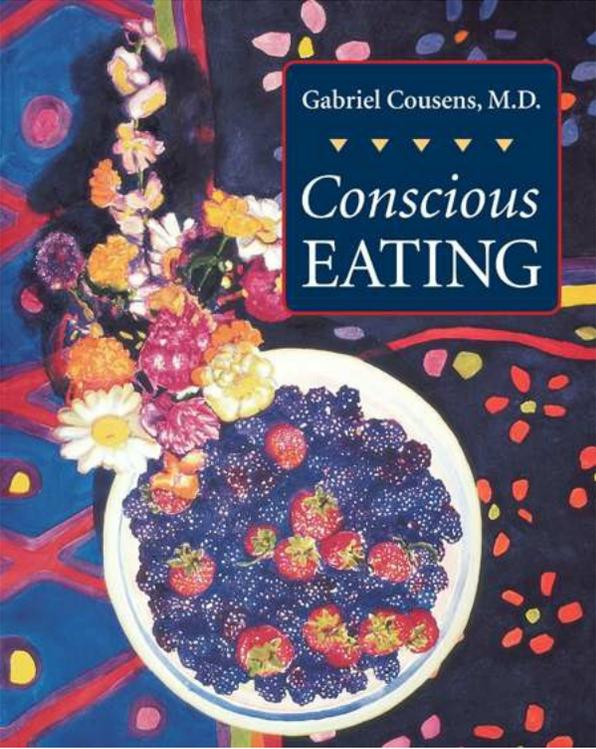


Gabriel Cousens, M.D.

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Conscious
EATING



Conscious Eating



Gabriel Cousens, M.D.

 North Atlantic Books
Berkeley, California

To the service of God, who inspired me to write this book and to carry on the teaching of Genesis 1:29* as the spiritual nutritional blueprint for humanity's preparation for the golden age of peace.

**“See, I give you every seed-bearing plant that is upon all the earth, and every tree that has seed-bearing fruit; they shall be yours for food.”*

And in gratitude for my experience as a Sundancer, and to the brothers and sisters of this tradition who have inspired me to offer myself for the healing of the world. This new edition of *Conscious Eating* is offered in service of this vision.

This book, inspired by the Divine, has manifested with the help of many people, whom I most gratefully acknowledge:

Nora Cousens, who patiently supported me with her love and thoughtful feedback on every aspect of the original book.

Kiana Rose, who helped me review the Ayurvedic aspects of our 14-Day Tree of Life Café Menu and all the new recipes; reviewed the new chapters of Conscious Eating; inspired me to write the chapter on nutrition and pregnancy; and has been a soul support to me during the writing of this new edition.

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Richard Grossinger, who encouraged me to re-write and deepen this exciting new edition.

And to the many others who lovingly helped create this book—**thank you.**

Please Note

Nothing in this book is intended to constitute medical advice or treatment. For development of an individualized diet or use of fasting cycles, it is advised that any person first consult his or her holistic physician. It is advised that he or she remain under the doctor's supervision throughout any major shift in diet or while fasting.

I have referred to a variety of studies, a few of which have involved animals. In no way does this mean that I endorse the use of animal studies for scientific purposes, and if data were available to make my point without using these studies, I would have done so. Animal studies, particularly studies in which the animals have been sacrificed, interfere with the peace between the animal world and the human world.

—*Gabriel Cousens, M.D.*

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Foreword

I BELIEVE THE GREAT AMERICAN PAINTER, Frederick Remington, would have appreciated Dr. Gabriel Cousens and this book, *Conscious Eating*. Remington was a gifted and courageous frontier artist who went to the American West in the mid-1800s to see and survey the new territory. He then reported to us by painting vivid and insightful pictures. Gabriel Cousens is also surveying a most important and exciting frontier—*optimal care and feeding of the total human being*

Gabriel Cousens, M.D., is a physician, teacher, nutritionist, artist, scientist, visionary, and spiritually awakened man, with something very important to tell us. Daily in his medical practice and research he sees what our food choices do to us to create glowing health or to promote dread disease. In *Conscious Eating* Dr. Cousens has not so much written a valuable nutritional guide as painted a most remarkable picture.

He uses his many insights into the effects of food on the human body as “colors” on his palette—rich textures of nutritional science, brilliant flashes of spiritual insight, and deep shades of intuitive logic and common sense—to outline and illustrate the rich landscapes of applied nutrition. His years of clinical experience and research, as well as his personal depth and awareness, combine in his snapshots, portraits, and ultimately, murals, that illustrate how what we eat, think, and do determines who we become— and how we can optimize the process.

Yet, Dr. Cousens is wise enough to know that each person must find their own way to their optimal health program. He clearly describes and maps the nutritional territory, from the wellsprings of the religious origins of conscious food choices, through the thickets of myths surrounding vegetarian nutrition, to the vantage points of wise shopping and food preparation—all along encouraging us to determine our own course according to the truths of our own body.

Dr. Gabriel Cousens is a nutritional pioneer who sees the larger picture of food and health and who cares enough to report back to us so we may make the wisest choices. As a student of nutrition, as well as a teacher, I know I learned a great deal from *Conscious Eating*. The nutritional frontier makes more sense to me now, and I'm sure this book will enlarge your world too—not to mention making you a much healthier “explorer” in the process.

Conscious Eating will vastly expand your understanding of the role of optimal nutrition in creating true health. This book will be seen as a pillar in the growing body of foundation work on vegetarianism. You are in the hands of a most capable nutritional guide—Dr. Gabriel Cousens—enjoy the journey!

—Michael Klaper, M.D.

Author's Update

SINCE THIS BOOK WAS FIRST PUBLISHED IN 1992, there has been an increasing demand by *Conscious Eating* readers for a center to transition into a “conscious eating” lifestyle. In response to this growing need, we have developed a retreat where we have expanded the vision from “conscious eating” to conscious living. The Tree of Life Rejuvenation Center is located on 166 acres on a beautiful southern Arizona mesa, surrounded by a magnificent 360-degree view and nestled in the Patagonia Mountains. The Tree of Life Rejuvenation Center is an innovative, rejuvenative, spiritual, eco-retreat center committed to the integration of all healing life forces for complete body-mind-spirit energization and renewal.

At the Tree of Life we have created a menu of awakened living. Every aspect of our lifestyle—organic gardens, life force-preserving food preparation methods, ecologically sound strawbale architecture, hybrid solar energy systems, the heartfelt quality of our human interactions, and the spiritual energy generated by our committed staff—all contribute to creating, supporting, and sustaining the living of life in balance.

Participants learn on an experiential level how to draw healing energies from the Divine and the elements of Earth, air, sun, water and the living planet as a whole.

I continue to expand our highly effective rejuvenation programs, which incorporate the best elements of nutrition, Ayurveda, homeopathy, acupuncture, naturopathy, Tachyon technology, and other healing modalities. Here on this blessed land, surrounded by its mountain views, we connect with the natural rhythms of nature through sunrise and sunset ceremonies, yoga, meditation, breathing exercises, nature hikes, sweat lodges, and the profound awakening of spiritual energies nurtured by an uplifting lifestyle and environment.

One reason that people are drawn to the Tree of Life is the integrated, comprehensive, in-depth nature of our unique programs. We offer medically supervised juice fasting programs and group spiritual fasting retreats which accelerate conscious physical, emotional, and spiritual evolution and often eliminate or greatly improve chronic diseases. Our Ayurvedic Panchakarma Process (“Five Purifications”) heals inner imbalances caused to a large degree by the hectic pace of modern living. Panchakarma is a time-honored and extraordinarily effective method of restoring inner calm and increasing high-level wellness. The Tree of Life also offers classes in live-food preparation and organic gardening. Intensive individual, couple, and family therapy sessions are facilitated by me, available only with advance reservations. Feel free to call us and let us know how we may serve you.

At the Tree of Life we assist you in overcoming what we lovingly call “the dark chocolate side of healing,” which is the hidden resistance to healing. We skillfully and compassionately help you let go of your addictions to the unhealthy habits that bring on chronic disease and much misery. These addictions include negative lifestyle habits, poor food choices, the tendency to form unhealthy relationships, and addictions to such health-depleting substances as coffee, tobacco, sugar, et cetera, all which keep us from reaching our full potential. In many people, we help release psycho-spiritual blocks that kept them stuck in self-defeating cycles of destructive habits.

Equally important, but often overlooked, is undiagnosed biochemically based depression, as well as other biochemical imbalances of the brain and body. These imbalances may be caused by hypoglycemia, neurotransmitter deficiencies in brain chemistry, food allergies, previous alcohol and other substance abuse, or candida, among other causes. Helping people rebuild their neurotransmitter pathways as part of their healing from drug addictions and depression has become a particular area of interest to me. With this approach I have seen people able to come off antidepressant drugs and be freed of a variety of alcohol, drug, and other life addictions that I have directly addressed in this new edition of *Conscious Eating*.

We specialize in creating personalized programs to help you heal into health and happiness. All the healing modalities and programs that we offer at the Tree of Life systematically help you overcome these life-force-depleting blocks to higher levels of rejuvenation and awakening. Becoming free of addictions is just the first step in the rejuvenation process. We want you to become free on all levels, free of all limitations—for only then can you fully experience the natural joy of being Divinely alive.

Although the center is fully operational with a certified Kosher, organic, live-food restaurant called The Tree of Life Café, and eight tasteful, casita-style residential units, meditation sanctuary, gardens and hot tubs, we are still in the process of flowering to our full physical potential.

For those of you who are lovers of nature and pioneers at heart, there is much we can presently offer that can

create a powerful healing transformation in your life. In fact, in the short time we have been open, guests from 28 countries have come to share the “raw life” with us. They return to their homes around the globe rejuvenated, inspired, and empowered.

The Tree of Life is a unique concept of an ecological, spiritual, health vacation. We want to empower you to succeed in your efforts to create a more healthy lifestyle and have a good time while doing it. The key to changing to a more healthy lifestyle is inspiration for the commitment to change, rather than simply more intellectual education. This is where the real secret to healing happens. This inspiration we call the *Tree of Life Experience*.

We have designed a rejuvenation environment to empower people with skills to change their lifestyles. We also provide on-site and home support to help individuals, couples, and whole families make the transition into joyous health. It is a pleasure to see people begin to drink deeply again from the fountain of joy within. It is your birthright that awaits reclaiming!

You are welcome to contact us at the Tree of Life Rejuvenation Center for additional information or reservations.

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Blessings for joyous health on every level,
Gabriel Cousens, M.D.
December, 1999

Introduction

A NEW BEGINNING IS DAWNING. *Conscious Eating* was written to help bring about, and prepare for, this new day. Conscious Eating is the awareness of how the food we eat affects our body, emotions, mind, and spiritual life. It is understanding how what we eat directly affects the planetary ecology and the degree of peace we have with the human and animal life on this planet, and even who lives or starves to death. It is my hope that this expanded approach to nutrition prepares and inspires the reader to increase awareness of the Divine and to participate in this dawning of the golden age of peace.

In this revised edition four complete new chapters, a lot of new information on enzymes, over 100 new recipes, our 14-day menu, and a variety of other features have been added. These chapters more fully empower the reader to understand the vital importance of a healthy diet and how to achieve it. Chapter 3 has breakthrough research on fast and slow oxidizers, parasympathetic/sympathetic metabolism, and the whole concept of physiological dominance in relation to individualizing your diet. Chapter 8, Deficient Diet: A Cause of Physical and Mental Degeneration, and Chapter 9, The Addictive Brain, highlight the serious effects deficient diet is creating in our society. Chapter 30 is the most comprehensive chapter (as far as I know) ever written on optimal nutrition for vegetarian and live-food pregnancy. A healthy pregnancy is the key for rebuilding the physical and mental health of our society.

Our food choices and the way we lead our lives are both the cause and effect of our diet and lifestyle. Our choices reflect the state of harmony with oneself, the world, all of creation, and the Divine. This synergistic view of nutrition is part of a core understanding of what it means to live an integrated, harmonious, and peaceful life on this planet. In this book, the reader will begin to understand the following:

1. How the spirit, mind, emotions, body, and even our hereditary expression are significantly affected by the food we eat.
2. How to develop an individualized diet.
3. A new paradigm of nutrition and assimilation.
4. How to determine your own psychophysiological constitution and how to eat to enhance this specific constitution.
5. How to balance one's individual acid-base relationship or pH. Some of my original, clinical, acid-base research and the concept of dominance will be presented for the first time.
6. An in-depth approach to the psychological and spiritual aspects of developing an optimal individualized diet.
7. Four transition phases to conscious eating and the transition to a vegetarian way of life from biological, emotional, psychological, and spiritual perspectives. This includes practical ways of making and sustaining this metamorphosis, even when traveling.
8. A wholeness approach to diet that explores the larger planetary implications of what we eat, including effects on the ecology, conserving natural resources, world hunger, and world peace, as well as ethical and moral issues regarding cruelty to animals. You will see how a vegetarian diet, and particularly a nondairy vegetarian diet, creates the preconditions for making the shift from hoarding of natural resources to sharing of these resources. This is because a nondairy vegetarian diet consumes from one-tenth to one-twentieth of the energy and natural resources of a flesh-food diet and therefore can potentially create an abundance for the needy millions of God's children.
9. Vegetarianism as the dietary part of the blueprint for enhancing our communion with the Divine and ushering in the age of peace.
10. The role of vegetarianism in different spiritual and religious traditions. You will be introduced to how vegetarianism has been recognized as an important part of most world religions and spiritual practices when they are carefully examined at their core level.
11. A new concept in the art of live-food cuisine that shows how to prepare food to enhance your awareness of conscious assimilation and to match your psychophysiological constitution. Recipes are designed to help us eat our food in a way that brings out the food's full energy on the most subtle levels.
12. Consideration of many of the issues, concerns, and questions raised about the adequacies and advantages of a vegetarian and live-food diet.

One cannot eat one's way to God, but a vegetarian diet—and particularly a high-percentage live-food diet—is a powerful aid in the process of spiritual evolution. However, without the context of right livelihood, right association, love, and connection with God through meditation and/or prayer, the practice of vegetarianism may result in an unbalanced ego state. A vegetarian diet is a true blueprint and a precondition for the golden age that is about to dawn. How else could the lamb lie with the wolf/lion?

Conscious Eating is a comprehensive effort to bring clarity and light to the most essential questions regarding our food choices and the process of living healthfully, happily, and in increased harmony with the Divine. After reading this book, one can no longer claim ignorance concerning the effects of diet on personal and world health. You, the reader, will have been sufficiently informed, coached, and alerted to these most important issues.

May all be blessed with the inspired will to make the changes in diet that are needed to enhance their communion with the Divine. In Revelations, chapter 2 verse 7, it says:

He (she) who has ears, let him (her) hear what the spirit says to the churches: To him (her) who overcomes, I will give to eat of the Tree of Life, which is in the midst of the paradise of my God.



Principles of Individualizing the Diet

THERE ARE A GREAT MANY DIETS OFFERED TO THE PUBLIC as “the best” diet for everyone. A major purpose of this book is to give you, the reader, some basic guidelines on how to develop a diet that is individualized to your specific needs, rather than trying to fit everyone into a general prescribed diet. This section empowers the reader with a new set of conceptual tools and an integrated approach to diet by presenting a complete theory of nutrition and assimilation, and by considering one's particular acid-base balance, individual psychophysiological constitution, lifestyle, the energetic subtleties of foods, and the seasons as they all relate to one's individual constitution. This section also presents a general approach to individualizing the diet—called conscious eating.

BLACKBOARD SELF-REFLECTIONS

Why are you interested in changing your diet toward becoming vegetarian?

- Something inside of me said it's time
- Spiritual reasons
- Desire better health
- To avoid participating in the killing of animals
- To protect the ecology of the planet
- Desire to lose weight
- All of the above

Preview of Chapter 1

TO CREATE A HEALTHY DIET, one needs to understand more than simply food; one needs also to understand one's physical, psychological, and spiritual self. It is important to have a template of conscious living that establishes food choices in their proper perspective in the context of Divine communion with prayer/meditation, love, wisdom, right companionship, and love and respect for oneself, others, Mother Nature, and all of God's creation. For many, this means not living to eat or eating to live, but eating to enhance one's communion with the Divine. This chapter gives much "food for thought" and challenges the reader to look at his or her dietary motivations. What is it you really want out of life?

I. How to individualize one's diet

- A. Perspectives on diet
- B. Mental relationship with food
- C. Eating to enhance our communion with the Divine

II. Artful intelligence plus trial and error applied to individualizing the diet

- A. Stabilizing time, emotional space, and how much and what we eat
- B. General goals around which to organize a diet

III. Psychology of eating patterns

- A. Distinguishing between healthy intuition and unconscious habitual eating patterns
- B. Ways to become aware of nonfunctional eating patterns
- C. Resistance patterns and excuses people use to avoid changing

IV. Power of Divine Communion to change dysfunctional eating patterns



Perspectives on Individualizing One's Diet

BECAUSE EACH ONE OF US IS A UNIQUE INDIVIDUAL possessing his or her own distinct biochemical variations and functional capacities in the world, there is no set, rigid diet that applies to everyone. In order to develop an appropriate diet that gives maximum support to every aspect of our lives, we need to individualize it so that it is totally functional on all levels. *A healthy diet is one that does not barter that which is eternal for that which dieth in an hour.*

Although one usually thinks of diet in terms of the body, in the context of this book and the cumulative contributions of ancient wisdom, the most complete understanding of diet is one that is intimately linked with spiritual life. Spiritual life is not something that occurs once a week on Saturday or Sunday, on special holy days, or just when one meditates or prays. The all-encompassing way of life represented by the Essene Tree of Life exists and grows *all the time*, not just on weekends. The Tree of Life is a metaphor for how we can live as true human beings in balance and harmony on this planet. The roots of the Tree of Life are the universal laws of nature; its branches are the universal spiritual laws which reach to the heavens.

Diet, if looked upon from the perspective of spiritual nutrition, is not a religion or an obsessive, misdirected form of searching for God. It is simply part of a balanced, harmonious life. Developing such a functional diet for oneself is not a search for a perfect diet, because the only thing which is perfect is that which is beyond the body-mind complex, which is God, the ultimate Truth of the Self.

The most effective diet is one eaten in the context of the principles that sustain the Tree of Life itself. This template for the conscious living of a spiritual life includes meditation and/or prayer; cultivation of wisdom; good fellowship with other conscious people; right livelihood; respect for the Earth and its inhabitants; love of the family and all humanity; respect for all peoples and cultures; respect for the forces of Mother Nature; respect and love for our own body and mind; and love for the overall totality of who we are.

The difficulty in developing a totally appropriate diet is not the food itself, but our mental relationship to food. Food is more basic than sex. Most people can survive without sex, but very few on this Earth can say they do not need food to survive. Our relationship to food is a primary means of physical survival which enables us to relate to others and learn the lessons we need to learn.

It is God's natural program that our first liquid food comes from the breast of our biological, earthly mother. Very few would argue that there is anything superior to mother's milk for the infant.

However, after solid food takes the place of human milk, the arguments start about what "should" be eaten. Beliefs about diet and what is "right" to eat are rooted in one's cultural and religious heritage. These beliefs are often very strong.

What we eat is both the cause and effect of our awareness. It reflects the totality of our ongoing harmony with ourselves, the world, the universal laws, and all of creation. Because the way, and what, one eats is often a source of security, people do not readily change their diets unless there is some significant reason, such as pain or disease associated with their present eating pattern. This is why it is sometimes true that "there are no such things as incurable diseases, only incurable patients." This famous adage is based on the fact that many folks are simply unwilling to make needed dietary and lifestyle changes, even when their life depends on it.

For many people, eating may be a mechanism for suppressing a variety of feelings, avoiding sexual tensions, and/or avoiding certain painful aspects of their lives. Some people eat in an attempt to make themselves feel good. Others may eat in order to deaden themselves to their feelings or their lives in general. Some overeat in a conscious effort to self-destruct. For others, eating becomes an addictive way of handling life. Some are so afraid of their inner life that when God calls, they would rather reach for another plate of ice cream than heed this call.

Overeating is a way of numbing oneself to life. Nutrition in the context of the Tree of Life is eating when one is already glowing with life and joy, rather than attempting to gain this joy through food. Individualizing one's diet at

the most refined level is eating to further enhance communion with the Divine. The art of conscious eating lies in creating an individualized diet that reflects and supports one's realization of the highest state of awareness, as well as one's need to function in the world of everyday life.

Eating food appropriate to one's individual needs is a means of extracting energy from our environment in a harmonious way. In today's world of fast foods and food irradiation, the relationship to food has become confused and degenerate. Many of us are disconnected and perceive as foreign the natural foods that Mother Nature offers us. The natural way to eat somehow seems "old-fashioned" or strange. The diseases that unnatural diet causes are so rampant that they are thought to be an inevitable part of life. This is not the case. Western medicine approaches this problem in convoluted ways and continues to spend billions of dollars developing sophisticated technologies to treat headaches while continuing to bang its (and our) head against the proverbial wall. The one who chooses to stop banging his or her head against the wall by giving up destructive food habits is often ridiculed. Our culture has become so upside down that one who chooses to heal and maintain good health with a diet that brings him or her into harmony with nature is often considered the idealist and extremist, rather than practical and appropriate. If this seems far-fetched, consider all the people who have repeated triple by-pass surgeries for clogged arteries without eliminating the proven cause of the problem, which they could do by adopting a diet that does not clog the arteries.

To make the shift into harmony is a matter of making conscious lifestyle changes. To do this, and to depart from the disease-generating practices of our culture, is considered heretical and seditious to our current fast-food lifestyle. Though it is difficult to change one's old habits and belief systems, this must be done if one values living a healthy spiritual life. When ambivalent to making these needed changes, some use the excuse that social forces are too powerful.

Nevertheless, in order to develop a totally functional diet, one needs to be willing to examine these patterns and abandon what is no longer appropriate. Eventually, one begins to make food choices on the basis of what maintains and enhances the blissful communion with God, as well as the feeling of well-being in mind and body.

As a meat-eating football player from the Midwest, I grew up without meeting a vegetarian until I was 28. Once I realized the spiritual, mental, and physical appropriateness of a vegetarian diet, it still took several years to complete the full transition. To make stable and lasting changes in one's diet, it is best to make step-by-step changes that can be incorporated in sync with the overall context of one's life. One needs a solid support system in order to make a successful, sustained change in the direction of high-level physical, mental, and spiritual health. Making idealistic yet drastic changes often creates imbalances which reverse themselves in short order.

Creating our own individualized diet is positively aided by a dose of artful intelligence as well as a trial-and-error approach. Gandhi, in his efforts to develop the appropriate diet for himself, would make one shift every four months. Often a change in diet or lifestyle may feel good the first week but not be so good for us after several months. For example, I have observed many people who, in the first few weeks, felt much better when they were put on a high-protein, usually meat-based diet for the treatment of hypo-glycemia. After four to six months, however, they often found that though their hypoglycemia was in better control, they felt worse. This is usually because it takes a month or two to experience the toxic load that comes from the high-protein, meat-based diet. Switching hypoglycemics to a low-protein, high-complex-carbohydrate diet or vegetarian with a higher percentage of protein/fast oxidizer diet (which will be discussed in Chapter 3) maintains stable blood sugar and slowly removes the toxic load caused by the high meat-protein diet. This is the long-term solution to the problem.

The process of individualizing the diet is realistic and basic rather than idealistic. Extremely idealistic or purist diets may even sidetrack us from our spiritual unfoldment. There is an interesting story of Buddha which makes this point quite nicely. In his ascetic stage Buddha was said to have spent several years eating just roots and tubers and standing on one leg in a river doing yogic austerities. He continued to get thinner and weaker until eventually he collapsed and was washed to shore. A little shepherd girl found him. She saw his emaciated condition and decided to feed him some raw milk and rice. In accepting this food, he let go of his ascetic concept of what was the "spiritually correct diet." Although he ate only one meal of this food a day he began to get stronger and sat himself under the bodhi tree; in short time, it is said that Buddha became enlightened. His diet was obviously not the cause of his enlightenment, but it was a functionally appropriate diet for him at that moment which helped to give him the strength to carry on his spiritual evolution. Diet is not the key, but it is a significant aid to enhancing all aspects of our lives, including the spiritual.

The art of conscious eating is learning how to eat just the right amount of food to maximize every aspect of our lives. It is not a deprivation or minimal-eating diet. It is a pattern of eating that adds to our wholeness. It is a diet that requires some sensitive attention to the details of our daily activities. Our hunger for the Divine becomes the overwhelming appetite and guide to our choice of diet.

Creating a Diet

IN DEVELOPING A DIET, clarity of purpose is necessary. Just as an architect does not design a building without knowing its purpose, one is able to develop a more appropriate diet for oneself when there is a clear perspective in mind of the purpose of one's life and what must be done to support that purpose. Although this is an individual matter, I am taking the liberty to suggest four general dietary concepts linked to optimal physical, emotional, mental, and spiritual life purpose, which may help in designing a totally functional eating pattern:

1. Developing a diet that is an aid to spiritual unfolding, one that maintains, purifies, and honors the body as the physical aspect of the spirit and the temple for the spirit in a way that keeps the mind clear, balanced, alert, and elevated. Such a diet helps our bodies to physically cope with the demands of everyday life.
2. Increasing the ability to assimilate, store, conduct, and transmit the spiritual energies now being generated on our planet as well as the energy released by one's own spiritual development. Also, developing a diet that supports these energies to either activate and increase one's potential for the awakening of one's spiritual energy or which further supports the awakened spiritual energy. When the spiritual energy in a person is birthed, it acts as a neo-catalyst on all levels of body mind, and spirit to enable the individual to better attract, hold, conduct, and be sensitive to the energy and love of God's grace.
3. Developing a diet that balances all our subtle energy centers on a daily basis. This is the organizing principle of the "rainbow diet."
4. Developing a diet that brings us into harmony with the principle of noncruelty to animals, the universal laws of nature, and food-related ecological issues, thereby enhancing peace on our planet.

Many factors play a role in how one goes about individualizing a diet, such as one's biochemical individuality; associated lifestyle patterns; how well one digests proteins, carbohydrates, and lipids; the degree of physical activity; how much one meditates or prays each day; the functional status of the enzyme system; and one's present level of health, vitality, and detoxification. External factors, such as present diet in relation to the changing of the seasons and general climate, and the political and social context in which one lives, are also significant factors. Because of all these variables, one can see why following a fad diet that is recommended for everyone, or a computer-generated diet, has limited value.

There is one computer program, however, which is superior. This is the magnificent human biocomputer. The program of this biocomputer is built on both inner sensitivity and observations of the results of one's choices. It is the one that helps us know how much and what to eat. To learn how to work this biocomputer one must pay attention to inner messages and how one feels after eating food. The process of individualizing one's diet requires trusting what is unfolding, cultivating artful intelligence, and carrying out trial-and-error experimentation. To be effective at the art of observation one becomes both the scientist and the experiment. The general framework of this book can serve as a starting point for taking responsibility; the rest of the work of individualizing the diet is one's own.

If one is to experiment accurately with food to determine specific effects of eating in a certain way, one must control variables such as when one eats, what one eats, how much one eats, the eating environment itself, and one's mental state in relationship to the food.

The timing of when one eats during the day and the consistency with which one follows this schedule need to be stabilized. Regularity helps the body adjust its physiology. If one eats food late at night when the digestive powers are diminished, most likely the food will have a different effect than if one eats the same food between 7 and 9 AM or 10 AM and 2 PM, which are the times the digestive forces are the strongest.

Between 10 AM and 2 PM is the optimal time to eat the biggest meal of the day, according to the Ayurvedic system, and between 7 AM and 9 AM according to the Chinese. One's own experimentation will uncover the best time. When one eats depends on one's constitution and daily schedule. For people who want to lose weight, not eating in the evening can be helpful because this is the time of weakest digestion. The key to timing, however, is knowing when one is actually hungry and thirsty so one learns to eat and drink only then. Finding the length of time between meals it generally takes to become hungry gives one a rather direct clue to how frequently to eat. A *kapha* constitution person may need to wait six hours, while a *vata* needs to eat every two to three hours and a *pitta* every

three to four hours. You'll learn about these constitutional types later.

The obvious but critical corollary is knowing *not* to eat and drink when one is *not* hungry and *not* thirsty. This may sound easy but it takes a high degree of discipline.

A stable emotional and mental environment helps to gain clarity on the effects of what one eats. If one is centered and calm before eating, eats in a peaceful environment, and pays full attention to the food, the digestive process will be different than if one is emotionally upset, depressed, or angry and tries to eat during the stress of an important business luncheon, for example, or while reading the newspaper or watching the TV news. Eating in a calm, uplifting environment and in a peaceful, inner state is beneficial to digestion.

How much one eats can dramatically affect how well one functions with a particular food. If one eats too much of any food, no matter how healthy it is, one will not get accurate information about that food. It is useful to allow time after meals for complete digestion. This also allows one to observe the digestive process. How good a food is for you goes beyond its immediate taste. It needs to be good in the context of the whole cycle of food preparation, digestion, assimilation, energization, and elimination. The effects of a food must be positive for the full cycle of the day and not just an hour after eating. It may take four months to understand the full impact of a particular food on one's system. As I pointed out before, some people initially feel well on the high-protein, flesh-centered diet traditionally recommended for hypoglycemia. Initially, this type of diet may make them feel good because it helps to balance the blood sugar. Also, the excess protein can reverse the flow of an uncomfortable detoxification process. There is also a stimulating effect in the meat from the adrenaline released by the dying animal. The high concentration of uric acid, which is close to caffeine in chemical structure, also may have a stimulatory effect. Initially these effects may seem beneficial. After several months on a high-protein, anti-hypoglycemia diet, however, some people begin to feel toxic and arthritic and require a different dietary approach.

BLACKBOARD SELF-REFLECTIONS	
Present Eating Habits I Want to Change	
Daily	Weekly
<input type="checkbox"/>	<input type="checkbox"/> Overeating
<input type="checkbox"/>	<input type="checkbox"/> Red meat: hamburger, steak, ribs, roast
<input type="checkbox"/>	<input type="checkbox"/> Pork: chops, ham, bacon, sausage
<input type="checkbox"/>	<input type="checkbox"/> Poultry: turkey, chicken
<input type="checkbox"/>	<input type="checkbox"/> Fish: fresh, frozen, canned
<input type="checkbox"/>	<input type="checkbox"/> Fried/fatty foods: potatoes, flesh foods
<input type="checkbox"/>	<input type="checkbox"/> Junk foods: potato chips, candy, soda
<input type="checkbox"/>	<input type="checkbox"/> Fast foods: McDonald's, Wendy's, Kentucky Fried Chicken
<input type="checkbox"/>	<input type="checkbox"/> Dairy products: cheese, milk, yogurt

Once one has a clear feeling for how much food to eat, when to eat the food, and where to eat it, the next step is to look at what one eats. Begin to observe the response to the different foods in your diet. One way to do this is to rotate food every three or four days so that the difference in how you feel with a particular food can be observed.

Feedback comes on several levels. On the physical level one may experience a full stomach, gas, and bloating from fermentation and putrefaction; increased mucus production; a sluggish mind and body; allergic response; and a feeling of low self-worth. If one is willing to pay attention, these data clearly give indications that the food is the probable cause of these very real symptoms.

Conversely, if the food one eats enhances, or at least doesn't interfere with, one's communion with the Divine and the flow of cosmic energy in the body, the food is appropriate. If after eating, one feels heavy and slow because so much energy is needed for digestion that attention is drawn to the stomach, then one is eating the wrong food. If one's energy feels drained, or the communion with the Divine is blocked before, during, or after the meal, it is an indication that some factor in the process of eating needs to be changed. If one's ability to sustain meditation is enhanced and one experiences greater harmony with the forces of nature, this is strong evidence that what one is eating is appropriate. Eventually the diet pattern developed will be totally adequate for every aspect of one's life.

Psychology of Eating Patterns

AS WE EVOLVE IN BODY, MIND, AND SPIRIT, the dietary needs of our body also change. The diet not only changes with the seasons, but with the maturation of our emotional, mental, and spiritual state. Remaining sensitive to our mind-body-spirit responses to our food is important in helping us make the appropriate adjustments in dietary intake. These shifts are guided by intuition and aided by the awareness of changes in our tastes for different textures, foods, colors, and smells. As we become healthy, we often require less food because the body is better able to assimilate the physical aspects of the food and the more subtle energies from which the food is condensed.

To successfully make the appropriate dietary adjustments we must be free enough psychologically to distinguish between healthy intuition (these subtle, internal feedback systems of when, where, how much, and what) and the drives of our habitual eating patterns, peer pressure, unconscious psychological needs, food transferences, and cultural and personal life patterns. The key to this approach lies in identifying nonfunctional food patterns and being able to let them go if they are detracting from our love communion with the Divine or from our physical, emotional, and mental well-being. In this process, we need to ask questions of ourselves, such as:

- Am I really hungry now?
- Am I eating too rapidly and overriding the sensation of fullness?
- Am I responding to other needs?
- What am I trying to say by this food choice?
- Are there alternative foods for filling this present desire to eat?
- Are there alternative activities for filling this present desire to eat?

Some of these patterns are relatively easy to identify and dissolve. For example, I always considered my mother's cherry pie a love offering to me. I left for college with a very positive food transference to cherry pie. Over the years, I would always eat cherry pie with great joy. As my diet began to evolve, the way I felt after eating cherry pie began to change and I didn't feel the same afterwards. Even eating organic cherry pie did not reverse this trend. Because of the negative feedback from my post-eating experience and my awareness of my food transference, I was able to let go of my nonfunctional food desire for cherry pie.

If the process of letting go of certain food habits were always this easy, our culture would not have such a high percentage of the population eating such poor diets and living in such poor health. For many people, overcoming their food transferences and food issues can require intense and difficult work that takes them to the very core of their psychological beings. In the US it is staggering how many people are overweight and obese (twenty pounds or more overweight).

In America there is such an abundance of food that people are literally eating themselves to death. Because of the abundance of food in our society, many ego defenses have developed around food. According to Dr. Cott, in his book *The Ultimate Diet*, approximately eighty million people in the US are overweight and forty-five million of these are obese. Forty percent of women between the ages of thirty and forty are obese.

Some of the more common negative beliefs and fears associated with being overweight have to do with the consequences people fear if they, in fact, lost weight and returned to normal body shape. Many people fear that the opposite sex will be more interested in them sexually if they lose their fatty protection. Losing this protection brings up fears around sexuality, molestation, and intimate relationships in general. Some people even fear being rejected by jealous peers if they are too attractive. Others fear receiving too much attention and the demand for intimacy this would bring up. Fat can become a wall of protection against intimacy.

For others, food means love and attention. It is a way of feeling loved. Many have been programmed that eating is

a way to get parental approval. Most people have been trained to please their parents by eating everything on their plate.

For some, overeating is a general, all-purpose way to stuff feelings of sadness, anger, rejection, fear, anxiety, and loneliness or to numb themselves to feelings and life in general. Not eating at all, or overeating, are ways to oppose a parent or spouse who wants you to do the opposite. For some, what they eat or do not eat may be one of the only activities in their lives that their parents or spouses cannot control. Eating may bring up many reactive family patterns that we developed at the dinner table over years of programming.

Overeating may also keep re-creating feelings of guilt and low self-esteem. It is a great way to punish or be angry with oneself. Some even use overeating as a form of slow suicide. On the other hand, people who have experienced actual starvation situations may find themselves eating excessively as a compensation for, and avoidance of, their fear of starving again.

As we start to look at these many different psychological patterns, it becomes apparent that not only do the actual eating habits keep people unhealthy and overweight, but the negative thoughts they have created in relationship to the food also contribute to the problem. These disharmonious thoughts maintain inappropriate eating patterns. To use an analogy, fat sticks to our bodies the way these negative thoughts stick in our minds. When these contracting thoughts are released, a lot of blocked energy is simultaneously released. This released energy sometimes seems to rebalance the system and somehow enables us to release fat. Symbolically, and often literally, heavy thoughts add heaviness, thickness, and darkness to the body. Thoughts filled with light and love add lightness and fluidity to us. It is said that “angels fly because they take themselves lightly.” While eating it is important to be joyous and to think positive thoughts. Negative thinking or taking in negative thoughts from those sharing the meal, or from the newspaper or television, adds a heaviness to the food we are assimilating.

Food is love. Life is love. Contracting, limiting, and negative thought patterns keep us mired in chronic hunger, unconscious gobbling, and a state of chronic dissatisfaction with food intake. These heavy thoughts block us from the experience of love in our lives. No matter how much we try to eat in this blocked state, we cannot fully be nourished. We will feel nourished by food when the negative thoughts, which determine who we think we are—or aren't—are dissolved. Thoughts about food determine how we relate to food and ultimately to other people. Chronic overeating patterns usually fade away when dysfunctional thoughts associated with food are dissolved.

Negativity is often stored in excess fat as blocked energy. When we let go of such forms of negativity as self-loathing, guilt, grief, depression, loneliness, helplessness, anger, hate, fear of others, fear of life, self-pity, blame, and unconscious death urges, this negative, stored energy often leaves the body. Then we are able to release the bulwark of fat which is used for protection from the pain of life. Eating then becomes filled with love and joy, and the body and mind become lighter and happier.

A vegetarian diet, and particularly a raw-food diet, can be threatening to some people because it directly forces them to face their food issues, and indirectly, their life issues. Live foods have so much nourishment in them that considerably less food is needed to get the same amount of nutrition. Needing less food for optimal nutrition, however, forces us to observe whatever food compulsions we may have. If we compulsively need to eat more food and the body actually needs less food, it becomes increasingly harder to deny this contradiction. Many negative thoughts may arise when beginning to eat less, particularly on a raw-food diet or when fasting. Because of the highly energetic qualities of raw food, it seems harder to suppress feelings when eating it compared to overeating cooked and nonvegetarian types of foods to numb ourselves to life. On raw foods, repressed emotions and thoughts seem to be more easily released by the body-mind complex.

In the Ayurvedic section, I will point out that sweet foods may create the illusion of fullness and a false contentment or good feeling. Often when people are feeling bad, empty, or depressed, they turn to junk food, especially sweets, in a misguided attempt to create a temporary feeling of fullness and happiness. Instead of the alcoholic's illusion of drinking troubles away, those who turn to junk food to make themselves feel better try to eat away their sadness and emptiness. It is a two-tiered illusion. Junk foods are “shadow” foods with little nutrient value and great negative consequences to health. Junk foods are an illusion of real food. The idea that we can eat away our troubles is an illusion compounded on illusion. Unfortunately, many become addicted to this double illusion. The transition to living foods brings us immediately into awareness of it.

Overeating, especially of junk food, may also represent a sweet but slow suicide for some who are depressed. Carol Meer, a past client of mine who took the Zero Point Process, a workshop that deals with dissolving negative thoughts and belief systems (see below), in the process of healing her food addictions and in her transition to a live-food approach, shared the following eloquent statement of the multiple meanings of overeating junk food from her May 1990 journal entry:

I have recently understood why I have eaten junk food for so many years. There are dead spaces ... spaces

in me that want death. Instead of going into myself and feeling and healing my death, I have “simulated” death by going in there with a strange reversal and eating dead food instead. Dead food is food that has no real vitality, but gives the sense of vitality or life. It is like artificial vitality giving one the false feeling of having power and energy. It is, in fact, deception woven into deception.

Without the accompanying emotional-mental work to release the stored negative thoughts and identities in those “dead places,” as Carol would say, it is difficult to heal oneself with a live-food diet alone. A live-food, or even a primarily cooked vegetarian diet is a powerful aid to the healing process. The level of health stimulated by such a diet creates a whole new experience and lightness in the body. The vibration of the somato-nervous system becomes so high that it literally forces the lower-vibration, negative thoughts out of the system. These negative thoughts become incompatible with a higher vibration of energy that begins to fill the system. Metaphorically speaking, a live-food diet brings so much lightness to the system that “the light is able to dispel the darkness.” Paradoxically, this is one reason I recommend that people make a slow transition to vegetarianism and particularly to a raw-food cuisine. I see this release of stored negativity as healthy and healing if one creates the proper psychological space to process these thoughts. For example, during our spiritual fasting retreats, we have a daily group process to help participants release and heal from these long-time, stored negativities that come up.

Food is essential to our survival. Psychological imbalances associated with food are related to the survival energy center and consciousness. Working through our food issues helps us become conscious of our survival issues. These issues link our subtle survival center to the awareness of survival issues of the whole planet. As we are able to come into harmony with our own survival issues, we become more and more able to eat in a way that is healthy for the survival of the whole planet, as well as ourselves. It is no accident that starvation is one of the critical issues our planet is facing today.

Once food compulsions and transferences are resolved and we overcome chronic overeating and lose weight, then the next subtle energy center and awareness issues often come to the surface. These are issues of sexuality and creativity. Throwing away the fatty protection frequently forces us to face our sexual power. In some cases, sexual obsessions that were buried underneath the food defense system begin to emerge.

Food difficulties and eating patterns are related to a whole complex of issues. Although it is easy to think this discussion only applies to those who are overweight, these are issues that many people face no matter what their weight. Food issues are something we all must master as part of our spiritual evolution, because with few exceptions, we all have to eat. Once we find peace with our food issues, we have added another building block to our spiritual foundation.

Because of my background as a psychiatrist, I include psychological work with people who are experiencing eating problems or who want to work on food issues in addition to their spiritual growth as part of my holistic approach. In order to speed the process and keep people independent, I teach a self-healing course at the Tree of Life Rejuvenation Center on how to identify these limiting, negative thoughts that we create in our own minds. This course, called the Zero Point Process, teaches people how to return to the onset of their thoughts about food, and even to look prior to the formation of basic identities around food and the personality in general. This is the so-called “zero point.” When we are able to do this, we can first witness these thoughts and then dissolve them. Once these thoughts are identified and dissolved, they no longer have any power over us. The techniques are powerful and simple. Sometimes these issues can be cleared up in one hour. This depends, however, on one condition being present: it is whether the person is ready to let go of his or her dysfunctional thought patterns.

To successfully give up a thought pattern, people need to get in touch with both their desire and resistance to lose or gain weight, or any aspect of food which is an issue to them. Some level of desire to change can usually be found. The process helps them get in touch with resistances so they do not deny them with affirmations and other avoidance patterns. Some of the resistant thoughts of which people become aware are: interpersonal manipulations around food; fears of change; self-mythologies; limiting self-concepts; negative self-images; unwillingness to give up family and cultural images; and unconscious secondary gain for being overweight.

Resistance Patterns and Excuses People Use

1. I like to use my weight problem to punish myself, to show the world I am no good. I hold on to my guilt because guilt is the way I've always lived; it is what I am used to. I do not know what I would do if I were okay.
2. I like to complain and feel self-pity. It gives me sympathy and attention from my parents and from friends. I'd lose this if I lose weight.
3. Being overweight is a good, safe excuse for not succeeding. Success and power are a threat. I would have to give up being "not okay." If I am successful, people would become jealous and reject me.
4. Being overweight protects me from sexual intimacy and intimacy in relationships. It proves that no one wants me.
5. Food is safe sex. Food is sensual, accessible, and easy.
6. Food is my friend. It is my only friend and the only thing I can count on. It is someone to come home to.
7. Food makes me feel connected to life and the world.
8. Food is an addiction I cannot live without. It is an abusive lover.
9. Being overweight is a way to be loved and accepted by my parents. If I succeed and lose weight, it'll make my parents wrong because they said I was no good. My mother and father were both heavy, and it would make me different from them. If I give up sweets, my mother would reject me. Sweets were the only form of love I got from my mother. I don't want to be rejected by my parents.
10. Being overweight proves life doesn't work. I enjoy being hateful. I can't let go of my resentments. If I felt good, I couldn't be as angry.
11. It is a sin to feel sexual and love my body.
12. If I got healthy, I would not have anything to talk or complain about. I am afraid to feel too good. I like to worry. I'm afraid to change my self-image.
13. Eating takes away my loneliness, grief, stress, and pain. Eating is a convenient way to stuff my feelings.
14. Overeating and being overweight is a way of numbing myself from the pain and responsibility of life. It allows me not to grow up.
15. I want to die. Life is just too much. I do not want to feel energetic and alive.
16. Lots of foods numb me to the peace and joy of my inner divinity and my relationship with God. My inner light and God scare me. It is safer to eat some more ice cream.

Once the contracting and limiting thoughts are dissolved, one is free to become healthy. The idea is not to create anything new like a preconceived weight loss diet. Rigid diets can be a form of punishment in themselves. Rigid diets are potential traps for being wrong and guilty because usually one goes off them eventually. Once the "food filter" or food transference blocks are removed, then one is spontaneously free to eat those foods and live in ways which bring health, love, harmony, and communion with the Divine. Overeating naturally fades when there is a reorientation toward eating to enhance health, joy, and communion. The joy of Divine communion helps decrease our physical appetite because we are already feeling satisfied from within.

The body's desire for food has its roots in the soul's need for spiritual substance. When one is in touch with the Divine there is such a sense of contentment, joy, peace, and fullness that food has no power to throw one out of balance. The eternal craving for divine happiness is fulfilled on the deepest level.

If one surrenders to the divine unfolding, slowly and gently, harmony with the diet and body also happens. One spontaneously moves to a positive self-image. For example, one client who was ninety pounds overweight had tried many different approaches to lose weight. This person spontaneously went on a fast several days after a session using the Zero Point Process. What happened was that through the Zero Point methods she was able to dissolve her intense rejection of and anger toward her mother, who was a sleekly figured "health nut." As part of her rebellion against her mother, she had subconsciously created the opposing body shape in relation to her mother's. Unfortunately, her rebellion made her an unhealthy ninety pounds overweight. After this one-hour Zero Point Process, the client reported that it was the first time in forty years that she wasn't feeling constantly hungry. She was amazed how full and good she felt while fasting.

This subtle approach to trusting the unfolding, rather than trying to fit oneself into a rigid picture, does require

some surrender to the mystery of our own unfolding. One time in the middle of winter, I was in Maine giving a Zero Point Process seminar. In order to create more heat to compensate for the sudden change from warm California to the winter cold of Maine, I found myself spontaneously increasing my food intake about three times above my regular amount. I did this with much gusto. My hosts, who had gone to a nutrition seminar where I talked about the dangers of overeating, were wondering what was going on with me. I shared with them that I had to trust my sudden increase in appetite. I explained that during the Zero Point Seminar I usually lost four pounds, and perhaps my body was trying to compensate for that as well as the cold. At the end of the seminar, although I ate three times as much, I lost my usual four pounds anyway. As soon as I left the cold of Maine my appetite immediately decreased to normal. Attempting to be in control with a rigid diet creates the illusion that one is in control. It confuses the issue, because on the cosmic level one is never in control.

The gradual process of refining one's diet requires trusting one's observations and intuition. After a long period of time eating soaked nuts and seeds with fruit in the morning, I noticed that I began to feel full after the usual six hours between breakfast and lunch. I also observed that my **24-hour** urine indican, a toxin given off by pathogenic bacteria growing on partially digested food in the colon, and a sign of bowel toxins, had suddenly become positive. By eliminating the nuts and seeds in the morning and having only fruit, my urine indican went back to normal and I was not feeling so full in the morning. This total picture was a sign to me that my body had just taken another step toward optimal health. I now needed less food to support my lifestyle.

When the habituating thoughts that distort our eating patterns are dissolved, the balancing process can be quite delightful. One feels free to eat or not to eat. One begins to be spontaneously attracted to certain foods that one intuitively knows are appropriate. Food intake spontaneously drops and the joy of eating increases. One actually pays attention to food. The energies of the foods, their tastes, textures, and aromas are more sensuously experienced. Everything eaten in this way tends to be completely nourishing because a context has been created to receive, in an optimal way, the gifts of love given us.

Mind Over Matter Doesn't Matter

THE MIND PLAYS AN IMPORTANT ROLE in the eating process on many levels. Our attitudes and beliefs about what we are eating are at least as important as what we are eating. It is possible to overcome the natural laws by thinking so positively that even eating junk foods may become nourishing. I do not particularly recommend this practice, however, because it has us spending energy trying to overcome the natural laws rather than being in harmony with them. Although mind is stronger than matter, it requires extra energy and focus to convert junk food into something nutritious for the body. For most people this doesn't work too well anyway and can become a way of avoiding the healing process.

In the long run it is more healthy and harmonious to eat in a way that aligns us with the natural laws and ecology of our body and the planet. Author and religious leader Terry Cole Whittiker, who teaches the power of mind over matter in everyday life, once taught that it did not matter what one ate because it can be transmuted by the mind. Although this is ultimately true, it has its price. The question can be asked, "Is this a worthwhile way to spend one's valuable mental energy, by using it to overcome the effects of junk food intake?" Once Terry Cole Whittiker experienced the power and higher vibration of a raw-food diet, true to her dedication to her own evolution, she adopted more of a live-food diet. She is now recommending it to her students. Since being on such a high-powered diet she has lost fifty pounds and feels at least that many years younger in vitality. God, through Mother Nature, has given us the natural nutritional kingdom, so why try to fruitlessly transform the worthless dust of junk food into the precious gold of whole, raw, organic food? Though blessing one's food can transform any edible item into a higher-vibration food, why not seek and eat the highest-vibration food to begin with?

Become Your Own Scientist				
The foods we eat are major factors affecting our body, emotions, and mental and spiritual states.				
Try observing how you feel after eating certain foods or eating too much. If your handwriting or vision are affected or your pulse increases by 20 beats after 30-60 minutes, then you might be allergic.				
Experiment 1				
Eat the same food at the same time for 4 days.				
	What I Ate	How I Felt: 1 Hour	How I Felt: 2-3 Hours	How I Felt: Rest of Day
B R E A K F A S T				
L U N C H				
D I N N E R				

Preview of Chapter 2

THE READER IS INTRODUCED to the idea that food is a love note from God. If we take time to read this note, the process of eating becomes a special time of enhanced spiritual awareness. It is a way to feel the Divine presence. This chapter also exposes the reader to the idea that assimilation is a dynamic interaction between the energetic forces of the food and the one who is eating. We are introduced to many meanings of assimilation. We are left with the questions—just what am I doing when I eat? Could I be more aware, and what would it feel like? I invite you to explore this for yourself.

- I. The process of assimilation
 - A. Food as a love note from God
 - B. Dynamic interaction between human and plant forces
 - C. The many levels of assimilation
 - D. Eating as a way to open one's heart to God
- II. How we are prepared to receive the food is as important as how the food is prepared
- III. Use it or lose it principle
 - A. Assimilation
 - B. Transition to a vegetarian or live-food diet
 - C. Synthetic vitamins
- IV. Paradoxical assimilation
- V. Colors of food as a coded message from God



Assimilation of Mother Nature's Energies

A PRIMARY, ONGOING WAY THAT WE ALL CONSCIOUSLY or unconsciously relate to nature is through our food. Eating is an intimate way to extract life-sustaining energy from Mother Nature. In the process of digestive assimilation, the food, as part of Mother Nature, gives up its identity and takes on the identity of the one who has ingested it. We are actually assimilating the forces of nature—stored in our food—whenever we eat. Each bite we take brings us the experience of our loving connection with Mother Nature.

Food is a love note from God. Its letters are written by the rays of the sun. It says I love you and I shall take care of you and sustain you with the offerings of my earth. If we take time to read the love letter, by chewing carefully and feeling the messages that are stored in food by the sun, earth, wind, water, and even by those who have grown, harvested, and prepared the food, its assimilation takes on a whole new meaning. This is a specific way of receiving God's grace, a holy sacrament to be experienced slowly, carefully, and consciously.

Assimilation is the dynamic interaction of the forces of the food with the forces of our human organism. An old Arab saying highlights this point: “By eating we become sick, and by digesting we become healthy.” In assimilation, the physical and energetic forces of food interact with us on physical, emotional, mental, and spiritual levels.

The idea that each food, as a particular energy, affects us on an emotional, mental, and spiritual level is a new idea for many people in our industrial civilization. But for thousands of years Ayurvedic physicians, Chinese acupuncturists, ancient healer priests and priestesses, and Western herbalists have utilized this awareness in their work. According to *The Spiritual Properties of Herbs*, by Gurudas, “An herb as a natural substance provides healing, but it also provides a spiritual message.”

One of the most significant developments in the awareness that plants, herbs, trees, and bushes can have their effect on emotional, mental, and spiritual levels was the pioneering work done by the extraordinary English physician, Dr. Edward Bach. In the 1930s, Bach gave up his job as a successful Harley Street physician and moved to the country, where he communed with nature and developed the thirty-eight Bach flower remedies. These remedies were prepared by an energy infusion process using the sun. Each Bach flower prepared in this special way was found to have a specific emotional, mental, or spiritual energy that helped heal by bringing the person back into harmony. Since 1972, I've been aware of the Bach flower remedies and the Bach Flower Society and have been very impressed with the thousands of reported healings that first take place on subtle energetic levels and then work themselves down to the physical.

I want to remind the reader that in the strict scientific sense, assimilation from nonmaterial sources has not been scientifically proven, nor has it been disproven. I ask the reader, in considering these and other extraordinary ideas, to rely on his or her intuitive understanding in addition to the materialistic-mechanistic, left-brained ways of processing the world that are limited to the five senses. By including our intuition, we increase our ability to explore the concept that everything in nature is made of energy and that we are affected on multiple levels of body, mind, and spirit by the subtle energies and nutrients of our food. If we find this a useful concept to enhance the quality and clarity of our daily life and diet, then I heartily encourage all to use it.

Food, particularly plant food, is a condensation of the sun's energy, as well as more subtle energy from the stars and other sources in the universe. Though the influences of these celestial bodies is indeed subtle, scientists have discovered that the surface of the Earth is constantly bombarded by radiation from different celestial bodies, including the moon, star systems, and other sources of radiation in the universe. Plants take these radiations into their energetic systems and ultimately transfer them to humans when they are eaten by humans. From a spiritual perspective, these energies are simply various condensations of the Divine cosmic energy. In the process of our eating food the cosmic, solar, stellar, lunar, and other universal energies stored in the food are released to be absorbed directly into the human organism. We can experience the whole universe in each bite of our food. Having now introduced these ideas, we are ready to consider the many levels of assimilation. The basic question is, “What

goes on when one assimilates food?" The simplistic answer: Energy that is locked up in the food is released.

Subtle Assimilation

FROM THE POINT OF VIEW OF SUBTLE ASSIMILATION, what matters is not the quantity of solid or liquid food that we take in, but whether the food is assimilated totally and properly. To do this, we need to hold the food in the mouth long enough for this process to take place. The secret of digestion is to transform each element into a more subtle form. The idea is to chew the food so that it begins to release the stored subtle energy locked inside. Then subtle receptor centers in our palate and throughout the length of the digestive tract receive the essence of the food. Certain foods may release their essences at different times and locations in the gastrointestinal tract as the body's assimilative and alchemical forces work on integrating the food so that it becomes part of the body's substance. The essence released from the food may gravitate to different organs, glands, and subtle energy centers in the body. This is initiated by thoroughly masticating until the solid food is transformed into a liquid state, which then begins the process of the release of energy from the solid food.

For many years I have been reminded, in word and in print, about the importance of chewing each bite 40-100 times. This practice of thorough chewing is called "fletcherizing," named after Dr. Fletcher, who popularized it. I never could quite get myself to consistently and fully chew my food in this way, even though I understood intellectually that thorough chewing helped enzymes work more efficiently and thus improved assimilation.

It is true that masticating food meticulously breaks open the cells of the foods in order to release the naturally occurring enzymes within the plant. One of these enzymes is cellulase, which humans do not have in their own system. This cellulase released from the plant by chewing dissolves a significant amount of the thin film of cellulose which covers all plant surfaces and hinders assimilation until the cellulose is more completely digested.

Despite all this information, it was only when I began to think in terms of a subtly experienced energy release that the whole process of chewing became intriguing to me. The whole alchemical process of releasing the subtle energies stored in the food seems to take place without any special effort on our part, except of course, the act of chewing our food sufficiently. The process of chewing becomes less a mechanical chore and more spontaneously interesting when we focus on the subtle release of energy with mastication. Cultivating this subtle awareness brings us into greater harmony with this delicate interchange of ourselves with nature.

Developing this subtle awareness is easier when we do not talk much at meals or do distracting things while we eat. Reading the newspaper, watching TV, having business meetings, and engaging in a lot of verbal interaction distract our attention from the assimilation process. If we focus on absorbing the energy from the food we will derive greater good from it. There is usually plenty of time left over for socialization with others after the chewing and subtle assimilation part of the meal is completed. For many, this approach to assimilation requires a change in eating styles. I personally found it a challenge to let go of glancing through the newspaper while eating breakfast.

This concentrated focus on the Divine gift of food can be a powerful spiritual practice. Not everyone makes time to pray, study the scriptures, or think about God each day, but most everyone makes time to eat. If our heart and mind are focused on experiencing food as a love note from God, eating becomes not only a way to nourish and love ourselves, but each meal becomes a time for enhanced spiritual awareness and gratitude to God. It becomes a way to directly experience a meaning of "give us this day our daily bread." It provides a regular opportunity for the conscious eater to take the time to receive and read God's love note, rather than toss it unconsciously into the garbage can of the stomach. *Eating consciously is a way of opening one's heart to God. It is a way to feel the Divine presence.*

Intimately interacting with nature through the medium of food requires that one maintain some degree of awareness and thoughtfulness. In this state one can sense a subtle fullness in the mouth and palate when the energy is released and therefore one does not have to clutter the mind counting chews. Food is also transformed from its solid form to a liquid state, then to a gaseous state, and from a gaseous state to a more subtle or etheric state. This not only involves chewing well, but also breathing in a way that enhances the liberation of this subtle energy from the food. Taking a pause and a deep breath four or five times with meals is an important aid to this assimilation process. This may be one reason the Essene Jesus said in *The Essene Gospel of Peace, Book One* (p. 39):

And when you eat, have above you the angel of air, and below you that angel of water. Breathe long and deeply at all your meals, that the angel of air may bless your repasts. And chew well your food with your teeth, that it becomes water, and that the angel of water turns it into blood in your body. And eat slowly, as if it were

a prayer you make to the Lord. For I tell you truly, the power of God enters into you if you eat after this manner at his table....

Preparing Ourselves to Eat

HOW CONSCIOUSLY PREPARED ONE IS TO EAT FOOD becomes as important as how one has prepared the food. There is a wonderful story about the Greek sage Epicurus (342–270 B.C.). The word Epicurean, which means “one with sensitive discriminatory taste in food,” is derived from his name. News of how wonderful it was to dine with Epicurus had traveled far and wide. One day a king who had heard of his reputation arrived to feast with Epicurus. He was shocked to see Epicurus sitting in a simple setting with just a piece of bread and some salt. The king, possessing some wisdom in his own right, kept his mind open enough to observe the fine level of consciousness and joy with which Epicurus, and eventually he himself also, ate the bread and salt. As the king grew more ecstatic with each bite, he decided to offer Epicurus anything he wanted, up to half his kingdom. He was shocked again to hear Epicurus turn down his offer with the comment, “It is enough to be, nothing more is needed.” The king pressed his offer again, and in order to please the king, Epicurus made a request for one pound of butter. His lesson to the king was that a good meal depends on the consciousness of the eater and how he/she celebrates it. It is not how elaborate the food, dining hall, or material lifestyle of the eater is. It is the state of consciousness that counts in extracting joy from our interaction with nature.

The practice of being conscious of the experience of energy being released from food seems also conducive to bringing about a shift in how the food is prepared. It is much easier to experience the unique energy of one specific food when that one type of food is all that is in one's mouth. Because of this, I find myself preparing food in larger, bite-sized, and identifiable pieces. For example, I might have just three or four items in my salads, which are cut in big enough pieces so that I can easily identify their tastes as I eat them. In this way I can experience the play of the different tastes and energies.

The interplay of a single spice, or combination of spices, with the food is another way of experiencing the delicious mix of energies. Spices tend to bring out and accentuate the different tastes of the individual foods. Each spice has its own unique herbal energy and taste that balances and harmonizes one's constitutional psychophysiology. This balancing and healing effect adds another dimension to the assimilation process. How spices affect specific constitutional psychophysiological types is discussed later in the book and the recipe section, where we have designed recipes that include this new approach to preparing food. It also turns out that when we prepare and eat just a few varieties of food in our meal, it is easier to assimilate and digest. As Jesus says in *The Essene Gospel of Peace, Book One* (p. 37):

And when you eat at her table, eat all things even as they are found on the table of the Earthly Mother. Cook not, neither mix all things with another, lest your bowels become as steaming bogs.

The Art of Relating to Food

ANOTHER ASPECT IN THE ART OF CONSCIOUSLY EATING FOOD is how one regards the food itself. If one sees nature as a servant existing only for personal needs, then one fails to fully appreciate the food and other gifts of nature. If one sees humanity as one strand in the web of life rather than egocentrically as the whole web, a much broader awareness of our union and harmony with nature develops. To experience oneself as interwoven with nature leads to receiving our food with more love and gratefulness. If food is eaten with a prayer of gratitude and respect for the life force it bestows and the sacrifice it is making for the survival of the human body, the food will carry the love of this prayer inside. The power and sacredness of the eating process are enhanced by the awareness that each particular fruit or vegetable is giving up its own individual existence as part of the evolutionary process so that it may be assimilated into the greater existence of the human body. In this larger context, eating becomes a sacred act in which food is an offering to the digestive fire to honor and appease the spirit of one's human form. In addition to making an offering to oneself, in some traditions an offering to nature or God is also made. In some of the American Indian traditions, such as that of the Cherokee, a food offering is made to the four directions and to some aspect of nature, such as a plant or a tree. In the Hindu tradition an offering before eating is made to God. Food may also be given to a sacred fire, an animal, or another human being as a way of allowing one to experience the joy of providing food, as well as the joy of receiving it. I witnessed this offering in almost every home I visited in India. This offering before eating is a way of thanking Mother Nature. It is another reminder that one's food is connected to all God's children.

Thoughts Affect Foods

IN ADDITION TO THE PHYSICAL NUTRIENTS and the plant's energy, one also inadvertently assimilates the state of mind of the people who grew, harvested, and prepared the food. If the food is grown and harvested by an organic farmer who is very much committed to caretaking the land and its produce, it is likely that this will produce a different energy than that of food grown by an agribusiness corporation. Personally caring for the land in a natural way creates a different effect than using synthetic fertilizers which deplete the soil, or using pesticides and herbicides that are toxic for those who eat the food and for those who are harvesting the food. Food harvested by a worker who feels exploited by the working conditions has a different energy than food harvested by one who is connected with his or her garden and who harvests with gratitude, love, and joy. If food is prepared with love as an offering to God and with the consciousness of the essential oneness of the person preparing the food and the person eating the food, the food itself will be absorbed and elevated by that consciousness.

Marcel Vogel, who was a research scientist at IBM for twenty-nine years, has been able to show experimentally that when water is infused with the thoughtform of love, its structure changes and the taste is sweeter. He did this by having people project loving thoughts into water and then he tested it in two ways. One was a subjective taste test in which people were asked to drink the two different waters. They all found that the water infused with love tasted sweeter. He also tested the water with nuclear magnetic resonance equipment and found that the bond angle of the oxygen and hydrogen in water infused with love was actually changed. In some cultures, the food preparers are encouraged to chant the name of God while preparing food for this same reason.

An interesting story of a monk living in the forest in India helps to illustrate this point. He was living in a simple setting, meditating regularly, and eating pure food that he gathered from the land. In this region it was customary for the kings and wealthy people to invite the monks to stay with them during the monsoon season. It was considered a blessing for the king to invite this monk to stay with him. The king, being of a greedy nature, also had a greedy cook. During the time of the monsoon, the monk had to eat the food prepared by the greedy cook of the greedy king. Over time the pure mind of the monk began to have greedy thoughts as a result of eating the food that had taken on the greedy thoughts of the cook. One day, near the end of the monsoon, the monk impulsively stole the necklace of the queen. The palace was in an uproar about this and, of course, no one suspected the monk. After a short time, the monk announced he was leaving. He returned to the forest with the necklace. After a few weeks of eating his own food, his mind began to clear. One day he looked at this necklace and could not figure out what he was doing with this useless piece of jewelry. When it became clear to him what had happened, he returned to the king with the necklace. The king, of course, wanted to know why he had done it. The monk explained that the food he had been eating while he was in the king's castle had been permeated by the greedy consciousness of the cook and had temporarily infected him with that greed. When he began to eat his own pure food prepared with love, his mind cleared and the greed left. For similar reasons, I regularly prepare my own food. I go to my garden and pick the vegetables to which I am most drawn. I thank the individual plant for feeding me and try to pick it with love in an awareness that the food is an offering. While eating, I try to maintain the imagery of where I picked the food. This helps me maintain an intimate interface with nature. It also keeps the food from being anonymous.

Imagery of Foods

THE WAY FOOD IS SERVED IN MOST RESTAURANTS, supermarkets, and fast-food outlets has little imagery or energy of its connection to its origin. Some people who have never lived in the country may think that food grows on a grocery shelf, but most understand that food is grown in the context of Mother Nature's energies of the sun, wind, earth, and rain. The active awareness that what one eats comes from Nature's bountiful earth rather than from a grocery shelf or fast-food bag honors Mother Nature. The Ten Commandments say to honor our mother and father. To me, this includes Mother Nature, whom I refer to as the Earthly Mother, and God as the Heavenly Father. I have observed an added joy in eating and an appreciation for food in myself and others who re-create the poetic images of the source of their food, such as visualizing an apple tree when eating apples, or imaging beets in the ground when eating beets. I also think about all the forces of nature that have helped create the plants. I see the sun shining on the beet, the rain nourishing it, the wind caressing it, and the earth giving it nutrients and acting as its home. With each bite, I am taking in and being energized by all these forces of nature. It's a delight! When these multiple insights are included in the eating process, it helps us take into ourselves the full nurturing qualities of nature, which are love manifest.

Energy Needed to Assimilate

IN THE PROCESS OF EATING WE ARE PENETRATED by the forces of the food. If these forces are too strong for us, and we are not able to muster enough assimilative energy to match the forces of the food, we can become sick. A classic example of this is overeating in a foreign country and getting “tourista.” We get tourista because included in the new foods we eat are new types of bacteria that we are not accustomed to taking into our bodies. When we eat just a little of this food, the hydrochloric acid in our digestive system is able to neutralize and digest the bacteria. But if we overeat, we are sometimes not able to secrete enough digestive enzymes to destroy the bacteria. Consequently, the bacteria start to digest us in the sense that the bacteria create a pathological condition in our bodies. The practical side of this is not to overeat while traveling and to take some extra digestive enzymes, such as betaine hydrochloride, with each meal. By following this simple rule, my own family did not have digestive or parasite problems in about eighteen months in India as well as on several trips to Mexico. Other people following this basic advice have also done quite well.

Food Stimulates Inner Forces

DIGESTION INVOLVES OVERCOMING AND ASSIMILATING the energetic forces in our foods by stimulating our inner forces to respond. This constant stimulation of our digestive forces by our food is actually very healthy. There is a general principle in the functioning of the human body which is called “use it or lose it.” For example, in walking, the muscle and skeletal system is strengthened by constantly overcoming the forces of gravity. When gravity is absent, as in the case of the astronauts who live for periods of time in a gravity-free environment, it was found that they begin to lose bone and muscle mass unless they do specific exercises.

The concept of our inner forces meeting the outer forces of food will be explored in depth later in the book in the sections on transitioning to vegetarianism and raw foods. Those who eat primarily cooked foods, which have lost some of their energy through the cooking, stop exercising their full digestive energies and may lose some digestive power over time or even generations.

When live foods are introduced too quickly, I have observed that people sometimes have trouble digesting them. If one doesn't understand this principle and doesn't give oneself time to develop the digestive power by making such a transition slowly, it is very easy to become discouraged in the transition process. A classic case of this is my observation of people visiting the United States from India. In India, most of the food needs to be cooked for hygienic purposes. When people from India start to eat raw salads, they may develop some discomfort. On a more subtle level, in the transition to vegetarianism from meat-eating, some people may have difficulty responding to the forces of stored sunlight that are released by the plants. Plants store light through the process of photosynthesis. During the process of assimilation, this light is released from the plant into our own systems. According to Rudolf Steiner, if one is prepared, an equal and opposite inner light is activated to match this. By this process, one increases the strength of the inner spiritual light, which is the original sustaining energy that keeps us alive. Heavy meat-eaters become deprived of this light stimulation, because the plant light has been released into the animal and is not transferred to the human. Some people who have come from generations of meat-eaters need time to build up this light. To use a physical analogy, if one were doing push-ups, one does not immediately start with 100 push-ups, and then when one fails, make the pronouncement that doing push-ups is too difficult for nonpush-up people. If one wants to succeed, one starts with 5, 10, or 20 push-ups and works up from there. One usually isn't discouraged if one can't start with 100 push-ups, and so in the same way one should try not to be discouraged if one is slow in making the transition to vegetarianism or raw foods.

Supplements Affect Powers of Assimilation

UNDERSTANDING THE DYNAMICS between the body's energies and the external energy of foods gives us a knowledge of how the body might be affected by vitamin and mineral supplements, specifically the chronic use of high-potency, synthetic vitamins, minerals, free amino acids, and other supplements. For example, for vitamin Bs, a high-potency, synthetic nutrient is anything over 5 to 10 milligrams. B vitamins less than these potency levels are usually obtained from natural food sources and are not synthetically made. I believe that it is a credible hypothesis that the use of high-potency B vitamins makes it too easy for the body to take in these nutrients in that the body doesn't have to work to extract and absorb them from food. It is comparable to a person getting a car and no longer walking regularly. Without the vital exercise of walking, they lose their stamina and strength. It is possible that this same principle of "use it or lose it" is operating when one excessively uses synthetic, high-potency supplements. Stating this possibility does not mean that I am against the use of supplements. I find that often at the beginning of the process of healing and rejuvenation, clients may need a good deal of nutrients to get the body going in the direction of a healthier state. As their bodies progressively begin to heal and achieve a higher level of health, their ability to assimilate improves and they make the transition to food concentrates along with, perhaps, a minimal amount of supplements.

Assimilation Aspects of Withdrawal

I SUGGEST THAT SYNTHETIC SUPPLEMENTS should be used with the awareness that assimilation involves a dynamic interaction between our bodies and the forces in food. Because of this, we should be cautious concerning the idea that all we have to do to get our nutrients is to mechanically load the system with high-potency, synthetic nutrients. Although there is not hard data to prove it, the indiscriminate, excessive use of high-potency, synthetic nutrients may act more as a stimulant and may cause some energetic imbalances. In addition, the body may become less able to assimilate nutrients from food when, and if, the synthetic vitamins and minerals are withdrawn for some unexpected reason.

In some of my clients, I have discovered that during withdrawal from fast foods, sugars, and drugs, these people first sometimes feel weaker before they become stronger. In addition, paradoxically, if they backslide and eat the energetically disruptive junk food of their old diet, they may get a false sense of feeling stronger. Let me explain. Most people test weak to white sugar when using the Kinesiology muscle testing method. During withdrawal from white sugar, some people muscle-test stronger with it in the beginning, although later they will test weaker. This can occasionally be true for junk foods. This doesn't mean one goes out and resumes eating junk foods; it means that, knowing this, one should try harder to resist the craving. The actual process may be that the physiology and cell memory—a metaphor for the body's subtle ability to remember substances to which it's addicted or allergic—go through a temporary adjustment period in which the body switches from unhealthy metabolism to a healthier metabolism. We see an analogy to this in some people going through withdrawal symptoms from alcohol. A drink of alcohol will decrease the hangover effects or the symptoms and for a short time make the person feel stronger and better. This paradoxical effect is sometimes seen with allergies when we crave the very things to which we are allergic. After this period has passed, people usually test weaker with the particular junk food or drug from which they have withdrawn and become worse when they are exposed to it.

Another energetic quality of food involves the actual colors that Nature bestows on our food. These colors can be viewed as different frequencies of condensed sunlight which aid our balanced development on a variety of body, mind, and spiritual levels. Each specific color frequency stimulates and nurtures specific subtle energy centers, different nervous system plexuses, our autonomic nervous system, and the various glands and organs. This principle, which I call the “rainbow diet,” is described in detail in my book *Spiritual Nutrition and The Rainbow Diet* and will be clarified later in this book.

It is fascinating to me how understanding the process of assimilation on a deeper level brings us into such an intimate interrelationship with nature. The very process of assimilation is a way to experience the manifestation of the Divine through nature in our everyday life, no matter where or how we live.

BLACKBOARD EXERCISE

Tuning in to the Love Note of God's Food

1. Close your eyes and take a deep breath.
2. Hold the food in your hand and feel texture, weight, smell, shape, color, and any subtle message.
3. With eyes still closed, imagine the food in its natural setting.
4. Thank God for the food and take one bite.
5. Chew slowly and experience juices, texture, and tastes.
6. Feel any energy release into the soft palate.

Preview of Chapter 3

IN THIS CHAPTER WE CHALLENGE the basic assumption of the standard approach to nutrition and realize that there is no single diet for everyone. We examine and explain metabolic dominant physiological systems. Based on this, the principle of biochemical individuality is established for selecting a diet.

I. Principles of individualization

II. Dominant systems

A. Oxidative

B. Autonomic

C. Ayurvedic

D. Anabolic-Catabolic

E. Endocrine

F. Blood Type

G. Acid-Base



A Revolutionary Breakthrough in Personalizing Your Diet: Linking Food Ratios to Physiological Types

THE PRINCIPLE OF BIO-INDIVIDUALITY holds that we are all unique bio-individuals with varying nutritional needs based largely on our genetic inheritance. This principle is powerfully stated by nutritional pioneer Roger Williams, Ph.D., D.Sc., in his book *Biochemical Individuality*: “If we continue to try to solve [nutritional] problems on the basis of the average man, we will be continually in a muddle. Such a man [average] does not exist.” Dr. Roger Williams introduced the concept that people have a genetic need for certain types of food and varying ratios of carbohydrates, proteins, and fats. He also demonstrated that people respond differently to the same vitamins, minerals, and other nutritional co-factors. What this means is that we can no longer just simply prescribe—in an across-the-board, general way—any particular nutrient for a specific disease. We must first discover the bio-individuality of the person who will be *taking* the nutrients. Contrary to this is the fallacy of “allopathic thinking” which, as a rule, does not address the person's underlying biochemical individuality. The allopathic concept of “one diet for everyone” is based on the false assumption that every human being's metabolism is the same and that there is one kind of nutritional approach and specific supplement regime which works for everyone and every disease.

The future of nutrition is based on continuing to discover the principles that determine metabolic bio-individuality. The practitioner's role will be to assist individuals in creating diets that match their unique metabolic and physiological needs.

At present, the shortcomings of allopathic thinking have permeated the health marketplace. Dietary systems with opposing philosophies and practices all have thousands of thankful testimonials, their adherents shouting from the rooftops that their diet is the “right way” for anyone who would just “try it,” whether it be cooked-food macrobiotics or raw foods; the low-protein vegetarian Fit For Life Diet or the high-protein Atkins Diet; or the McDougal-Pritikin high-complex-carbohydrate diet or the popular Sears Zone diet. How can all these different systems be right for everybody?

Simply put, they're not. If we look closely at the people who follow these diets, we find a very curious phenomenon. All these diets do seem to work ... *but only for about one-third to one-half of the people!* Those for whom it works are the ones who give the glowing testimonials. We do not hear too often from the ones for whom they do not work.

Why do these diets work for some and not for others? The answer to this puzzling “controversy” can be found in biochemical individuality. Different physiological types require different fuel mixtures in order to enter “the zone,” or the right conditions to have maximum cellular energy and expression of health. A racing car requires a different fuel mixture than a jeep, and the same principle operates when it comes to human metabolic type.

Lucretius, the Roman philosopher, put it nicely when he said, “One man's meat is another man's poison.” When we give our body the correct balance of proteins, fats, carbohydrates, vitamins, and minerals *for our own physiologic pattern*, we enter our personal “zone.” This is the homeostatic state we achieve when maximum energy is created from the food we eat. I want to be clear that when I use the term “the zone,” I do not mean the Zone Diet that Dr. Barry Sears popularized. In Dr. Sears' Zone Diet, the real reason that the diet makes a percentage of people feel good for a while is not the animal foods themselves that they may have just added to their diet; it is the particular ratio of proteins, carbohydrates, and fats—the *fuel mix*— that is in alignment with their true metabolic needs. Put these same people on a vegetarian diet that emphasizes a similar ratio of proteins, carbohydrates, and fats, and you'll get similar positive results without the long-term harmful effects and risk factors associated with animal foods as a major component of the diet.

Another thought about the Zone Diet, the Blood Type Diet, or any diet that says one must eat animal foods to be healthy—I cannot emphasize enough that there is no scientific evidence that human beings of any physiological pattern have a minimum daily requirement of animal foods. A high-protein diet can easily be achieved in a more

healthy way with vegetarian sources of protein. Even Eskimos could adapt if they had to. Too much animal food is the surest way of leaving “the health zone” for the “hospital zone,” as epidemiological studies for cancer, heart disease, diabetes, and other degenerative diseases attest.

The main reason for the eventual failure of nonvegetarian food prescriptions is that in the long term, animal foods do not suit the ideal anatomical and physiological requirements of the human body, mind, and spirit. Several of my other chapters go into detail on the health risk factors associated with animal foods. The key revolutionary breakthrough is that the ratio of protein, carbohydrate, and fat must be linked to the physiologic pattern of the person.

Principles of Physiologic Constitutions

THE KEY PRINCIPLES OF PHYSIOLOGIC CONSTITUTIONS ARE:

1. any nutrient and food can have opposite biochemical effects in different individuals;
2. any symptoms or degenerate conditions can be caused by opposite biochemical imbalances;
3. diseases are the result of underlying metabolic imbalances, and so the treatment of disease is the treatment of the underlying metabolic imbalance;
4. in a particular individual there is one homeostatic regulatory system that dominates these other systems;
5. which system dominates will determine how a particular diet or nutrient behaves in one's system;
6. to accurately select a proper diet and nutrients, one needs to know the dominant system and metabolic type.

Knowledge of these different homeostatic systems is not new. The first research about this subject was done by Francis Pottenger, M.D., in 1919. In his book, *Symptoms of Visceral Disease*, he showed that the autonomic nervous system (the involuntary nervous system controlling such processes as digestion and breath—abbreviated ANS) is the basis of physiologic individuality. He also showed how certain nutrients affect the autonomic nervous system differently, depending on whether one's constitution is parasympathetic-dominant (referring to the part of the ANS that regulates and stimulates such processes as digestion and defecation) or sympathetic-dominant (referring to the part of the ANS that stimulates the flight or fight response).

In the 1950s Drs. Melvin Page and Henry Bieler, famous American nutritional doctors, developed another approach—the concept of endocrine types. They created physiologic systems based on the dominance of a particular endocrine gland; thus we have adrenal, thyroid, gonadal, and pituitary types. Each endocrine category requires a different diet and does better on modified lifestyle factors.

Another researcher of the 1950s was Dr. George Watson, a professor of psychology at UCLA, who found that individuals oxidized their food differently. In other words, the speed with which they oxidized different nutrient categories such as proteins, fats, and carbohydrates was key to the dietary choices that were appropriate for the individual. He discovered that to produce optimal energy for the brain, a person has to eat the right mix of these nutrient categories. Using his approach, he had significant healing success with people who had a variety of mental-emotional problems ranging from depression and anxiety to schizophrenia.

Dr. William Donald Kelly was the first to use the autonomic nervous system as a way to classify different physiologic types. He used this system with partial success in treating cancer and other medical problems.

All these physiologic systems based on biochemical individuality had various levels of success. Applied singly, they still had gaps in their scope of effectiveness. There needed to be a way to integrate all these systems. In 1983, W. L. Wolcott, who was the trouble-shooter for Dr. Kelly for eight years, established the principle of metabolic dominance. This principle states that for each person, one constitutionally driven physiologic system is the ruling or most influential system in determining how the body will function on a particular nutritional regimen. This new concept has led to a breakthrough in integrating these different physiologic system approaches. The key to synthesizing the various physiologic systems is to first determine the dominant system so we can accurately prescribe the type of diet and nutrients that will support a person's well-being and highest functioning. I want to acknowledge that my understanding of this exciting breakthrough has come directly from many hours of dialogue with W. L. Wolcott. Currently, I am engaged in a joint research project with W. L. Wolcott and Dr. Harold Krystal to find the most accurate and simple way to establish an individual's metabolic type and dominant homeostatic regulatory system.

Dominant Physiologic Systems Approach

THE IMPORTANT QUESTION in the physiologic constitution approach is, “How do we find out what our dominant physiologic constitution is?” Resolving this question is one of the keys to conscious eating.

In arriving at any constitutionally prescribed diet and lifestyle for an individual, the following list of physiological systems should be taken into account. After determining the dominant physiologic pattern, the other levels of physiologic systems are factored in to create a unique way of viewing the individual's overall biological functioning. Many healthy people have intuitively gravitated to the appropriate diet and lifestyle that supports their constitutional strengths and weaknesses. However, there are those who are immersed in the confusion of various uncomfortable physical, mental, and emotional symptoms and need outside assistance by trained health practitioners in order to discover what in their diet and lifestyle is contributing to imbalance. They require support in understanding what needs to be added to their diet and lifestyle to eventually bring them back into balance. Some of the main constitutional systems originally outlined by W L. Wolcott that I consider in my analysis include:

1. autonomic system operating on a continuum ranging from sympathetic-dominant to parasympathetic-dominant;
2. oxidative system operating on a continuum ranging from fast oxidation of glucose to slow oxidation of glucose;
3. Ayurvedic psychophysiological constitutional tendencies as found in the *dosha* forces *kapha/pitta/vata*, which are explained in Chapter 4;
4. acid/alkaline operating on a continuum ranging from acid- to alkaline-forming foods;
5. endocrine glands ranging from the dominant endocrine type to the least dominant (adrenal, thyroid, gonadal, and pituitary);
6. lipo-oxidative system operating on a continuum ranging from catabolic-aerobic-acid versus anabolic-anaerobic-alkaline;
7. blood type, such as Type O, A, AB, etc., associated with lectin sensitivity (to be explained later in this chapter).

Once we determine the dominant physiologic system of an individual, we then can begin to develop a diet that works to balance that system and most effectively bring homeostasis (balanced physiologic functioning of the biologic system) and optimal health to the overall organism.

Each person has a dominant system with a unique blend of less dominant systems that influences how the food we eat affects our homeostatic balance. In my research and clinical experience, I've found that there are several major physiologic systems that determine how food and supplements affect our homeostatic mechanism to bring health and illness. The two most significant are 1) the oxidative system (fast, slow, and mixed oxidizer) and 2) the autonomic system, comprised of sympathetic, parasympathetic, or balanced. The third major system I use is the Ayurvedic.

In the Ayurveda system, three psychophysiological constitutional types— *vata*, *pitta*, and *kapha*—reveal that the ancients had intuitive insight and appreciation of the inherent psychophysiological differences and the respective dietary prescriptions for these different constitutional types.

When I work with individuals in putting a diet and lifestyle plan together, all my training in these different health systems overlaps and comes into play.

Oxidative System

IN THIS SECTION, I describe how the oxidative system works on the functional level of the individual. In the section immediately following, I explore how the oxidative system works on a biochemical level.

The oxidative system is dominant in approximately 60% of the population. The autonomic system is dominant in 40% of the population.

What is fascinating about this is that the same food or supplement for people who are oxidative system-dominant will have just the opposite effect in a person whose autonomic system is the dominant force. For example, calcium in a sympathetic-dominant person will create more sympathetic dominance imbalance and acidity. In a person whose system is dominated by the oxidation homeostatic mechanism, calcium will cause a slower oxidation and move the system toward alkalinity.

Potassium and magnesium will alkalize a person whose autonomic nervous system is dominant and will acidify a person who is oxidative-dominant. As you can see, this completely opposite effect has great clinical significance as far as what one prescribes for people.

Fruits and vegetables in the oxidative-dominant system will cause the blood to move to the acid side. In the ANS-dominant person, fruits and vegetables will cause the blood to move in an alkaline direction.

Protein foods acidify the blood in ANS dominants and alkalize the blood in oxidative-dominant people.

The startling point here is, it is not the food or nutrient that determines the alkaline or acid effects in the body. It is the dominant system of that person which determines whether a nutrient will react in an acid or alkaline way in the body

At the Tree of Life Rejuvenation Center I now measure the change in blood pH in response to foods and nutrients in different individuals. It constantly amazes me how the blood pH tests are totally different than what is taught in medical schools and in most of the naturopathic literature. I have had to rewrite my acid-base chapter in this new edition of the book in order to adjust to these exciting new findings.

The research shows that food and nutrients behave differently in people with different dominant metabolic types. This has profound implications. It is the most obvious explanation for why some diets or “miracle” nutrients work well for some people but may actually make other people feel worse.

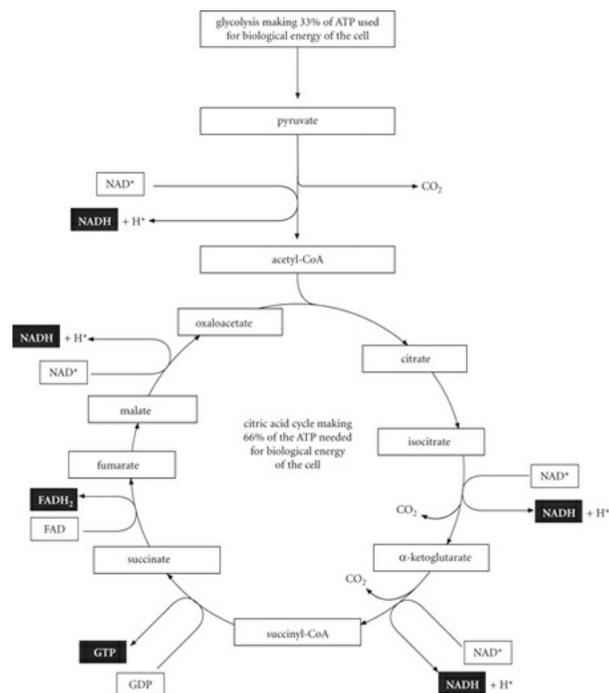
The implications of metabolic systems is that there is no one human physiology that is the “gold standard” by which to compare everyone else. In practical reality this means that diets, herbs, and nutrients must always be individually prescribed rather than allopathically prescribed in a quasi-democratic, “one for all”-type mentality. Allopathically prescribed recommendations for so-called “right vitamins and minerals to treat different diseases” aren’t precise enough for the nutrition of the future that we are working toward developing in the present.

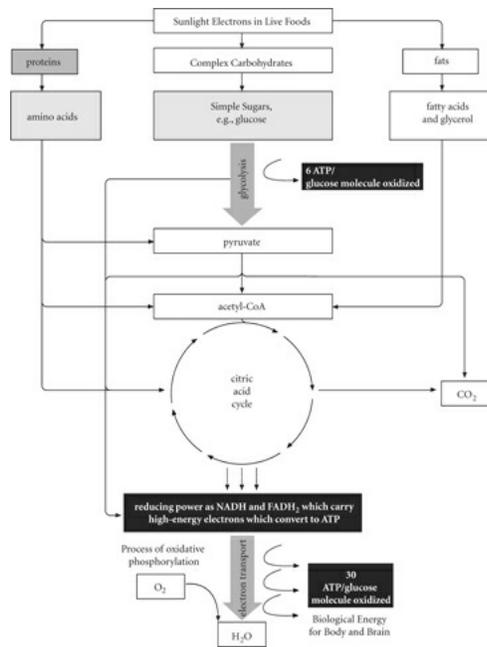
Following general prescriptions may lead you to taking nutrients that are specifically deleterious to your particular metabolic type. In other words, two individuals may have different systems out of balance, yet manifest the same constellation of symptoms. The reverse is true as well: Two individuals may have very similar physiologies, but different symptom patterns.

To rebalance metabolic systems and heal these two different individuals, we must introduce different diets and nutrients. The principle then is: any given disease or symptom complex may arise from virtually opposite biochemical imbalances in different metabolic types.

How the Oxidative System Works

THE PRIMARY FUNCTION OF THE OXIDATIVE SYSTEM is to convert proteins, fats, starches, and sugars into cellular energy in the form of ATP (adenosine triphosphate). ATP is the biological form of energy storage at the cellular level. There are two main biochemical energy cycles at the cellular level that produce ATP. One is called glycolysis and the other is called the citric acid cycle. Glycolysis provides about 33% of the cellular energy. The citric acid cycle, when operating optimally, produces about 66% of the cellular energy. To make each of these cycles work optimally and efficiently, there needs to be an optimal ratio of raw materials coming from sugars, protein, and complex carbohydrates in a person's diet.





Specific vitamins and minerals are needed for the optimal function of these cycles. A slow oxidizer is someone whose glycolysis cycle is working slowly, so he or she needs more carbohydrates in his or her diet to compensate for the slower oxidation and lower production of glucose and its metabolic intermediates such as pyruvate, which indirectly feeds the citric acid cycle. A fast oxidizer is one whose glycolysis cycle is working too rapidly. Too much glucose and its breakdown products are produced and there is an unbalanced amount of pyruvate and other intermediates from the glycolysis in relationship to the acetyl-CoA from the protein and fat metabolism. Either too much or too little glucose and its intermediate breakdown products in relationship to protein and fat catabolism interferes with the proper functioning of the citric acid cycle. To optimize biological energy, or ATP production, the citric acid cycle must work at maximum efficiency (see the diagram). For the citric acid cycle to work optimally, there needs to be the right balance of glycolysis and protein and fat catabolism. When there is the correct balance of these, the citric acid cycle has the right fuel mix to function efficiently and produce a maximum amount of ATP.

There is a third type of oxidative system which we call mixed. These people are balanced between a slow and fast oxidizer metabolism and so need a third ratio of protein/carbohydrate/fat.

In practical terms, a slow oxidizer needs a high carbohydrate intake to prime the slow glycolysis rate and a relatively low protein and fat intake to keep a low rate of acetyl-CoA production from fat and protein catabolism.

A fast oxidizer needs a low carbohydrate intake to slow down the glycolysis production and a higher protein and fat intake to increase the acetyl-CoA production. A fast-oxidizer diet is a relatively low-carbohydrate, high-protein, and moderate fat-intake diet. Please note that this high-protein diet is easily achieved with a plant-based, vegetarian diet.

Research with multiple personalities and manic-depressives shows dramatic physiological changes in constitution. Although these are described as constitutional tendencies, major stress physically and emotionally has been known to cause shifts in constitutional tendencies. With prolonged optimal health I have seen people shift toward more of a mixed oxidizer. They tend to be slanted more toward their original constitution, but are no longer at an extreme pole.

Needs of Fast, Slow, and Mixed Oxidizers

Fast Oxidizer: high protein, 50-55%; low carbohydrate, 30-35%; medium fat, 20-25%; tendency to be acid.

Slow Oxidizer: low protein, 30-35%; high carbohydrate, 55-60%; low fat, 10-15%; tendency to be alkaline.

Mixed Oxidizer: medium protein, 40-45%; medium carbohydrate, 40-45%; medium

fat, 15-20%; tendency to be optimal pH 7.46.

Physiologic Constitutions, Brain Functioning, and Behavior

AT THE TREE OF LIFE REJUVENATION CENTER I am presently exploring the impact of diet and nutrients on the brain, behavior, psychological states, and overall well-being. The research of Dr. George Watson (explained in his book, *Nutrition and Your Mind*) on mental states and the oxidative systems is a landmark in the scientific literature. His work strongly demonstrates the influence of diet on the functioning of the brain. Watson's research with more than three hundred patients showed that some cases of mental illness, including serious psychiatric diagnoses such as obsessive-compulsive disorders, depression, anxiety, and even schizophrenia, involved impairment of the nervous system and brain function due to abnormalities in the brain metabolism of these patients. Watson's research showed that the rebalancing of cellular oxidation is key for restoring proper energy function of the brain and nervous system. When proper brain energy metabolism was reestablished, many mental states such as anxiety, depression, obsessive-compulsive disorders, and paranoia faded away.

I am finding the same results in my work. If the brain's cellular metabolism is producing optimal energy, mental and emotional imbalances are more likely to disappear.

Watson found that in order to regulate the rate of cellular oxidation and reestablish metabolic balance, people need an adequate supply of nutrients in a balanced ratio of food fuel proportions, according to whether they are fast or slow oxidizers. We must appreciate that food provides the raw materials the body uses to synthesize cellular enzymes as well as to balance hormones which in turn regulate thyroid, insulin, and glucagon balance, all of which affect the brain metabolism.

The Biochemistry of Brain Function

GLUCOSE TRANSPORTED IN THE BLOOD is the basic food for all the muscles, organs, brain, and nervous system. When glucose metabolism is impaired, it impacts our mental state. The brain needs the greatest amount of glucose of all the body organs to function efficiently. All energy used by the brain is derived from the process of cellular respiration, which uses glucose as its primary fuel.

Cellular respiration is the process by which complex foods are broken down into more simple substances. These are then oxidized at the cellular level to make energy for the brain and for the body generally. In this process, glucose is transformed by the action of enzymes (biochemical catalysts) into a series of intermediate substances (intermediary metabolites) which drive complex metabolic cycles. It is these cycles which create energy in the form of ATP, the primary energy molecule of the body, as previously mentioned. The energy does not come from glucose directly, but from the interaction of the intermediary metabolites in the glycolysis and citric acid cycles that have been created from the glucose.

To understand how fast- and slow-oxidizing metabolisms profoundly affect functioning, we must appreciate how the body produces ATP from glucose. In these two primary cellular respiration cycles, any interference with the step-by-step breakdown of the glucose to ATP from the incomplete oxidation of glucose intermediates in the brain may result in impaired mental functioning.

As an example, let's take the case of a deficiency in the vitamin niacin. Niacin participates in the enzymatic breakdown of sugar at several places in the energy production cycles. A deficiency of niacin slows down brain metabolism and therefore affects the creation of energy for brain function. It is well known that a niacin deficiency may result in pellagra. Pellagra has a variety of mental symptoms associated with it, including depression and anxiety. Niacin is also needed for tryptophan metabolism. Niacin deficiency has been implicated in some forms of schizophrenia. As we can see, deficiencies of these and other vitamins and minerals, as well as pH imbalances, may profoundly alter brain functioning and therefore the normal functioning of brain activities.

Although glucose metabolism is primary in brain metabolism, the adequate utilization of protein and fat breakdown products in the citric acid cycle significantly affects the amount of ATP that is available for brain metabolism. There needs to be a proper mix of the intermediate metabolites from both glucose metabolism and fat and protein metabolic breakdown for the citric acid cycle to produce the optimal amount of energy for proper functioning.

To summarize, a person with a slow oxidative metabolism processes glucose too slowly in the glycolysis cycle and therefore does not create the proper fuel mix with the catabolic products of fat and protein metabolism. The result of this poor mix is a slow-down of the production of energy in the cells. Adverse psychological effects of this include documented cases of anxiety, depression, and obsessive-compulsive disorders.

As I pointed out before, slow oxidizers do best on a diet that is high in complex carbohydrates, moderately low in protein, and low in fat. The high amounts of carbohydrate supply more glucose to drive the slow oxidizer system to increase glycolysis function. The low-fat and -protein part of the diet minimizes the amount of fat and protein metabolites in the system, so less acetyl-CoA is produced. For a slow oxidizer the glycolysis needs to be primed with a high-carbohydrate diet, and the acetyl-CoA needs to be minimized with a low protein and fat input.

Fast oxidizers are people whose metabolism burns glucose quickly and have too much activity in the glycolysis cycle. In this case there is an imbalance with the metabolites of the fat and protein metabolism, which is insufficient to match the excess of metabolites such as pyruvate from the glycolysis cycle. To get the correct mix, fast oxidizers need to eat more protein and fat to produce more acetyl-CoA to keep up with the high glycolysis metabolism. Following this understanding, one can see that for fast oxidizers the traditional vegetarian diet of low fat, low protein, and high complex carbohydrate diminishes their energy production. Consequently there is a significant disruption of the energy production in the nervous system. Severe personality changes can manifest, such as social withdrawal, anxiety, depression, tendency to violence, and even paranoid delusions. I have seen this happen in fast oxidizers who have tried to convert to the high-complex-carbohydrate, low-fat and -protein style of traditional vegetarian diets. Fast oxidizers do best on variations of the "Zone" diet, preferably plant-based as I mentioned before, which is a relatively high-protein, moderate-carbohydrate, and moderate-fat diet. The ratio is approximately 50-55% protein, 30-35% carbohydrate, and 20-25% fat. For frustrated fast oxidizers who are struggling to be vegetarian because they are sticking to the traditional vegetarian approach of a low-protein, low-fat, high-complex-

carbohydrate diet, this information has been a tremendous boon. Literally overnight they transformed from low-energy vegetarians to high-energy “successful” vegetarians. Once this information gets out and people become conscious eaters who break away from the narrow dietary teaching of the orthodox vegetarian community and attune to their own physiologic constitutions, there will be many more healthy and happy vegetarians. The pathway for many more people to become successful vegetarians will be opened.

Slow oxidizers do relatively poorly on the Sears Zone Diet type of approach because they need a diet that is high in complex carbohydrates to prime the slow glucose metabolism. Both poles of the oxidative metabolism can be corrected using a vegetarian diet. I have helped a variety of fast-oxidizer people become vegetarian with an individually prescribed set of nutrients and a specific high-protein, modest-fat, and modest-complex-carbohydrate diet.

It is important for fast oxidizers to minimize foods that are high on what is called the “glycemic index.” The glycemic index is the rate at which a food is converted into glucose. There seem to be several published variations of the glycemic index so I am not going to give numbers to the foods and share my version of the glycemic list. Common high-glycemic foods are puffed rice, rice cakes, cornflakes, sugar, wheat bread, and baked potatoes. These foods are best avoided or used minimally by fast oxidizers.

The middle-level glycemic foods include: carrots, brown rice, corn, bananas, all bran, kidney beans, raisins, spaghetti, and pinto beans.

Foods that have the lowest glycemic index include: yams, oatmeal, orange juice, rye bread, navy beans, apples, yogurt, peaches, plums, fructose, soybeans, and peanuts. Vegetables are also generally low on the glycemic index. Foods low on the glycemic index are the healthiest for fast oxidizers.

Foods high in purines are helpful to fast oxidizers. Purines are found in proteins that contain high amounts of nucleoproteins. Purines contain adenine, which is an important part of the intermediary metabolism for the production of acetyl-CoA from fat and protein. Some high-protein, high-purine vegetarian foods are chlorella, brewer's yeast, and bee pollen. Good vegetarian protein and fat foods are raw nuts and seeds as well as avocado.

The glucose metabolism of slow oxidizers improves with specific vitamins and minerals that speed up the breakdown of glucose to pyruvate. These help bring the brain metabolism back to a normal rate. A different set of vitamins and minerals will slow down the overactive glucose metabolism of fast oxidizers, and thereby bring them back to a normal metabolic pattern. Once one understands these patterns, it is possible to select the correct diet, vitamins, and minerals to either slow down or speed up the metabolism as needed.

Potassium, magnesium, chromium, B1, B2, and B6 stimulate the glycolysis cycle and thus help the slow oxidizer become more efficient. Calcium, iodine, boron, vitamin A, B3, and B12 slow down the rate of glycolysis and thus help the fast oxidizer become more efficient. For example, if we try to give a high-potassium diet to a fast oxidizer, we will make them more metabolically out of balance.

The reverse is also true: if one gives vitamins and minerals that slow glucose metabolism to a slow oxidizer, one may make their condition even worse. Through a properly prescribed diet and vitamin and mineral supplementation as well as other lifestyle changes it is possible to shift the metabolism of a slow or fast oxidizer back to a more balanced mid-range rate. One can shift the balance of the homeostatic mechanism so that a slow oxidizer moves more into balance.

One way of determining the optimal mineral and dietary pattern based on metabolic type is to observe the blood pH. Slow oxidizers naturally have a more alkaline blood pH, and fast oxidizers have a more acid blood pH. A properly prescribed diet will bring the blood pH back within optimal range.

Direct clinical observation shows that for people whose oxidation system is the dominant system, protein and fat intake will alkalinize the blood, and fruit and vegetables will acidify the blood. This may be different than what you have read or been taught in natural health circles. We may be concerned that fruits and vegetables make oxidative-dominant people more acid, but for oxidative-dominant/slow oxidizers who have a tendency to be more alkaline constitutionally, fruits and vegetables are helpful because their acid direction balances the alkaline tendencies of the slow oxidizer. Therefore, slow oxidizers need lots of carbohydrates to keep their pH balanced. For fast oxidizers, who tend to be acid in their pH, eating lots of carbohydrates such as fruits and vegetables would make them more acidic. They do best by eating more protein, which for an oxidizer-dominant person is alkalinizing. This makes perfect sense if we keep in mind that fast oxidizers need more protein and fat to make their citric acid cycle work optimally as well. The key is bringing the blood pH to an optimal level of 7.46. This is where the brain cellular metabolism works best. The ideal is not to be too acid or alkaline, and to eat foods based on your constitution. These foods will automatically balance your acid/base tendencies.

Research shows that if a person is ANS-dominant rather than oxidative-dominant, the metabolic relationships reverse, and fruits and vegetables alkalinize the blood while protein and fats acidify the blood. In this case the dominant polarity is between parasympathetic- and sympathetic-dominant rather than slow or fast oxidizer. This has

tremendous implications for vegetarians, vegans, and raw-fooders.

At the Tree of Life Rejuvenation Center, people come for a three-day assessment to determine which physiologic system is dominant. A major part of this testing involves drawing blood two hours after each meal to determine how a person responds physiologically to different types of foods. Once a pattern develops, I am able to determine what system is dominant, and in that system, which subsystem is dominant. This allows me to determine the best diet and nutrients for my clients. I also use a questionnaire and glucose tolerance pattern to assess whether a person is a slow or fast oxidizer. A gentle rolling curve for the three-hour glucose tolerance test in which there is not a rapid drop back to the fasting glucose level suggests a slow oxidizer. A curve with a large and rapid spike or a drop in blood glucose suggests a fast oxidizer. The following is a self-assessment questionnaire based on the physiological characteristics of fast and slow oxidizers.

Slow Oxidizer Profile

1. Do you eat to live? Yes No
 2. Can you go a long time without eating? Yes No
 3. Is it easy for you to skip meals and maintain energy and a sense of well-being? Yes No
 4. Are you generally not concerned at all with eating? Yes No
 5. Does a high-carbohydrate diet with fruits, vegetables, and sweets satisfy and sustain you emotionally and energetically? Yes No
 6. Do you have a minimal appetite for lunch? Yes No
 7. Do you have a minimal appetite for dinner? Yes No
 8. Do you love sweets (white sugar foods or dried fruits) and need something sweet with a meal to feel satisfied? Yes No
 9. Does eating before bedtime worsen sleep? Yes No
 10. Does eating fatty foods like lots of seeds, avocados, and nut butters make you feel lethargic? Yes No
 11. Does eating a meal high in tofu, chlorella, spirulina, nuts, seeds, beans, or flesh food, if you are not a vegetarian, drop your energy afterward? Yes No
 12. Does eating sweets (sugar foods or dried fruits), grains, or fruits restore lasting energy and give a sense of well-being? Yes No
 13. Does apple or orange juice alone energize and satisfy you for a long time? Yes No
 14. Do you handle juice or water fasts without many headaches, extreme hunger, nausea, or shakiness? Yes No
 15. Does a high-carbohydrate, low-protein, low-fat vegetarian meal like a salad, grains, vegetables, or just fruits make you generally feel well, satisfied, and energized? Yes No
 16. If you could eat anything you want (what you like, not what you think is good for you) at a buffet, would you sample all the salads and leave room for the desserts? Yes No
 17. If you feel low-energy, does eating sweets or fruits restore lasting energy? Yes No
 18. Are you not particularly fond of potatoes? Yes No
 19. Do you have a sense of sustained well-being after eating sweet foods? Yes No
 20. Do foods taste too salty? Yes No
- Does eating red meat decrease energy and well-being? If you are a vegetarian, can you remember when

21. you used to eat red meat if it decreased energy and well-being? Yes No
22. Do you get sleepy or lethargic eating a high-protein, high-fat meal such as one high in seeds, nuts, tofu, spirulina, beans, or chlorella? Yes No
23. Do you not particularly care for sour foods such as lemons? Yes No
24. Do you rarely want snacks? Yes No
25. Is it easy for you to go more than four hours without food? Yes No
26. Is the traditional low-protein, high-carbohydrate diet easy and natural for you? Yes No
27. Do you feel good and energetically sustained after eating grains to which you are not allergic? Yes No
28. Has your general health and well-being improved since becoming vegetarian or minimizing high-protein foods? Yes No
29. Did you grow up having any aversions to flesh foods? Yes No
30. Did you grow up having any aversions to fatty foods? Yes No

Fast Oxidizer Profile

1. Do you have a strong appetite for breakfast? Yes No
2. Do you have a strong appetite for lunch? Yes No
3. Do you have a strong appetite for dinner? Yes No
4. Do you need to snack frequently? Yes No
5. Does a high-carbohydrate diet with fruits/ vegetables/sweets make you feel worse or not satisfy you? Yes No
6. Do you feel satisfied after a high-protein meal like tofu, beans, spirulina, nut, seeds, or chlorella? Yes No
7. Do you feel better after a high-protein meal? Yes No
8. Do you crave flesh foods? Yes No
9. Does a high-protein meal give you a sense of increased energy and well-being? Yes No
10. Does going four hours without food make you feel jittery or weak? Yes No
11. Do you need to snack often to feel okay? Yes No
12. Do you live to eat? Yes No
13. Do you prefer fatty foods over sweets? Yes No
14. Does eating sweets throw you out of balance? Yes No
15. Does eating sweets deplete your energy within an hour? Yes No
16. Does eating before sleep help with sleep? Yes No
17. Does eating before sleep help you to sleep through the night? Yes No
18. Does having orange or apple juice alone make you feel light-headed or hungry? Yes No

- | | Yes | No |
|---|--------------------------|--------------------------|
| 19. Does eating a high-protein or fatty meal such as lots of seeds and nuts restore lasting energy and a feeling of well-being? | <input type="checkbox"/> | <input type="checkbox"/> |
| | Yes | No |
| 20. Do you like to eat potatoes? | <input type="checkbox"/> | <input type="checkbox"/> |
| | Yes | No |
| 21. If you are vegetarian, can you remember if eating red meat used to give you energy? | <input type="checkbox"/> | <input type="checkbox"/> |
| | Yes | No |
| 22. Does eating fruit, pastries, or candy make you feel worse? | <input type="checkbox"/> | <input type="checkbox"/> |
| | Yes | No |
| 23. Is it hard for you to fast on juice or water? | <input type="checkbox"/> | <input type="checkbox"/> |
| | Yes | No |
| 24. Do you really not care for sweet desserts, but may enjoy something fatty or salty? | <input type="checkbox"/> | <input type="checkbox"/> |
| | Yes | No |
| 25. Do you feel worse after eating grain? | <input type="checkbox"/> | <input type="checkbox"/> |
| | Yes | No |
| 26. Do you like sour foods? | <input type="checkbox"/> | <input type="checkbox"/> |
| | Yes | No |
| 27. Do sweet foods seem too sweet? | <input type="checkbox"/> | <input type="checkbox"/> |
| | Yes | No |
| 28. Do you get a quick lift and then a sudden drop of energy from sweet foods? | <input type="checkbox"/> | <input type="checkbox"/> |
| | Yes | No |
| 29. If you skip meals, does it cause you to be weak, jittery, low-energy, and unbalanced? | <input type="checkbox"/> | <input type="checkbox"/> |
| | Yes | No |
| 30. Do you love or crave salty foods? | <input type="checkbox"/> | <input type="checkbox"/> |
| | Yes | No |

If your scores for slow or fast oxidizer are about the same, then you fit more into the mixed metabolism that requires a diet neither high nor low in carbohydrates, protein, or fat such as 40% protein, 40% carbohydrate, and 20% fat. The general diet for slow oxidizers is approximately 55% carbohydrate, 30% protein, and 15% fat. The general diet for fast oxidizers is approximately 50-55% protein, 30-35% carbohydrate, and 20-25% fat. These are just starting points. Even though we may be in a certain general category, there is a continuum. As we learn more about what works best for us, we can fine-tune the diet percentages.

The key to understanding these ratios is not how much to eat or how many total calories we consume, but rather the approximate ratio of high protein, high complex carbohydrate, and fatty foods on your plate. I have taken this approach because, in my experience, most people find it easier and more practical to work with this ratio awareness than to worry or obsess about total calories or the amount of calories in each food. The ratios I recommend for these foods, depending on what type of oxidizer you are, are meant to be starting points. Over time, you will generally begin to fine-tune these ratios for your optimal personal health. For example, if you are a fast oxidizer, you need approximately 50% of your intake at an average meal to be in the form of high-protein foods. As a vegetarian you may want to make some of your protein intake per meal be a high-protein concentrated food such as spirulina or chlorella. Your lunch may be a green drink containing these high-protein concentrates and salad with some avocado, nuts, or seeds. The ratios at this meal are approximate, as they will be at all your meals. As you practice this awareness of the ratios you find the optimal amounts of the different foods that make you feel most energized, emotionally balanced, with the best sustained energy. Your total protein intake, depending on how much you eat per meal, can be as little as 20 grams or up to 70 grams per day, yet still allow you to keep the ratio for a fast oxidizer diet. *A point I want to emphasize in this example is that a fast oxidizer diet does not mean you should consume excess amounts of protein (which is unhealthy), but rather consume a healthy balance of protein, carbohydrates, and fat according to your constitutional type.*

Autonomic Nervous System Dominance

THE AUTONOMIC NERVOUS SYSTEM (ANS) is the other common dominant system, accounting for about 40% or more of all individuals. The ANS is the involuntary part of the nervous system. The voluntary part of the nervous system—the cerebrospinal system—is the other part.

The ANS has two divisions called the parasympathetic and sympathetic system. They work synergistically in the regulation of all the involuntary processes of the body such as blood pressure, heart rate, digestion, elimination, rate of cellular activity, immune system function, sweat secretion, etc. The sympathetic system (fight or flight) stimulates these various functions, and the parasympathetic system slows the functions. In some systems of the body their roles are reversed, such as with the digestive system, which the parasympathetic activates and the sympathetic slows. The sympathetic system tends to regulate catabolic or energy-using processes in the body. The parasympathetic system regulates the anabolic or energy-conserving processes in the body. The organs associated with and activated by the sympathetic system are the left brain, anterior pituitary, thyroid, parathyroid, adrenal medulla, kidneys, bladder, uterus, prostate, gonads, skeletal system, cardiovascular system, and neuromuscular system. It is thought that the sympathetic system is responsible for the regulation of calcium metabolism.

The parasympathetic system is associated with the right brain, posterior pituitary, thymus, tonsils, parotid, lungs, adrenal cortex, pancreas, liver, gallbladder, spleen, stomach, intestines, appendix, bone marrow, digestive system, immune system, lymphatic system, respiratory system, and excretory system. Protein, carbohydrate, and fat metabolism are strongly influenced by the parasympathetic system.

A sympathetically dominated system tends to be more acidic, and the parasympathetic tends to produce a more alkaline environment.

Sympathetic-dominant individuals tend to be taller and thinner than parasympathetic. They tend to have more defined musculature and muscle tone, large bones, dry skin and hair, and they are more left-brained with excellent concentration and rapid mental processes. They have large pupils. They have some trouble expressing their emotions, yet they are excitable and can get angry easily. There is a tendency for anxiety and irritability. They are personality type A and highly motivated, goal-oriented people. They are not necessarily socially easy-going people. When they are out of balance they tend to get acidosis, dry skin, constipation, dry eyes, indigestion, heartburn, insomnia, hypertension, irritability, sweet cravings, emotional instability, tachycardia, tendency to infection, and decreased appetite.

Parasympathetic-dominant people tend to have broad shoulders and narrow hips, poor muscle definition and tone, and are stronger than average with good endurance. They tend to have smaller pupils, moist skin, clear skin, and are often overweight with trouble losing weight. They tend to be more emotional, intuitive, and creative.

People who are parasympathetic-dominant make friends easily and are outgoing and friendly. They are slow to anger and are emotionally stable with good ability to express their feelings. They often need extra sleep and they sleep better when they eat before going to bed. Parasympathetics have a tendency to enjoy meats, fats, and salty food.

When the parasympathetic dominance is out of balance, such people may get too alkaline, with oily hair, diarrhea, excessive appetite, lethargy, apathy, low motivation, decreased sex drive, allergies, hay fever, low blood sugar, heart irregularities, chronic fatigue, poor concentration, and depression.

As with the oxidative system, there is the mixed or balanced ANS dominance for those who have metabolic balance that is not predominantly parasympathetic or sympathetic. They have strong characteristics from both.

Although a particular ANS dominance is strongly determined by genetic tendencies, the ANS is also influenced by emotional traumas and nutritional imbalances. When these are cleared up, it is possible to bring the ANS more closely into balance. Like the oxidative system, the ANS has a primary constitutional and functional quality. Rebalancing the functional quality can positively change or tone down how the physiologic constitutional dominance operates. The point is that our diets and lifestyles can impact the degree of dominance and bring our systems closer to balance.

Another interesting biological indicator is circadian rhythms. This is the daily or twenty-four-hour cycle of all our biological systems. A person's protein, carbohydrate, and fat ratios for any meal are also influenced by the daily rhythm. In the process of fine-tuning the metabolic systems of individuals, I have found, for myself and others, that the optimal carbohydrate, protein, and fat ratios slightly vary with the time of day. The key here is to observe what

diet gives optimal energy and emotional balance, and minimizes food cravings.

At first I used the constitutional and pH balancing approach with people who primarily have psychological problems such as depression and anxiety, and energy-depletion disturbances such as chronic fatigue and fatigue in general. I have also seen excellent results in people who have difficulty becoming vegetarian and who, on a diet that is suited to their constitutions, are now able to be healthy vegetarians. Presently I am using this approach for creating optimal diets in the rejuvenation process, as well as for support in the healing of chronic disease.

It is wonderful to see the changes that happen. Sometimes they happen within only a day, and sometimes these shifts take a few months to manifest. In the process of finding the best diet, we automatically find what I call the N (optimal nutrition) zone. In the N zone, nutrient and food intake creates the proper mix which optimizes the pH as well as the hormone ratios like that of insulin and glucagon. I am theorizing that because everyone has individualized responses, there is a specific optimal N zone for each person. *Through a subjective evaluation we are able to tell when this dietary optimal zone is reached. We will feel: 1) energized, 2) emotionally well-balanced, and 3) satisfied after each meal.* This type of evaluation requires that we remain conscious enough to make a clear determination.

Foods for Your Metabolic/Autonomic Constitution

FOLLOWING IS A LIST OF FOODS THAT ARE MOST APPROPRIATE for your constitutional type. The ratios of protein, carbohydrates, and fats refer primarily to ratio by volume of food; however, it is also important to account for the ratios of protein, carbohydrates, and/or fats in a particular food. For example, nuts and seeds contain approximately 20% protein and 80% fat, making it impossible to follow the ratio guidelines given when nuts and seeds are eaten as the singular source of protein. In order to balance the ratio of protein to fat it is necessary to add a supplemental concentrated protein source such as chlorella, spirulina, Klamath Lake blue-green algae, bee pollen, or brewer's yeast. These are also high-purine foods which enhance the metabolic production of energy for fast oxidizers and parasympathetics. A tablespoon of any one of these with your meal will help to balance the ratio of fat to protein when nuts and seeds are consumed as a significant part of the meal.

Autonomic and Bio-oxidative Types for Dietary Eating Patterns		
	Acid/Alkaline Tendency	Diet Type
Sympathetic	acid blood	high-carbohydrate diet
Slow Oxidizer	alkaline blood	high-carbohydrate diet
Fast Oxidizer	acid blood	high-protein diet
Parasympathetic	alkaline blood	high-protein diet

I believe that the oxidative and autonomic systems are the two most important systems in terms of dominance. The chart above helps to explain the relationships between slow and fast oxidizer and sympathetic and parasympathetic. The other systems I have listed also play a role in the fine-tuning. The Ayurvedic and acid-base considerations are discussed in other chapters.

Foods for Metabolic, Fast Oxidizer Constitution		
50-55% protein, 30-35% carbohydrates, 20-25% fat		
Proteins: Nuts and seeds (approx. 20% protein) Chlorella Spirulina Klamath Lake blue-green algae Bee pollen Brewer's yeast Soy protein Lentils Beans Carbohydrates: All grains (except wheat) Vegetables: Cauliflower Asparagus Artichokes Spinach Carrots Celery Avocados Olives Fruits (minimal): Low-glycemic index fruit: Apples (especially Granny Smith) Peaches Pears	Oranges Juices: Carrot (diluted 50%) Beet (diluted 50%) All vegetable Minimal fruit Fats: Nuts and seeds (approx. 80% fat) Olive oil (extra virgin cold-pressed) Essential fatty acids: Flaxseed oil Pumpkin oil Sesame oil Borage oil Walnut oil Hempseed oil Sunflower oil Purine Foods: High-purine foods: Bee pollen Brewer's yeast Chlorella Moderate-purine foods: Whole grains Asparagus Cauliflower Mushrooms	Peanuts Peas Low-purine foods: Fruits and vegetables Other: All herbs and spices Herbal teas (no caffeine) Sea salt Foods to Avoid: Sugar, candy Coffee, tea, soft drinks, alcohol Table salt Wheat, white potatoes, white rice, white flour Dried fruits Sweet fruits: Bananas, grapes, dates, etc.

Foods for Autonomic, Parasympathetic Constitution

45-50% protein, 35-40% carbohydrates, 20-25% fat

<p>Proteins: Nuts and seeds (approx. 20% protein) Chlorella Spirulina Klamath Lake blue-green algae Bee pollen Brewer's yeast Soy protein Lentils Beans</p> <p>Carbohydrates: All grains (except wheat; more than fast oxidizers) Vegetables: Cauliflower Asparagus Artichokes Spinach Carrots Celery Avocados Olives Fruits (minimal): Low-glycemic index fruit: Apples (especially Granny Smith)</p>	<p>Peaches Pears Oranges</p> <p>Juices: Carrot (diluted 50%) Beet (diluted 50%) All vegetable Minimal fruit</p> <p>Fats: Nuts and seeds (approx. 80% fat) Olive oil (extra virgin cold-pressed) Essential fatty acids: Flaxseed oil Pumpkin oil Sesame oil Borage oil Walnut oil Hempseed oil Sunflower oil</p> <p>Purine Foods: High-purine foods: Bee pollen Brewer's yeast Chlorella Moderate-purine foods: Whole grains Asparagus</p>	<p>Cauliflower Mushrooms Peanuts Peas</p> <p>Low-purine foods: Fruits and vegetables</p> <p>Other: All herbs and spices Herbal teas (no caffeine) Sea salt</p> <p>Foods to Avoid: Sugar, candy Coffee, tea, soft drinks, alcohol Table salt Wheat, white potatoes, white rice, white flour Dried fruits Sweet fruits: Bananas, grapes, dates, etc.</p>
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Foods for Metabolic, Slow Oxidizer Constitution

55-60% carbohydrates, 30-35% protein, 10-15% fat

<p>Carbohydrates: All grains Vegetables: Beets Broccoli Brussels sprouts Cabbage Chard Collard greens Cucumbers Eggplant Hot peppers Kale Leeks Lettuce Mustard greens Okra Onions Potatoes Scallions Squash Sweet peppers Yams Fruits (all ripe fruits): Apples Apricots Berries Cherries Citrus Grapefruit Grapes Lemons</p>	<p>Melons Nectarines Oranges Pears Pineapple Plums Tangerines Tomatoes</p> <p>Juices: All fruit juices All vegetable juices</p> <p>Proteins (moderate to minimal): Nuts and seeds (approx. 20% protein) Chlorella Spirulina Klamath Lake blue-green algae Bee pollen Brewer's yeast</p> <p>Fats: Nuts and seeds (minimal; approx. 80% fat) Cold-pressed oils: Flaxseed oil Sesame oil Safflower oil</p>	<p>Other: All herbs and spices Herbal teas (no caffeine) Rice milk Soy milk Honey Maple syrup Mustard Catsup Horseradish (no salt) Vinegar Pepper Sea salt</p> <p>Foods to Avoid: Sugar, candy Coffee, tea, soft drinks, alcohol Table salt White flour, white rice</p>
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Foods for Autonomic, Sympathetic Constitution

55-60% carbohydrates, 25-30% protein, 10-15% fat

Carbohydrates:		
All grains	Melons	Corn oil
Vegetables:	Nectarines	
Beets	Oranges	Other:
Broccoli	Pears	All herbs and spices
Brussels sprouts	Pineapple	Herbal teas (no caffeine)
Cabbage	Plums	Rice milk
Chard	Tangerines	Soy milk
Collard greens	Tomatoes	Honey
Cucumbers	Juices:	Maple syrup
Eggplant	All fruit juices	Mustard
Hot peppers	All vegetable juices	Catsup
Kale		Horseradish (no salt)
Leeks	Proteins (moderate to minimal):	Vinegar
Lettuce	Nuts and seeds (approx. 20% protein)	Pepper
Mustard greens	Chlorella	Sea salt
Okra	Spirulina	
Onions	Klamath Lake blue-green algae	Foods to Avoid:
Potatoes	Bee pollen	Sugar, candy
Scallions	Brewer's yeast	Coffee, tea, soft drinks, alcohol
Squash		Table salt
Sweet peppers	Fats:	White flour, white rice
Yams	Nuts and seeds (minimal; approx. 80% fat)	
Fruits (all ripe fruits):	Cold-pressed oils:	
Apples	Flaxseed oil	
Apricots	Sesame oil	
Berries	Safflower oil	
Cherries		
Citrus		
Grapefruit		
Grapes		
Lemons		

Catabolic-Anabolic System

THE CATABOLIC-ANABOLIC SYSTEM developed by Dr. Emanuel Revici again makes the point of how individualized our responses are to different medicines and even different phases of the disease process. His work is especially significant in the treatment of cancer because the physiology of cancer changes with the different stages of the disease.

Dr. Revici found a law of organization that he thought applied to all matter. He found that organisms appear as morphologically and functionally identifiable organizations composed of an electropositive part and a secondary electronegative part held by the principal part. He saw two forces manifesting in nature: electrostatic and quantum. The electrostatic force is characterized by positive and negative charges with a tendency to balance each other and create annihilation. The second force, quantum, works toward the prevention of annihilation by creating and maintaining form. The electrostatic forces are related to entropy or loss of organization, and the quantum forces are related to the enhancing of order and thus to negentropy. In the body, the forces of catabolism are related to the electrostatic forces, and the anabolic or growth forces are associated with the quantum forces. In his view, all of biology can be understood as the play of these two forces represented as catabolic and anabolic within each level of the biological hierarchy.

In Revici's understanding of pathology, the pathological forces can appear as either catabolic or anabolic. This is a key concept because once we understand that diseases can manifest either catabolically or anabolically, it means two progressive stages in the same disease or two different diseases may respond differently to the same medicine or nutrient. Therefore, to deliver proper treatment, one must understand the level of hierarchy in the biological system where the pathology is taking place, and then whether it is catabolic or anabolic. With this diagnostic information, one can supply the proper balancing and healign medicine. Revici was able to classify many medicines according to catabolic or anabolic and thus use them appropriately for healign a catabolic or anabolic stage of a disease.

He found an anabolic quality for the positively charged alcohols, amines, and amides and a catabolic quality for the negatively charged acids, aldehydes, and ketones. He separated vitamins into a catabolic group that included A, D, B6, and B12 and an anabolic group including B1, B2, K, E, B3, B5, nicotinamide, and folic acid. He also categorized lipids as polar or non-polar, with the forces of the non-polar group being predominant. He found that in the treatment of neoplastic diseases, conjugated fatty acids were helpful for anabolic conditions, and unsaponifiable lipidic fractions of organs helped for catabolic conditions. He developed many lipid fractions to work against the catabolic or anabolic forces of the different stages of neoplasm.

What Dr. Revici found was a dualistic concept as a general pattern in physiopathology, including such mechanisms as slow and fast heart rate, polyuria (excessive urination) and oliguria (minimal urination), and diarrhea and constipation. He studied lipids as an important factor in the regulation of body processes. He separated lipids into two fundamental groups. He found that people were either anabolic or catabolic at one point in time.

A person who is anabolic tends to have less selective cellular membrane permeability. The more anabolic they become, the tighter the membrane becomes in a way that keeps nutrients out and toxins in the cells. The cells tend to have a more anaerobic metabolism and build-up of lactic acid. As the cells become more acidic, the other buffer systems, especially the extracellular fluids, become more alkaline to buffer the acidic cells. In these people, the urine becomes alkaline. They need to decrease their essential fatty acids and increase their saturated fat intake. They do better with a high-complex-carbohydrate diet that is moderately high in saturated lipids.

Those people who tend to be catabolic have an excessive membrane permeability which allows their nutrients and toxins to move in and out of the cells in a disorganized way. Their cells become too alkaline, and to compensate, their extra-cellular buffer systems become more acid and hence the urine becomes more acidic. They have a more aerobic metabolism. The best diet for these people involves minimizing saturated fats and increasing essential fatty acids. They need a high-protein, moderately high-fat, and low-carbohydrate diet.

How the body terrain responded to the two different types of lipids was an important key to rebalancing the system and rebuilding membrane permeability. Revici and his team found that some pain syndromes would respond to positive polar lipids, and other types of pain would need negative polar lipids, which has to do with essential fatty acids versus saturated fats. He found this to be true for hemorrhage control, vertigo, hay fever, arthritis, certain cancers, and a variety of other pathologies. The principle is how the body is organized to handle the positive or negative polar lipid medicines. In the treatment of cancer, he found that the body varies at different phases of the

cancer as to whether it responds to positive or negative polar fractions.

The point again is, how the body handles what it is given is the most important factor. This is directly opposite to the allopathic approach, which gives the same medicine to everyone at every stage. The anabolic/catabolic lipid system seems to have a more dominant role in chronic diseases than for people who are in general good health. I mention Revici's work in depth because it is a powerful scientific support making the same statement about biochemical individuality from a different standpoint. The fact that at different phases of a disease process one may need a different diet, nutrient supplementation, or medicine should alert us to the importance of always trying to be sensitive to the mysterious and wonderful flow of our own physiology, even in our healthy state. The Ayurvedic system is a more global system that helps us understand how to live a balanced life as well as develop a diet that flows with the energy of the seasons, the times of the day, the life stages, and our overall lifestyle. This will become more clear in Chapters 4 and 5 on Ayurveda.

Endocrine Types

THE ENDOCRINE SYSTEM IS ANOTHER FACTOR to be considered in determining optimal diet. It is less of a dominant factor in individuals than the oxidative and ANS physiologies. Endocrine type plays its biggest role in the process of body rate and type of growth. This is particularly true in regard to body shape and weight distribution. This work was pioneered by Dr. Henry Harrower, Dr. Henry Bieler, and Dr. Elliot Abravanel. They found four basic body types: pituitary, thyroid, adrenal, and gonadal. They believed certain foods have specific stimulatory effects on certain endocrine glands. An accurate identification of the endocrine type helps us make food choices that are most supportive of a person's endocrine metabolism.

One way to recognize your type is to look at your body shape. Pituitary types tend to have a large head in relationship to their body. They tend to be creative and intellectual and to like dairy products. Their weight tends to accumulate all over rather than in specific areas. The adrenal type tends to be long, strong, and powerful with a thick, muscular body, broad shoulders and waist, and squarish head and fingers. Their weight tends to accumulate in their belly and across their shoulders. They have strong digestion and tend to crave meat and salty foods. They are usually warm, outgoing people with strong endurance. Thyroid types are tall and thin with long fingers. They put on weight around the midsection. They tend to be nervous and to have an erratic flow of energy. The gonadal types (who are mostly women) tend to be pear-shaped with weight on the buttocks and thighs. Their upper bodies are smaller than their lower bodies. They like fatty and spicy foods. They tend to be nurturing, steady, and responsible people.

In viewing diet intake from the endocrine perspective, we learn what foods to avoid. If we eat foods that overstimulate our key energy endocrine gland, the gland eventually becomes exhausted. The metabolic rate slows down and we gain weight according to our endocrine type. Pituitary types should avoid dairy products. Thyroid types should avoid a high-complex-carbohydrate diet and go to a high-protein, moderate-fat, and low-carbohydrate diet. Adrenal types do best if they minimize red meat, salt, and cheese. Gonadal types do best if they minimize saturated fats and spicy foods.

As an overview, the endocrine system approach helps to point out which organ system needs to be fed for optimal functioning and weight loss.

Acid-Base Balance

THE NEWER FINDINGS ON THE OVERRIDING EFFECTS of the autonomic and oxidative systems on the acid/base diet have made the traditional viewpoint of alkaline or acid foods far less important, since what matters is how we respond to the food in terms of becoming acidic or alkaline and not so much the food itself. This traditional view still remains more of a guideline for ANS-dominant people. See Chapter 11 for more on acid-base balance.

Blood Type Approach

BLOOD TYPE GIVES US AN INSIGHT into our genetic inheritance. It gives us a specific guideline about what foods to minimize in our diet. There are some anthropological extrapolations and dietary generalizations that have been popularized about the different blood types. I find these anthropological extrapolations quite inaccurate. For example, at a recent live-food, vegetarian talk I gave in Honolulu to active and successful live-food vegetarians, about 50%, including myself, were type O. According to popular theoretical extrapolation, those who are type O should do best on a high-flesh, protein diet. I know my health and the health of many of these type Os significantly improved upon becoming vegetarian, according to self-reports.

The only thing specifically worth paying attention to are the high-lectin foods that have been scientifically documented and which may be detrimental to us if eaten in excess. The foods we want to minimize are those containing lectins that are reactive with our blood type, or lectins that react with all blood types.

Lectins are protein antigens that bind to the surface of red blood cells or white blood cells. They can set off allergic symptoms or they can act as hemagglutinins. A hemagglutinin is something that binds to our red blood cells or white blood cells and causes them to clump together and disrupt the flow of blood or lymph in the tissues and/or damage organs. These lectins are found in both plants and animals. They are present in about 30% of the foods commonly eaten in the American diet.

Lectins were first discovered in castor beans. In 1945 researchers found that lectins could be blood type-specific when they found that lima beans agglutinated blood type A. Lectins are found most commonly in edible cereals, beans, seeds, nuts, fish, and shellfish.

The following is a list of blood type-specific lectins and panhemagglutinins reported in the literature by Laura Powers, Ph.D., with whom I have had a personal communication on lectins.

The second list is of panhemagglutinins, which means foods that affect all blood types to some extent.

Blood Type-Specific Lectins		
<u>Blood Type A</u>	<u>Blood Type B</u>	<u>Blood Type O</u>
blackberries	bitter pear melon	asparagus
brown trout	black-eyed peas	Australian catfish
"cornflakes"	castor beans	blackberries
escargot (Roman snail)	cocoa	boa constrictor
field beans	Coronilla (heart disease herb)	cocos
French mushrooms (<i>Hygrophorus hypothejus</i>)	Evonymus Europaeus (butter dye, oil for soap)	eels (47%)
garfish	field beans	Evonymus Europaeus (butter dye, soap oil)
halibut	French mushrooms (two kinds) (<i>Hygrophorus hypothejus</i> and <i>Marasmius orondes</i>)	French mushrooms
hog peanut	halfmoon fish	gorse
lima beans	pomegranate	halfmoon fish
"Product 19"	salmon	halibut
snakes	salmon caviar (roe)	Japanese eel
snow white mushrooms	sesame seeds	lotus
soybeans	snakes	sunflower seed
soybean sprouts	soybeans	<u>Blood Type M</u>
string beans	trout caviar (roe)	Clown's Mustard (rheumatism herb)
tora beans	tuna	horseshoe crab
"Total"	Western painted turtle	wheat germ
vetch (common)		<u>Blood Type AB</u>
Western painted turtle	<u>Blood Type A2</u>	hyacinth bean
white croaker fish	French mushrooms	All "A" & "B" foods
winged bean		Camel's Foot (Chinese pot herb)
<u>Blood Type A1</u>		
giant butter clam		
horse clam		
lima beans		

**Panhemagglutinin Lectins,
or Those Which Agglutinate All Blood Types**

"All Bran" cereal	navy beans
asparagus	nutmeg
banana	oyster
barley germ	parsley
black beans	peanuts
broad beans	peas
caraway seeds	peppermint
celery	pinto beans
"Cheerios"	potato
chicory (endive)	processor beans
coconut	pumpkin seeds
coconut crab	radish
coffee	"Raisin Bran" cereal
cucumber	rice germ
currants	rutabaga
fava beans	rye germ
French mushroom (<i>Amarillaria mellea</i>)	"Shredded Wheat"
grapes	"Special K" cereal
hazelnuts	strawberries
hermit crab (75%)	sweet peppers
kidney beans	Swiss chard
kintoki beans	tomato
lentils	triticale
lentil sprouts	walnut
lobster	wax bean
locust beans (black)	wheat germ
Mexican mushroom (<i>Agaricus campestris</i>)	"Wheaties" cereal

Lectins, in many cases, may be resistant to destruction through cooking, our digestive acids, and proteolytic enzymes. If between 1 and 5% absorb into the bloodstream from a big meal, it is on the border of setting off an immune reaction. If our intestinal IgA antibodies are low, if we have a permeable bowel syndrome, deficient stomach hydrochloric acid or proteolytic enzymes, lectin absorption will be even higher. Cooking food may decrease the lectin amount. Sprouting may also help to minimize the lectin effect. Dr. D'Adamo has reported that if one sprouts wheat, its lectins are significantly minimized so people who normally cannot eat wheat because of their sensitivity to wheat lectins are able to eat it. I have observed the same thing. More research has to be done on the effect of sprouting nuts, seeds, and grains in terms of minimizing their lectin potency.

Researchers have found that feeding high-lectin diets to animals creates significant pathological lesions in the small intestine and thymus as well as in the liver, pancreas, and spleen. The higher the circulating lectin-specific antibodies, the more toxicity. They found that diets high in lectins produced high levels of circulating lectin antibodies.

In humans, lectins have caused significant damage from raw or under-cooked kidney beans and hemolytic anemia from Mexican fava beans in individuals with a genetic deficiency in glucose-6-phosphate dehydrogenase. When these lectins are eaten in excess they can cause intestinal damage, disrupted digestion, protein malabsorption, carbohydrate malabsorption, other nutrient deficiencies, type-two allergy and other responses, and hemagglutination.

Digestive distress is one of the most common problems that lectins instigate. They can actually cause nausea and vomiting and damage to the microvilli of the small intestine, which is where we absorb our food. From this comes gas bloating and fluid retention. One research paper found that lectins can even promote growth of harmful bacteria in the intestine. When the lectins bind to the microvilli in the small intestine they can cause an inflammation that blocks the production of enterokinase, which is needed for protein digestion. The long-term ingestion of lectins that do this can actually result in a protein deficiency. They cause similar problems with carbohydrate absorption. One researcher found that lectins can reduce the glucose uptake by **50%**. Some lectins, including those in wheat germ and jack beans, can even bind to insulin receptors on the cells and interfere with glucose metabolism. Some people theorize that the high lectin content in grains can create inflammatory bowel disease.

Gliadin, which naturally occurs in wheat germ and other high-gluten grains, has been shown to cause inflammatory bowel disease. I have found that clients with high gliadin antibodies and bowel inflammation and digestive disorders experience a definite improvement when they avoid high-gliadin grains. These are primarily the

high-gluten grains: wheat, barley, rye, and oats.

Lectins can cause a variety of immune reactions as well as direct hemagglutination of the red or white blood cells. The type of immune reaction depends on the type of antibodies they stimulate. Research shows that they most often stimulate the production of IgG and IgM antibodies, which are typically found in **80%** of food allergies. Some of these symptoms include general fatigue, headache, achiness, nausea, vomiting, diarrhea, and eventually immune exhaustion. Research has shown that there is a direct relationship between the severity of the symptoms and the number of antibodies. These IgG and IgM antibodies may also form large antibody-antigen complexes that can combine with white blood cells and immune complement protein factors in the blood. These complexes can deposit in the tissues, organs, and blood vessels, and may be involved in **50%** of food allergies. Typical symptoms from these complexes are fatigue, headache, arthritis, muscle pains; liver, kidney, gallbladder, heart, and blood vessel inflammation and destruction, and other diseases; as well as a variety of mental imbalances including irritability, depression, fearfulness, confusion, hyperactivity, learning disorders, and even schizophrenic-like symptoms.

Antibody-antigen complexes may also cause an IgE antibody reaction with the release of histamine in the mucous membranes, resulting in such symptoms as hay fever, rhinitis, asthma, hives, eczema, and hyperactivity. These reactions may also be the cause of delayed reactions of up to three days with migraines, brain allergies, joint and muscle pain, bladder inflammation, gallbladder symptoms, and heart and blood vessel disease.

Lectins can agglutinate red blood cells and lymphocytes. When lectins congregate in large numbers they can cause enough red cell damage to create a hemolytic anemia and jaundice. A literature search by Laura Powers, Ph.D., has found one hundred nineteen dietary lectins reported. Sixty-five of these are blood-type-specific hemagglutinins, and the other fifty-four are panhemagglutinins that can react with any blood type. These lectins bind to the surface of the red blood cell of up to two dozen blood groups, making over 400 sub-blood types. Once the lectins bind to the red blood cells they trigger killer cells, monocytes, or neutrophils, which attach to the red blood cell to cause the agglutination.

How harmful are these lectins that exist in 30% of our dietary intake? The answer lies in the amount of active lectins that get into our system. A significant amount of lectins do not break down when they are cooked and during the digestion process. When they have not been broken down, somewhere between 1% and 5% get absorbed into the blood. Higher amounts may get into the system when high-lectin foods are eaten raw or there is a deficiency in stomach acid, proteolytic enzymes, or secretory IgA (the immune complex that lines the digestive system).

In susceptible people, lectins taken in a high amount can cause a variety of specific symptoms, immune exhaustion, and generally diminished health, well-being, and growth. The situation is complicated by the fact that food sensitivities cannot directly be predicted by blood type. Although hemagglutination is related to blood type and amount of lectin eaten, there are other reactive mechanisms that affect the amount of hemagglutination.

My approach to the lectin issue is to pay attention to what one is eating and specifically how much one is eating. I am an O blood type for whom sunflower seeds are a lectin. As a vegetarian, I eat sunflower seeds on a regular basis. Through bio-kinesiological muscle testing, I found that I could have up to three tablespoons of sunflower seeds without any adverse effects. (A simple muscle-testing procedure is to hold the food at the thymus and see if it weakens an outstretched arm extending laterally from the shoulder; it is about 89% accurate.) This means the lectins from the three tablespoons of sunflower seeds do not create a high enough concentration to cause a reaction. I do not, however, eat sunflower seeds with every meal or even every day, but I do not avoid them entirely.

The same approach should hold true for all the panhemagglutinins. Monitor the amount of intake and see if there is any reaction, or muscle-test each food for sensitivity. Any food you find on the panhemagglutinins list or blood type-specific list that you eat a lot of, I strongly suggest you monitor. For example, blood types A and B would do well to pay attention to their response to soy products. Type As might want to check their response with corn and blackberries. People with blood type B may want to check their response to sesame seeds, cocoa, and black-eyed peas. Those with blood type O should be aware of how they respond to blackberries and sunflower seeds. Those with type M might want to see how they respond to wheat.

The panhemagglutinins can affect all blood types, so again, any food that we eat in excess on this list may cause difficulties. The conscious approach is to check each food we particularly like on these lists. I, for example, test fine when I eat two bananas at one time, but test weak with three bananas. As conscious eaters, we need to find the balance for ourselves.

High-lectin foods are best avoided, or at least thoroughly cook them, especially grains or beans. Improving the fire of our digestion with herbs and digestive enzymes, particularly proteolytic and hydrochloric acid, should help. Dr. D'Adamo found that sprouted wheat did not cause a lectin problem for those sensitive to the wheat lectin. I don't find this to be true for the legumes. Because of this we do not serve sprouted legumes at the Tree of Life Rejuvenation Center, except for small amounts of garbanzo beans, because the others tend to cause gas.

More research needs to be done on the effect of sprouting and the washing away of the lectins from the various

grains. Grains are a high-fiber and high-quality food, and if one needs to have grains, I suggest cooking them unless they are sprouted. Plenty of fiber can be obtained from fruits and vegetables, so grains are not needed for fiber. Some recent unpublished research by Laura Powers studying immune globulin G and E suggests that all blood types, O, Ai, A2, B, A1B, and A2B, have moderate to highly reactive responses to eggs and dairy.

Recent popular books have made broad generalizations about using blood type as a guide for just about everything. Laura Powers, Ph.D., one of the few experts in this field, personally communicated to me that such stereotypes are not documented in the nutritional literature. I and several other mature holistic health practitioners concur that these claims are still in the realm of extrapolated anthropological theory and generalizations.

Further complicating all this controversy is the fact that the various blood types have subdivisions such as blood type Ai and A2 and blood type B1 and B2. These subcategories will react with different susceptibilities to lectins.

My own experience as a person with blood type O was that my health, strength, and vitality significantly improved when I became a vegetarian, despite what the Blood Type advocates say about Type Os supposedly being better suited to flesh-eating. I have also found a significant number of very healthy vegetarians who are type O. These data directly invalidate the anthropological theory approach to blood type.

Because of this, the only lectin data I trust is that which is reported in the scientific literature. The lectin lists from popularized books on the subject have not been documented or made available as actual data when practitioners have asked for it. I raise this point because the more restrictions we create in our diets, the more difficult things get for people. Until more data is available in the scientific literature, the list of one hundred and nineteen lectins is what we have. This lectin list should not rule our lives. It is only a list of foods of which we should be aware so we can experiment with the quantities and types of food that positively or negatively affect us. Avoidance of high-lectin food to which we are sensitive can often alleviate many physical symptoms.

Summary

SORTING OUT THE MOST APPROPRIATE DIET in this complex field requires looking at all the factors. The most important point to remember is that we are unique individuals, and as such we best serve ourselves by developing a diet pattern that is unique to our physiology.

There is no one diet for everyone nor one nutrient that will work miracles for everyone. Conscious eating means to remain conscious. It implies being your own scientist and entering into a process of trial and error as you fine-tune your diet. Rediscovering how to eat in a way that best enhances our health, well-being, and joy is a noble endeavor. When we change our diet so that it is optimal for us, it positively influences all our biological systems and every aspect of our health and well-being.

There are three essential questions to remember:

- ⌘ Am I emotionally stable after eating?
- ⌘ Do I have increased physical energy after eating?
- ⌘ Am I craving any foods?

The answers to these questions cannot be obtained from any book. They must come from our own direct experience. This is a most important key to conscious eating.

BLACKBOARD FOOD FOR THOUGHT

Avoid eating when you are:

- ⌘ Sad
- ⌘ Angry
- ⌘ Under Stress

Remember: food is love and life is love.

Eating when calm and able to focus on your food is a way to love yourself.

Preview of Chapter 4

THIS CHAPTER GIVES SPECIFIC INFORMATION on how to organize your food intake to enhance your personal mind-body (psychophysiological) constitution and health. It explains the best foods and lifestyles to emphasize for the three major psychophysiological constitutions, as well as how to shift your diet to adjust to the seasons and even the time of day. These constitutions are best thought of as tendencies rather than absolutes. In this chapter you will learn several new words from an ancient culture, such as *dosha*, *pitta*, *kapha*, and *vata*. These words come from the Ayurvedic system of healing, which is a comprehensive system of medicine developed more than 5000 years ago. The term “Ayurveda” means “science of daily living.” As you read this chapter you will begin to recognize your predominant psychophysiological or mind-body type as well as those of your family and friends. It is fun to be validated for who you are. There is also a questionnaire that can help you identify your primary and secondary constitutional tendencies. As you understand these types, you will begin to appreciate the unique needs of each individual and why there is no one general diet that is correct for everyone. Once you understand this, you become free from the tyranny of trying to fit into every fad diet that comes along. You become your own researcher and begin to trust your own knowledge of the best food choices for you. Are you ready to be empowered in this way? Are you ready to become more independent in taking responsibility for your health?

I. The Ayurvedic Tridosha System and discovering your personal body-mind constitution

A. *Vata*: Air/Ether, kinetic energy movement of intestines, muscles, and nerve impulses

B. *Kapha*: Water/Earth, potential energy, body fluids and mucus

C. *Pitta*: Fire and metabolism, balances potential and kinetic energies

II. Finding your dosha type

A. Characteristics—physical and psychological

B. Images

C. Food tastes

D. Spiritual task

E. How to recognize imbalances

III. Cycles

A. Life cycle

B. Day cycles and timing of meals

C. Seasonal effects on diet

IV. Dual Constitutions

V. Chapter Summary



Personalizing Your Diet to Your Body-Mind Constitution

IN ORDER TO ARTFULLY AND INTELLIGENTLY DEVELOP an individualized diet, it is useful to be aware that different foods have specific effects on our body-mind complex. These effects go beyond simply feeling recharged from eating a particular food. Ayurvedic and Chinese healing systems, which have been successfully used for thousands of years, both recognize the importance of the specific energies of foods and herbs in rebalancing and healing the body. Western herbalists share a similar awareness about the use of herbs. The Ayurvedic and Chinese also are cognizant that our foods help to balance the relationship of our body energies with the changing seasons of the environment. In the Ayurvedic system, the individual mind-body or psychophysiological constitution is called one's *dosha*. The tridosha system offers a simple yet relatively complete way to understand how the foods we eat directly affect our health and well-being. "Tridosha" means three doshas or constitutions, which are called *vata*, *pitta*, and *kapha*. Please remember that all the suggestions made in this food and dosha section are only tendencies. Your personal exploration with these tendencies in mind will reveal what works best for you.

Ayurvedic Tridosha System

THE TRIDOSHA SYSTEM OF THE SCIENCE OF AYURVEDA is particularly useful in helping maintain the awareness of nutrition as the interaction between the forces of food and one's own dynamic forces. In the tridosha system, the five basic elements of creation, which are earth, water, fire, air, and ether, manifest in the human psychosomatic complex as a balance of three dosha essences named vata, kapha, and pitta. Vata is associated with the energy of air and ether, kapha is associated with the energy of water and earth, and pitta is associated with the energy of fire and water. Often they are thought of as vata/air, kapha/water, and pitta/fire.

One is born with a permanent constitutional complex combination of all three doshas. In other words, the dosha combination for each person is genetically determined. These dosha types influence all our biological and psychological tendencies. A person's constitutional type predetermines which doshas tend to become imbalanced more easily than others. When the doshas are in balance, it means there is a healthy psychophysiological state. If the doshas are temporarily unbalanced, one may feel a subtle disharmony in the body-mind complex. If the doshas are chronically imbalanced, the result may be disease.

A rough translation of the word "dosha" given by Dr. Robert Svoboda in his excellent book, *Prakruti*, is "things which can go out of whack." The vata energy goes out of balance most easily for everyone. The next most frequent dosha to go out of balance is pitta. Kapha is the least likely to go out of balance. The three dosha energies work together in the body to maintain health. All three doshas are needed to maintain the life of every cell and organ. All three doshas must be balanced to maintain optimal health.

For a body organ to remain alive, vata energy is needed for movement of nutrients and oxygen to the organ and for the removal of wastes. The pitta energy is needed for the organ to metabolize the nutrients to make energy for the cells to live. The energy of kapha is needed to maintain the structure of the organ so assimilation, metabolism, and elimination of wastes can take place. In disease, one or all three elements may be off. For example, to conceptualize a knee problem using the understanding of the dosha energies, one might say that if kapha energy is decreased in the knee joint there is not enough lubrication; if there is excess dryness and pain on movement, there is a painful vata imbalance. In addition, if there is redness and heat in this joint, a pitta imbalance is indicated. If all three types of symptoms are occurring, then there is a pitta, kapha, and vata imbalance.

Energy Characteristics of the Three Doshas

THE DOSHAS MAY BE UNDERSTOOD as three forms of energies operating simultaneously in the organism. Vata is kinetic energy operating in the body. Vata may also be understood as catabolic, or the energy involved with the breakdown of the tissues and aging. Vata is the force which tends to predominate in the senior years. It regulates all physical and psychological movement including the flow of thoughts in the mind, the movement of breath, the movement of nerve impulses in the nervous system, and the function of the muscles. In terms of digestion, vata supplies the energy for chewing, swallowing, assimilating food, and expelling wastes. At the cellular level, vata is responsible for the movement of nutrients into cells and the removal of wastes out of cells. On the level of mind, vata influences the rapidity of the thought process and the flow of impulses in the nervous system. All movement in the body from peristalsis (muscle movement) of the stomach, small intestine, and large intestine, and the entire muscle system, is influenced by vata.

Kapha can be thought of as stored or potential energy. It governs biological strength, vigor, and natural tissue resistance. Kapha lubricates the joints, moisturizes the skin, gives support to the heart and lungs, and helps to heal wounds. The anabolic or growth forces in the body are activated by the kapha energy. Kapha is the energy that tends to predominate in children up to puberty. This is the time of active growth. It is also the time that children tend to have illnesses arising out of excess mucous conditions such as colds, flus, and earaches.

Kapha controls body lubrication, form, and stability. It affects the tissues and wastes of the body that vata moves around. Kapha should not be thought of as simply mucus. It is the force in the body which causes the mucus to accumulate or dissipate. The secretions which lubricate and protect the digestive organs and all the joints are energized by kapha. It affects the structure of the body cells. Kapha gives stability to the mind and power to long-term memory. It helps the mind focus on particular thoughts and chosen topics of concentration. A kapha-dominated personality is stable. Kapha represents the tendency to accumulate energy and form. It is stored potential energy. For example, a person whose predominant dosha is kapha more easily puts on weight than a person whose predominant energy is vata. The tendency of a predominantly vata person is to readily expel energy. Because of this, vata-dominated people tend to be thin and active, and kapha people tend to be heavy and more inert.

Pitta is the energy that balances the vata kinetic energy and the kapha potential energy in the organism. Metabolism is the main influence of pitta. It primarily affects cellular metabolism and the endocrine or glandular system. Pitta directs digestive nutrients to provide energy for cellular function. The metabolic heat and fire in the body is ruled by pitta. On the mind level, pitta is the energy that processes new data.

These dosha forces have certain qualities and properties that characterize their energetic effects on the body, which helps us better understand their effects on us. Vata and kapha seem to be almost completely opposite in qualities. Vata as kinetic energy promotes change and movement; kapha as stored energy promotes lubrication and stasis. One of the functions of pitta is to balance the opposing forces of kapha and vata. Pitta people seem to be naturally gifted managers of the flow of all sorts of energies. It is fascinating how a person's dosha constitution determines the mental and physical pattern of energy utilization in everyday activities. The dosha type affects how one works with such basics as exercise, sex, money, and ways of organizing one's business and daily schedule. Even one's sleep and dream pattern is influenced by the balance of the doshas.

The body regularly discharges aspects of these dosha forces as part of its efforts to maintain health. Kapha is expelled primarily as mucus; pitta is excreted via acid and bile; and vata is eliminated as gas and muscle or nervous energy. For example, if the system has an excess of kapha energy, one will be discharging more mucus. If there is excess vata, it may be noted as flatulence or muscle twitching.

In each person there is a constitutional balance of these forces that informs us of the tendencies by which doshas most easily become unbalanced. The dosha type, as distinct from dosha energy essences, is a descriptive pattern of our psychophysiological makeup with which we are born and which does not change during our life. Each dosha personality I'll be describing, however, is more of a pattern of tendencies for how the mind will respond to different life situations rather than one's specific individual personality. The dosha can be thought of as a genetic precondition for reacting in a certain general psychological or physical way to the environment. For example, as a kapha it is easier for me to stay peacefully at home than be out socializing at parties, whereas a vata dosha person may be out socializing. Our constitutional dosha balance influences how the body and mind will tend to react when experiencing a particular stimulus, such as food, weather, or emotions. It also influences our lifestyle, form of

expression, interaction in the world, and even marital compatibility. As we develop in body, mind, and spirit toward more health in our lives, the doshas do not unbalance as easily.

Finding Your Constitutional Dosha Type

THERE ARE TEN POSSIBLE CONSTITUTIONAL TYPES: vata, kapha, pitta, vata-pitta, pitta-vata, vata-kapha, kapha-vata, pitta-kapha, kapha-pitta, and vata-pitta-kapha. A particular dosha constitution indicates a heightened tendency to manifest imbalance or disease in a particular way as characterized by the dosha. For example, those with a vata imbalance will unbalance in typical vata ways such as with large intestine difficulties and gas or nerve or muscle problems. Usually people have a combination of doshas such as pitta-kapha or vata-pitta. The dosha mentioned first is the primary dosha to most easily go out of balance. The dosha mentioned second, such as the vata in a kapha-vata, will go out of balance next most frequently. Those who have a vata-pitta-kapha dosha combination either have the most difficulty with their health or they are the healthiest. Those who have the most trouble with their health are those for whom all their doshas become easily unbalanced. Those with the best health do not have any dosha that readily becomes unbalanced. These are the people who seem to have good health no matter what they do to their bodies. The majority of people make up the other nine possible constitutional types.

See pages 95–101 for a self-interview to help you gain some clarity on your dosha constitution. Mark the answer to each question from 0 to 3. Three means it describes you most of the time, and zero means it doesn't describe you at all. Add up each column. The column with the highest score is your primary dosha. The combination of this questionnaire and this chapter should give you a good feeling for your dosha constitution.

Usually people are not purely kapha, pitta, or vata, but predominantly one and secondarily the other. If a particular dosha scores much higher than the other two, one is considered a single dosha type. The single dosha can have a score that is up to twice as high as the next one, but it can be less. In a double dosha type, the dosha that represents the greatest percentage of one's qualities is your predominant constitutional type of the pair. The second dosha may be almost equal or considerably less. Occasionally, two doshas are equal, and the third dosha is higher than both. The third is the dominant dosha; most likely one of the two that are tied on the self-interview will emerge as the secondary dosha as you further study and understand your characteristics.

By understanding one's constitutional dosha tendencies it is possible to more intelligently select the most appropriate lifestyle, environment, and dietary pattern for conscious eating. One's dosha type serves as a guideline for selecting the types of foods to eat according to the seasons, time of day, and many other factors, all of which, if wisely chosen and carried out, will contribute to the balancing of one's doshas. The more balance the doshas maintain, the healthier one is.

BLACKBOARD FOOD FOR THOUGHT

Your physical, emotional, mental, and spiritual needs are unique.

A "Conscious Eating" Approach is best developed from sensitivity to your own uniqueness.

Dosha Constitutional Types

Instructions: Mark each column from 0 to 3. Three means *most often describes you* and zero means *doesn't describe you at all*. Put your score in the column on the left side of each dosha category. Add up the total of each column at the bottom.

Characteristic	Kapha	Pitta	Vata
Gait, Pace	<input type="checkbox"/> Slow, graceful	<input type="checkbox"/> Brisk	<input type="checkbox"/> Fast, irregular
Body Type	<input type="checkbox"/> Heavy bone structure, wide shoulders/hips	<input type="checkbox"/> Proportional, balanced	<input type="checkbox"/> Tall, thin, small, thick irregular prominent joints poorly proportioned, imbalanced
Structural Abnormalities	<input type="checkbox"/> Rare	<input type="checkbox"/> Rare	<input type="checkbox"/> Sclerosis, nasal septal defects, bow legs
Fingers & Toes	<input type="checkbox"/> Short & square	<input type="checkbox"/> Medium	<input type="checkbox"/> Long, thin, tapered
Joints	<input type="checkbox"/> Well-lubricated	<input type="checkbox"/> Average	<input type="checkbox"/> Crack easily
Body Weight/Dynamic	<input type="checkbox"/> Tends to gain weight easily/lose weight with difficulty	<input type="checkbox"/> Maintains a steady weight, gain slowly or lose easily	<input type="checkbox"/> Variable, irregular, often hard to gain weight
Location of Weight Accumulation	<input type="checkbox"/> Below waist	<input type="checkbox"/> Weight deposited evenly	<input type="checkbox"/> Accumulates around waist
Endurance	<input type="checkbox"/> High stamina	<input type="checkbox"/> Medium stamina	<input type="checkbox"/> Irregular, low stamina
Physical Activity	<input type="checkbox"/> Avoids exercise, but better from it	<input type="checkbox"/> Likes regular exercise, vigorous okay	<input type="checkbox"/> Active, irregular
Sex Drive	<input type="checkbox"/> Low & steady	<input type="checkbox"/> Moderate	<input type="checkbox"/> High, erratic
Fertility	<input type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Menses	<input type="checkbox"/> Painless	<input type="checkbox"/> Moderate cramping	<input type="checkbox"/> Irregular, misses period
Subtotal Chart 1	___ K	___ P	___ V

Dosha Constitutional Types

Characteristic	Kapha	Pitta	Vata
Menses Flow	<input type="checkbox"/> Light	<input type="checkbox"/> Bleeds heavily, bright red	<input type="checkbox"/> Scanty, clots, dark
Appetite & Thirst	<input type="checkbox"/> Moderate, eats slowly	<input type="checkbox"/> Excessive, sharp hunger, does not miss meals	<input type="checkbox"/> Irregular, extreme, eats quickly
Taste Preferences	<input type="checkbox"/> Warm, bitter, spicy, sweet	<input type="checkbox"/> Cooling, sweet, bitter	<input type="checkbox"/> Warm, sweet, sour, salty
Taste in Mouth in Morning	<input type="checkbox"/> Sweetish	<input type="checkbox"/> Sour, metallic	<input type="checkbox"/> Astringent, bitter
Digestive Power	<input type="checkbox"/> Mild, slow	<input type="checkbox"/> Strong, fast	<input type="checkbox"/> Irregular, problem with gas
Food Tastes That Create Imbalance	<input type="checkbox"/> Sweet, sour, salty, dairy	<input type="checkbox"/> Salty, pungent, sour, hot	<input type="checkbox"/> Bitter, astringent, pungent
Food Tastes That Create Balance	<input type="checkbox"/> Pungent, bitter, astringent	<input type="checkbox"/> Sweet, bitter, astringent	<input type="checkbox"/> Sweet, sour, salty
Food Qualities That Create Balance	<input type="checkbox"/> Warm, dry, light	<input type="checkbox"/> Cold, heavy, dry	<input type="checkbox"/> Heavy, oily, warm
Food Qualities That Create Imbalance	<input type="checkbox"/> Oily, cold, heavy	<input type="checkbox"/> Oily, hot, light	<input type="checkbox"/> Cold, dry, light
Best Climate	<input type="checkbox"/> Warm, mild	<input type="checkbox"/> Cool	<input type="checkbox"/> Warm, hot weather
Worst Climate	<input type="checkbox"/> Cold, damp	<input type="checkbox"/> Hot	<input type="checkbox"/> Cold, windy
Stool	<input type="checkbox"/> Well-formed	<input type="checkbox"/> Yellowish, well-formed	<input type="checkbox"/> Hard, dark colored
Bowel Functions	<input type="checkbox"/> Regular, once a day, slow	<input type="checkbox"/> Regular, two times daily	<input type="checkbox"/> Variable, diarrhea, constipation
Face	<input type="checkbox"/> Strong jaw, broad, muscular	<input type="checkbox"/> Well-proportioned	<input type="checkbox"/> Narrow, dry, irregular, unbalanced
Subtotal Chart 2	___ K	___ P	___ V

Dosha Constitutional Types			
Characteristic	Kapha	Pitta	Vata
Teeth	___ Strong/white	___ Medium-sized	___ Protruded, big, crooked, uneven, buck
Teeth Sensitivity	___ No problems	___ Prone to cavities	___ Brittle, sensitive to cold & sweet
Gums	___ Decay-resistant	___ Soft, easily bleeds, canker sores	___ Emaciated
Eye Type	___ Large with large pupils, white sclera, long dense eyelashes	___ Proportional, light-sensitive, yellowish sclera, short eyelashes	___ Small, dull, dry & close or far apart
Eye Color	___ Blue, milk chocolate	___ Green, light blue, red	___ Black, grey, slate blue, dark chocolate
Hair Quality	___ Smooth, oily, thick, straight	___ Wavy, fine	___ Dry, curly
Hair Color	___ Light-dark brown, medium blonde	___ Light brown, red, light blonde	___ Dark brown, black
Skin Characteristics	___ Thick, no skin problems	___ Delicate, irritable, rashes, pimples	___ Patchy, variable, chaps easily, bottom of feet tend to crack, eczema, psoriasis
Skin Color	___ White	___ Red, yellowish, coppery	___ Dark complexion
Skin with Age	___ Smooth, few wrinkles	___ Freckles, moles, pigmentation	___ Dry, flaky, cracked
Skin Response to Sun	___ Tans evenly	___ Burns easily	___ Tans easily
Nails	___ Strong, large, symmetrical	___ Soft, strong, well-formed, pink	___ Hard, brittle, irregular
Subtotal Chart 3	___ K	___ P	___ V

Dosha Constitutional Types			
Characteristic	Kapha	Pitta	Vata
Pulse Quality	___ Slow, broad, cool	___ Firm, jumpy	___ Shallow
Pulse Rate	___ 60-70/minute	___ 70-80/minute	___ 80-100/minute
Perspiration	___ Moderate	___ Profuse	___ Scanty, even in warm weather
Strength	___ Strong, sturdy	___ Moderate	___ Variable to weak
Voice	___ Low-pitched, resonant, drone	___ Intense, enthusiastic	___ High-pitched, wavering, weak
Vocal Habit	___ Silent, speaks slowly	___ Vocal, good public speaker	___ Very talkative, but variable
Pain Tolerance	___ Would rather avoid pain	___ Moderate, faces pain	___ Low, sensitive to pain
Worse From ...	___ Lack of exercise	___ Acid food & acid system	___ Wind, over-exertion of any sort of emotional or physical extremes
Travel	___ Likes to stay home	___ Adventurer with a purpose, explorer	___ Wanderer
Natural Immunity	___ Moderate	___ High	___ Weak
Tendency for Disease	___ Mucus accumulates, colds, flus	___ Inflammations, heart, skin	___ Body pain— frequent nervous system, muscle & joint problems
Communication Pattern	___ Slow, cautious communicator, quiet	___ Concise, clear	___ Loves to talk a lot, gets off subject
Personality Trait	___ Serious, patient, regular	___ Strong, forceful	___ Chaotic, spacy, flexible
Personality Imbalance	___ Inertia, complacent, greedy, stubborn	___ Domineering, angry	___ Ungrounded, poor life or task focus
Subtotal Chart 4	___ K	___ P	___ V

Dosha Constitutional Types			
Characteristic	Kapha	Pitta	Vata
Emotions That Create Imbalance	___ Complacency	___ Anger, jealousy, grief	___ Fear, anxiety
Mental State	___ Calm, steady	___ Intelligent, aggressive	___ Alert, restless, quick
Humor	___ Serious, quiet humor, slow to laugh	___ Intense laugh, sharp, sarcastic, biting	___ Quick wit, joyful, punster
Friendship	___ Few, steady, loyal	___ Utilitarian	___ Changes, brief, many
Competitiveness	___ Not aggressive	___ Very aggressive	___ Variable
Forgiveness	___ Slow to forgive, forgets with difficulty	___ May hold grudge with eventual forgiveness	___ Forgives & forgets easily
Decision-making Style	___ Slow, deliberate	___ Comprehensive, clear	___ Impulsive, short-sighted
Ability to Grasp Information	___ Slow, comprehensive, but works logically with material once comprehended	___ Insightful, takes in information easily	___ Quick, makes theoretical connections
Mode of Receiving Information	___ Sensate, feeling, intuitive	___ Visual intake of information	___ Receives information auditorily, through intellect; auditory senses acute; noise level is painful
Follow-through	___ Completes everything, strong perseverance, detail-oriented	___ Completes work quickly	___ Inconsistent, incomplete
Subtotal Chart 5	___ K	___ P	___ V

Dosha Constitutional Types			
Characteristic	Kapha	Pitta	Vata
Typical Role in Organizations	___ Bureaucrat	___ Executive leader, good organizer	___ Doesn't do well in organizations, inspirational, visionary
Concentration Ability	___ Steady, strong	___ Moderate	___ Erratic, variable
Speech	___ Harmonious, slow	___ Sharp, cutting	___ Fast
Voice Tone	___ Low-pitched	___ Medium-pitched	___ High-pitched, dissonant, cracks easily, hoarse
Emotional Quality	___ Calm, greedy	___ Irritable, aggressive	___ Fearful, insecure, anxious
Temperament	___ Attached	___ Jealous, fiery	___ Impatient, fragile
Stress Response	___ Insensitive, withdrawal, complacent	___ Anger, jealousy, hatefulness	___ Fear, anxiety, panic
Mental Stability	___ Calm, tolerant, complacent	___ Irritable	___ Easily knocked off center
Mental Style	___ Stable, logical	___ Judging, artistic	___ Inspired, theoretical
Memory	___ Good long-term	___ Good short-, moderate long-term	___ Good short-term, weak long-term
Faith-commitment	___ Steady, loyal	___ Fanatical	___ Fickle, changeable
Financial Style	___ Wealthy, frugal	___ Saves, buys luxuries when appropriate	___ Poor, spends quickly
Subtotal Chart 6	___ K	___ P	___ V

Dosha Constitutional Types

Characteristic	Kapha	Pitta	Vata
Dreams	___ Water, romantic	___ Fire, violence, war	___ Fearful, flying, running
Sleep	___ Easy, long, deep, excessive	___ Short, sound	___ Insomnia, scanty, irregular, grinds teeth
Stress Tolerance	___ High	___ Medium	___ Low
Typical Livelihood	___ Professional	___ Executive, engineer, builder, professional	___ Artist, theoretician, visionary
Type of Appreciation	___ Grateful	___ Demonstrably appreciative	___ Fickle
Lifestyle	___ Home-oriented, accumulates money	___ Well-organized, pragmatic life	___ Exciting, irregular lifestyle on every level
Subtotal Chart 7	___ K	___ P	___ V
Subtotal Chart 6	___ K	___ P	___ V
Subtotal Chart 5	___ K	___ P	___ V
Subtotal Chart 4	___ K	___ P	___ V
Subtotal Chart 3	___ K	___ P	___ V
Subtotal Chart 2	___ K	___ P	___ V
Subtotal Chart 1	___ K	___ P	___ V
Totals	___ K	___ P	___ V

Vata Dosha

Images of Vata Dosha People

THE ARCHETYPAL ANIMAL IMAGES of people with predominant vata constitutions are: goat, rabbit, camel, or crow. Vata possesses the qualities we commonly associate with air and wind. Vata energy dries, cools, and roughens like a desert wind. It has the irregular, inconsistent quality of wind coming and going. Like the wind, vata energy is light with little form and much movement. Changeable like the wind is a central vata theme. The mental and physical energy of vata people comes in bursts of wind. The images of vata are somewhat like a cross between a hyperactive child and the brilliant but ungrounded futurist or theorist who has difficulty manifesting his or her vision. The vata person can be a great visionary who exhausts easily from the stresses of life. Vata people have a tendency to use up their energy quickly.

Physical Characteristics of Vata People

People with a vata constitution are generally thin, flat-chested, have noticeable veins and muscle tendons, and have difficulty gaining weight. The quality of dryness of the vata energy leads to a tendency to have dry, cracked skin and a thinness of the body. Such people tend to be more dark-skinned as compared to others of the same racial background and they tan easily. The skin of a vata person chaps easily and is prone to eczema and psoriasis. Oiling the skin is both balancing and healing for a vata, especially if done regularly. Rubbing oil on the skin, especially sesame oil, seems to balance the vata tendency for roughness, dryness, irritability, and lightness. This also seems to be emotionally soothing for those with a vata constitution.

The hair of vata people tends to be dark, coarse, and curly. Because of the quality of variability, head hair may be oily or dry in different places. The nails of a vata person are usually rough, irregular, and show marked ridges or depressions. The color of the finger just below the nails may look slightly bluish or gray in color. Nail-biters are often vatas. Irregularity also shows up in the teeth. A vata's teeth may be bucked, crooked, and uneven. Teeth tend to be brittle and overly sensitive to hot and cold. The jaw is often out of alignment with the rest of the mouth. Gums may recede early in life, and there may be an astringent or bitter taste in vata mouths.

Because of the vata quality of coldness these people crave the sun. Their circulation is usually poor and so their skin is cool to touch. Their innate coldness leads to scanty sweating. They love external heat sources such as the sun, saunas, and hot springs. Vata people love warm climates and more easily go out of balance in the windy, cold time of the year, such as in the fall and winter. A smart vata will dress warmly and may put cayenne powder in his or her socks and shoes during cold weather.

Vatas may be tall or short with narrow shoulders and/or hips. They tend to have long fingers and toes. The vata quality of irregularity leads to unbalanced body proportions and structural abnormalities, such as deviated septums, scoliosis, or bowed legs. The irregularity of a vata may also manifest as fluctuations in weight. These are also the people who seem to be able to eat almost anything without gaining weight.

Typical eye colors of vatas are grey or slate blue. They may also be dark brown or black. Vatas are erratic eaters. They often are in a hurry to eat but may take more food than they can eat. They also may eat too much and have trouble digesting it all. Their appetites are variable from day to day, and they often need to have snacks between

meals. If breakfast is missed they usually function poorly because of the vata tendency toward hypoglycemia. The vata tendency to irregularity does not easily hold blood sugar levels stable. Unless vatas eat a heavy breakfast, they will usually want to eat an early lunch. Those with a vata constitution have a harder time fasting unless they get juices every few hours.

Vata people tend to have irregular bowel function. Sometimes they have constipation and sometimes diarrhea. Their tendency to be irregular and to become dry gives some vata women irregular menstrual periods. Sometimes vata women miss their periods or they have scanty flow. Cramping with their periods is sometimes accentuated, as muscle spasms and cramping is a vata tendency.

Food Needs of Vata People

Vata people can eat a raw-food diet if they eat heavier, oily foods such as avocado and soaked nuts and seeds, both of which have water to balance their dryness and oil to balance their lightness. Heating herbs help vatas by giving their raw food the warmth it needs. Since vatas have a tendency to be cold and to get cold, warming up food to 110-118° F in the sun or the stove is an especially good practice for a vata who likes raw foods. Vatas are unbalanced by the dryness of dried fruit but can eat some if they add back the water element by first soaking the fruit. Vatas should eat at regular intervals and not go too long without eating. Blending raw vegetables into a liquid soup form is good for vatas in that it supplies the water element in an easily digestible way while still preserving the enzymes. This blending process and soaking of nuts and seeds helps to minimize the gas that vata people tend to have because of the inherent air quality of their basic constitution. In general, vata people are best maintained in balance with soupy, oily, salty, and warm foods. This is particularly true for those vatas who have been successful on a raw-food diet.

Psychophysiology of Vata People

The vata psychophysiological type tends to be active and restless but often has low endurance. They have fluctuations in their energy and a tendency to expend energy quickly—they love to burn it up as soon as they get it. The tendency is to overextend themselves and burn out like a match which flames brightly and then exhausts itself. Exercise often tires them out. Like their energy, their pulses tend to be fast, thin, and irregular. Their sexual activity tends to mirror this as well. They may have intense interest in sex which peaks when it is expended in lovemaking. They have a tendency for sexual overindulgence which often leads to exhaustion.

Creativity comes easily for a vata person. They have alert, active, and restless minds that verbalize rapidly. Sometimes they can become mentally fatigued easily. They are quick to understand things intellectually. Vata people often are the visionaries, artists, and people who theorize. They love excitement and variation in lifestyle. When in balance, a vata person is vivacious, energetic, talkative, gregarious, and enthusiastic.

Their sensitivity to subtle energies, desire for harmony, and open-mindedness make it easy for them to pursue a spiritual life. Sometimes their will power is weak and needs to be exercised to increase it through balanced, harmonious discipline. Vatas tend to have quick memories and forget easily. They think predominantly in words. Often they are very sensitive to changing environmental activity and are affected by noise and pain. Loud music may actually be painful to them. I often think of vatas as people whose nervous systems have less insulation. They are knocked off their “center” the most easily compared to the other dosha types. Balancing vata in general can miraculously clear up many nervous system imbalances.

Vatas also have a tendency to insomnia. They either have difficulty falling asleep or they awaken early. They dream frequently and often have flying dreams or dreams that are intense and active. Because of the sensitivity of their nervous system they tend to be nervous, anxious, and fearful. Vatas may be irritable and anger easily, but it is an anger that fades quickly. Vatas’ active minds require continual stimulation. They make friends easily, but often

the relationships are not sustained. Often these people appear to be “space cases.” Vatas are receptive and open to spiritual development. It even comes easily for them, but they have a tendency for poor follow-through. They may move from one stylish social group, or experimental activity or group, to another.

Spiritual Challenge for Vata People

One of the most important spiritual challenges for people with vata constitutions is learning how to regulate their energy and balance their lifestyle so they do not fall into the unbalancing syndrome of overextension of their energies and the resulting chronic exhaustion. As a medical doctor I have instructed my vata clients in developing and mastering a balanced, regular, harmonious lifestyle. They become quite pleased with the improved quality of their health and spiritual life. Balance is one of the most difficult achievements for a vata. It is, however, stability that allows them to manifest their vision.

How to Recognize an Imbalance in the Vata Dosha

I can often recognize an imbalance of vata on the psychological level as nervousness, fear, anxiety, insomnia, pain, tremors, and spasms. This vata imbalance may also reveal itself in its drying tendencies as rough skin, arthritis, emaciation, stiffness, constipation, general dryness, thirst, insomnia, excessive sensitivity, and excitability. Vatas have a tendency to manifest large intestine disorders and to suffer from excessive gas. A vata disorder may also manifest in the muscle system with low back pain or in the nervous system with sciatica, paralysis, and various types of neuralgias. Almost any sort of psychosomatic symptom can be connected to a vata imbalance.

These vata imbalances more often manifest during weather conditions such as cold, windy, stormy weather. I once was able to solve the problem of insomnia of one of my vata patients by suggesting that this person turn off his fan at night. The wind from the fan was causing a vata imbalance and the consequent insomnia.

It seems that with vata people, anything excessive such as strenuous exercise, mental work, extreme diet changes, grief, anger, suppression of natural urges, severe weather conditions, or any activities taken to the limit will cause an imbalance. A calm, stable environment will usually bring a vata person back into balance.

Several of my predominantly vata clients have found that to successfully live in the world they need to pay constant attention to keeping their lifestyle and diet balanced. I have found that high-functioning vatas approach their vata constitution as a spiritual challenge. When they don't, pure vata types have difficulties adjusting to society. To illustrate with a case example, when one of my patients first came to me she was a typical, thin, high-strung, anxious vata who was in constant turmoil with her husband. She was unable to commit herself to the role of mother and frequently spoke about “skipping out” as she had done in the past. She was using marijuana and other stimulating drugs. She was on a heavy flesh-food diet and she ate at irregular intervals. She often tackled projects in the work world that would overwhelm her. She was depressed and angry with herself and her work. After eighteen months of nutritional and dietary work, homeopathy, family therapy, and meditation training, her life was transformed into a model of balance and harmony that she could hardly believe. Her marriage became a happy one, she began to enjoy her motherhood, she meditated on a regular basis, she changed to a balanced, vegetarian, 80% raw-food diet, and got off drugs. She stopped taking on those stressful extra projects and focused on making her home her own Garden of Eden. A key component in her success was increased self-understanding, which included an understanding of her vata constitution, and committing herself to not creating stressful situations on any level in her life. By seeing her vata constitution as a spiritual challenge rather than a limitation, she turned her chaotic, unhappy life into one experienced by her as blessed.

Another vata constitution patient who came to see me was already on a spiritual path and quite aware of her vata constitution. One major balancing factor for her was sticking to an 80-90% raw-food, vegetarian diet. She was extremely sensitive, and when she wandered from this diet, her mind and body would go out of balance. One typical

characteristic of vatas is what I call time disease. They tend to overextend, stress out, and go into crises. A major improvement in this person's vata-balancing effort occurred when she became strong enough to refuse to let herself be overworked by the demands of the spiritual group she belonged to. Healthy vatas usually have learned to “say no” and have become experts in their own time and stress management strategies.

My constitutional type is kapha-vata. One way my vata manifests is in the musculoskeletal system. By doing stretching and breathing exercises regularly, I have found a way to keep my vata balanced. Traveling is a vata stress for me so it is a time when I pay particular attention to hatha yoga and other vata-balancing factors. Because travel is potential stress for my constitutional type, I have found that the day after I arrive at my destination it's best to eat lightly and only do light yoga and exercise. When I travel, I keep myself warm and avoid cold breezes that are unbalancing to vata. These might seem like little things, but to me they have meant the difference between feeling great and full of energy or suffering with a stiff neck or some pulled muscle.

Summary of Ways to Unbalance Vata People

1. Avoid calm, soothing environments.
2. Be excessively physically and mentally active with travel, overscheduling, overworking, excessive fasting, or extended periods of any extreme.
3. Live chaotically without any regular schedule or rhythm connected with the natural Earth cycles, such as working a graveyard shift, eating irregularly, and being on the run.
4. Don't get enough sleep, rest, or meditation.
5. Live in a windy, cold environment.
6. Use cocaine, speed, and other drugs.
7. Overly act out or suppress feelings.
8. Eat dry, frozen leftovers; cooling, light, bitter, astringent, and pungent foods.
9. Engage in worry, fear, and excess mental activity.

Summary of Ways to Balance Vata People

1. Live in a warm, moist, tranquil environment with a minimum of wind. Keep warm.
2. Live moderately and in a balanced, regular way in harmony with Earth cycles. Always be gentle to oneself. Avoid all physical, emotional, and mental excesses.
3. Eat warm and moist foods that have some oil content and do not stimulate gas (avoid beans). Avoid drinks and foods that have been chilled, frozen, or have ice cubes.
4. Eat foods that have sweet, salty, and sour tastes and are not light and dry (avoid dried or dehydrated food).
5. Get adequate sleep.
6. Meditate regularly to maintain a calm mind.
7. Try to make the environment as secure and safe as possible.

Kapha Dosha

Images of Kapha Dosha People

KAPHA CHARACTERISTICS ARE ALMOST OPPOSITE the characteristics of vatas. The symbolic animals are the elephant, bull, horse, sea turtle, or lion. Kapha dosha people have physical characteristics similar to that of most football linemen. Kaphas are the quiet, heroic work horses of the world who do their job without complaining. Kapha men and women are the quiet, family-oriented, homebody and homebuilder type people who are comfortable with the status quo. They tend to store and steward their energy in every aspect of their lives, whether it be body or money energy. They have pack rat tendencies in that they collect and hold onto everything, including possessions, money, the past, people, energy, words, and their weight. Kapha possesses many of the qualities of earth and water combined, such as we experience with mucus or mud. Kapha is inert, thick, heavy, sluggish, stable, viscous, sticky, cold, and slow-moving. A “couch potato” is an image that fits a kapha who is in a kapha imbalance.

Physical Characteristics of Kapha People

Weight is one place kaphas regularly tend to store energy. Kapha females and males have a difficult time losing weight. Females tend to gain weight in the lower part of their bodies, such as the hips and buttocks. Kapha women tend toward water retention, especially premenstrually. The menstrual periods of kapha women are usually regular without excessive blood flow, and generally not too difficult.

Kaphas have heavy bone structures with wide shoulders and hips. Fingers and toes are usually short and squarish in relation to the rest of the body. The tendency to store energy is reflected in kapha's thickness and tendency to be heavy, to gain weight easily, and to store it most obviously in the hips and downward in the body. They are well-proportioned in terms of the relative sizes of body parts, and their joints are well-lubricated.

The skin of a kapha person is well-oiled, tans easily, and is smooth and thick. There may be a few freckles and an occasional mole. The skin may be cool but not cold, because kaphas usually have good circulation. Kaphas usually perspire moderately. Typical kapha hair is oily, slightly wavy, thick, and brown or dark brown. Nails are strong, large, and symmetrical, as are the teeth. The tongue of kaphas is rarely coated. A sweetish taste may be present in their mouths when they become unbalanced. Kapha eyes are often large and liquid, blue but also milk chocolate in color. Like their physical attributes, a typical kapha pulse is slow, full, rhythmic, and strong.

Exercise is very beneficial for kapha people. They tend to do poorly if they do not get sufficient or regular exercise. Paradoxically, they are not motivated to exercise until they actually begin to experience the sense of well-being regular exercise gives them. They often have good muscle tone and coordination and are the best able to endure vigorous exercise of the different dosha types.

In the realm of sexual activity kaphas tend to have a lower sex drive compared to the other doshas since they inherently like to conserve their energies; but, as with exercise, when they actually reap sexual satisfaction this encourages them to engage in sex more often because the experience was positive. Kaphas, as part of their homebuilding energy, are also very fertile.

The sleep of a kapha person is usually deep and long. They are the longest sleepers of the three doshas. They characteristically awake refreshed and alert. However, if they take naps during the day, they usually awake groggy

and slow. Rarely do they have insomnia. Their dreams are usually calm and peaceful.

Food Needs of Kapha People

The digestion in a kapha is slow and regular. Digestion is especially slowed if oily or fatty foods are ingested. Kaphas have a tendency to move their bowels one time per day. Their appetites are moderate, and they are the least thirsty of the three dosha types. Excess water may throw them into imbalance. My experience is that these people do better on less than the commonly recommended eight glasses of water per day. In my laboratory I'm able to test for optimal hydration. Often those with a kapha constitution who drink six to eight glasses of water per day test as overhydrated. Because I eat primarily fruit and vegetables, if I, as a kapha-vata, drink more than four glasses of water per day I test as overhydrated. Excess fluid may precipitate a kapha imbalance, especially if it is a time of day when the kapha forces are strongest, such as 6 AM to 10 AM and 6 PM to 10 PM.

Kaphas are balanced by a diet that is light, warm, and dry. Oily, fatty, fried, salty, sweet, cold, and heavy foods create a kapha imbalance. The all-American diet of high fat and sugar content plus excess salt is the worst for kaphas. Fast foods are a disaster for them. Most dairy products are also unbalancing for a kapha constitution. Raw foods with an abundance of bitter and astringent greens with some heating and pungent herbs constitute the best type of diet because of kapha's tendency to gain weight and have slow digestion. The lighter kaphas eat at each meal, the easier their digestion and the better their health will be.

Psychophysiology of Kapha People

The typical kapha personality is calm, quiet, steady, relaxed, and serious. They are the easy-going types who are the most unlikely to become upset by stress. Intellectually, they may at first be slow to comprehend, but once they grasp a concept they are able to work with it and hold on to it. In concert with their mental activity, they tend to speak slowly and carefully. They may be temperamentally disinclined to talk in that they do not initiate conversations easily unless they feel they have something of use to say. The voices of kapha people are often low and sonorous. There is a certain sweetness about kaphas in tone, voice, and manner.

Tolerance, calmness, forgiveness, and love are predominant kapha characteristics, as are righteousness, generosity, patience, humility, steadiness in relationships, and stability of mind. There is a tendency to avoid confrontations. Kapha people often withdraw when confronted. There is a turtle quality about the social interaction of a kapha. Sweetness in their human interactions will lure them out of their shell.

Sometimes kaphas tend toward complacency and avoidance of change. They have a tendency toward inertia, as is typical of a tendency to store energy rather than expend it. But once the ball is rolling they can have strong emotions. They tend to procrastinate if they feel under pressure. Kaphas take a long time to make up their minds, but once committed to an action or a friendship, they are very loyal to the commitment. An imbalance of the kapha personality may manifest as passivity, inertia, oversensitivity, possessiveness, or greed. Overattachment and greed are the two most common kapha imbalances.

Kapha types tend to experience their world and express themselves through their senses and emotions. They are linked to the material world. They tend to accumulate possessions. Their tendency to familiarity, long-term commitments, and the material world makes them be home- and family-centered in their desires and skills. A kapha mind retains information well, but kaphas are not particularly the theorizers of the world. They are good at settling down and running things once they are built, but they are not inventors of machines or explorers who discover new lands. Kaphas think in terms of stabilizing systems rather than creating systems. They are conciliators. This makes them good managers and bureaucrats. The tendency to resist change sometimes makes them inflexible. Kaphas are the solid citizens of the world who enjoy their lives and do not make too many waves unless they are pushed too far.

Spiritual Challenge of Kapha People

A main spiritual task for a kapha is overcoming the tendency for inertia and complacency in a way that brings them into an active personal interaction established in the moment with people and the Divine. Kaphas may become stuck in the orthodoxy of a particular form of spiritual ritual or routine and lose the meaning and passion for the Divine in the process. The key task is learning how to use their groundedness and their tendency for form to support and sustain an active, dynamic, expanding spiritual life that will transcend the form in order to keep them in communion with the Divine.

How to Recognize an Imbalance in the Kapha Dosha

Symptoms of a kapha derangement include a sense of heaviness, drowsiness, constipation, itching, skin disease, dullness, inertia, depression, edema, swelling of joints with fluid, and excess mucus production in the eye, ear, nose, throat, and lungs. Kaphas have a tendency toward upper respiratory infections, colds, and flus. A kapha person can be thrown out of balance by eating too much sweet, cold, damp food, such as ice cream. Their imbalance is worsened by cold, damp weather. They are put in balance by warm, dry weather and warm, dry food. They are made better by plenty of exercise, heat (such as a sauna), a mucusless diet, plenty of raw food, periodic fasting, and a warm, dry climate. Avoidance of sweets is important for kaphas because of their tendency toward a “sweet” complacency, inertia, and a “stuck in a rut” lifestyle, which sweets amplify. Natural, raw, unprocessed, nonfiltered honey is a notable exception to the sweet danger, for a little bit of honey helps to heat, nourish, and rebalance kaphas.

Those who tend to unbalance toward kapha are sensitive to cool and damp weather. In India, where the change of seasons is distinct, many people with asthma get worse in the rainy season, which is a cool and damp time of year. Because of my own kapha tendencies, I do not eat watermelon in the morning or after the sun goes down. These are the times kaphas are most easily unbalanced. In fact, if I have too much of any fluid or watery fruit in the morning I may get a slight accumulation of fluid in the nose which will go away if I sit in the sun for a few minutes. When I have eaten watermelon at these kapha-vulnerable times, even in the summer, I feel an immediate mucus buildup within a half-hour. It took me a long time before I figured out that a raw diet alone was not enough to balance the tendencies for kaphas to produce mucus. By getting into the sun or heat, such as a sauna, and using a little cayenne in the morning, this tendency to have too much fluid and mucus has faded away.

The above case is instructive in that the timing of foods is important. The same watermelon taken during the pitta time of day, which is 10 AM–2 PM, feels quite balancing, especially if I have been out in the summer sun. Because of this, the only time I even consider having watermelon is during the hot summer. This is one example of how one balances food, environment, and dosha.

Summary of Ways to Unbalance Kapha People

1. Become a couch potato by overeating fatty, oily, fried foods, getting no exercise, and napping after meals.
2. Eat at least one sweet, oily dessert and lots of ice cream and other dairy products each day while watching TV.
3. Overeat and concentrate on sweet, oily, salty, and cooling, frozen, chilled, and watery foods. Eat an excess of wheat bread and pastries.
4. Avoid all exercise.
5. Suppress all creativity and do one's best to become inert mentally and physically. Create no waves in your

- life or job and do a lot of repetitive work.
6. Use tranquilizers to excess and hypnotics.
 7. Avoid all emotional expression and all conflict.
 8. Live in a wet, humid, cold climate.
 9. Be a collector.
 10. Become deeply involved in ritual and orthodoxy.

Summary of Ways to Balance Kapha People

1. Lead an active, creative, and stimulating physical, emotional, and mental life. Have daily exercise and stimulating friends and work environment. Minimize TV viewing.
2. Eat foods that are warm, dry, pungent, bitter, and astringent. Minimize sweet, salty, oily, heavy, and sour foods.
3. Eat an 80% raw-food diet.
4. Eat the minimum to feel satisfied.
5. Minimize fluid intake to three or four cups per day.
6. Express your feelings in the moment.
7. Throw away the turtle shell you wear and try to interact with the world.
8. Maintain only those spiritual practices that keep you in contact with God's divine nature and purpose for you.

Pitta Doshha

Images of Pitta Doshha People

THE ARCHETYPAL ANIMALS OF THE PITTA DOSHA are the tiger, cat, and monkey. A football quarterback who is balanced and well-coordinated, a warrior, and the stereotyped image of a hard-driven, insensitive corporate leader are all archetypal examples that portray the pitta person. For females, the proverbial “Amazon woman” comes close to representing this archetype. The “hot-blooded” teenager is another image. The elemental image is fire. Fire is hot, intense, fluid, and light. It burns you if you get too close but is inspiring at the right distance. Pittas are hot in every aspect of their lives. The key word-image for pitta is intense.

Physical Characteristics of Pitta People

A pitta person usually has a medium-framed, well-balanced physical body of average weight. Pitta people tend to deposit weight evenly over the body and can gain or lose weight easily. A pitta-type person is physically graceful and strong, and their physical structure reflects this. The skin of a pitta person is usually light or coppery and sensitive to the sun. They have many freckles and usually become sunburned before they tan. Skin problems are an integral part of a pitta person. The pitta person's skin can become irritated easily and is prone to rashes, inflammations, and pimples. These tendencies can become much worse in the summer.

The heat of the pitta makes them warm-bodied and warm to the touch. Their tendency to perspire, even in cold weather, makes them sometimes have sweaty palms. Their heat is reflected in red hair or light-colored brown or blonde hair. Early baldness or the hair changing to white or gray at an early age is an indication of pitta. Nails are strong and rubbery with a pink hue because of their warm blood under the skin. Pitta eyes may be hazel, green, reddish brown, or light blue. There may be a charismatic fire in their eyes that radiates out in all directions. Pittas have medium-size mouths with teeth that are prone to cavities and gums that tend to bleed. Pitta tongues and mouths are prone to canker sores. Body heat may manifest so strongly that the tongue may be deep pink to red or even bleed at various times. A sour or metallic taste may occur in the mouth early in the morning if there is an imbalance.

Pitta people have strong digestive fires and good appetites. They are the least affected by poor food combining because they digest so well. A good appetite is common. They may become irritable if they do not eat when they are hungry. Eating usually calms them down. Pittas usually like cold drinks. Their bowel function is regular and frequent, but may feel hot on excretion. Stools may be yellow or orange. If this stool color is too intensely yellow or orange, it suggests a pitta imbalance. Because of their innate heat, pitta women bleed more heavily and for a longer time during menses. The menses blood is usually bright red. During menses, pitta women may have moderate cramps and loose stools.

Until they overheat, pitta people enjoy vigorous exercise. Pittas do not need exercise as much as kaphas. Pittas can fatigue more easily. After a good workout they will usually be hungry and thirsty as compared to a kapha, who may not be hungry at all. The pulse of a pitta is regular, full, and strong with a medium speed of about 70.

The sleep habits of pittas are generally regular and problem-free. They do not have insomnia unless there is particularly excessive stress or too much work worry. They sleep lightly and wake up alert. They do not need as much sleep as a kapha person. Pitta dreams are active, intense, often in color, and often vividly remembered upon

awakening. Their dreams may involve being chased or chasing someone, as well as themes of much heat or light.

Food Needs of Pitta People

The best diet for a pitta is bland raw food. They are the most sensitive of the three doshas to toxins in food, air, and water. It is most important for them to eat organic food and drink only filtered water. Other pollutants, such as alcohol, coffee, marijuana, and cigarettes, also throw them out of balance. Sweet-, bitter-, and astringent-tasting foods, which are cool and heavy, are the most balancing. Spicy, oily, salty, and sour foods tend to unbalance pittas. Overeating is another big hazard for pittas since one of their major tendencies is acid indigestion. Pittas do best on a low-protein diet since protein, especially from flesh foods, creates a metabolic stimulation and heat of about 30%.

Psychophysiology of Pitta People

The pitta personality is ambitious, intense, and competitive. The abundant fire in their makeup is reflected as a tendency to anger easily. The mind of a pitta usually has good comprehension and intelligence. At work, they know how to pace themselves. They tend to live by their watch and do not like people wasting their time. They are good managers and executives and exhibit great leadership qualities. They naturally tend to take command of situations. Whereas vatas may be the ungrounded theoreticians, the pittas are the engineers who manifest the plan or idea on the physical plane. Unlike the kaphas, they have minimal interest in the day-to-day running of a business. They are not the sustainers the kaphas are. The essence of the pitta mind works visually, and there is usually no difficulty visualizing or remembering a scene. The pitta memory is good. Like the kaphas, they do not easily forget a slight.

These people are strong leaders who may tend to dominate those around them. They are outgoing and make friends easily. Pittas believe in fair play and have a warrior's courage. When in balance, they are happy, confident, and friendly. If angered, they tend to be hurtful or vengeful. They are also easily unbalanced by the toxic emotions of others, such as hostility, hatred, and jealousy. It is characteristic of them to become angry and hostile under stress. They tend to be impatient with those who do not catch on as fast as they. This tendency can lead to arrogance. The pitta fire is sometimes revealed in sharp sarcasm and an undertone of impatience. They are often dedicated to self-growth and may rise to leadership roles in tightly knit, intolerant organizations, whether they be spiritual, cultural, athletic, or business settings. They work well with energy and often spontaneously create a well-organized and balanced lifestyle. Their money is spent appropriately and not impulsively and excessively, as vatas might handle money.

Spiritual Challenge for Pitta People

The central spiritual challenge for a pitta is transforming the tendency for anger and irritability into a feeling of calm and love. This does not mean the suppression of feelings as much as learning how to express emotions in a harmless way without judgment. To develop the awareness and expression of unconditional love is the culmination of this spiritual challenge.

How to Recognize an Imbalance in the Pitta Dosh

When pittas are out of balance, their psychological symptoms tend toward vanity, intolerance, pride, aggressiveness, stubbornness, hatefulness, jealousy, and excessive anger. Chronically angry individuals are highly suggestive of a pitta imbalance. They may experience acid indigestion and sourness or burning in their mouth, eyes, skin, small intestine, and stomach. Other signs of pitta imbalance may be fainting, excessive perspiration, restlessness, increased thirst, desire for cold drinks, and even delirium. Excessive environmental heat may cause all of these symptoms. Heat stroke occurs more frequently in pittas than the other doshas. Other causes for a pitta derangement may be strong anger, grief, excess physical exertion, fear, and too much salty, pungent, acid, dry, or heating foods. Pittas are rebalanced by cool weather, nighttime, sweet foods, cold baths, and clarified butter (ghee). Although in the Ayurvedic system ghee is recommended for balancing aggravated pitta, I do not necessarily recommend it for general use because it is a dairy product and a cooked oil.

An example of a predominantly pitta constitution is my son, Rafael. When we were in India on vacation he was in fine health until the hot season arrived. As the temperatures went above 100° F he began to develop heat rashes on his body, canker sores on his tongue, and generalized exhaustion. He also began to get colds. When the cooler monsoon season came, his health immediately returned to its prior excellent condition. In the same heat another woman was so pitta that she literally became disoriented. In her delirium she felt that she was going to die. She required a variety of cooling foods and homeopathic remedies to return her to normal functioning.

Summary of Ways to Unbalance Pitta People

1. Live in a hot, dry climate, exercise in hottest time of the day, and wear tight clothing.
2. Avoid cool and peaceful places, relationships, and lifestyles.
3. Act out all aggressive, angry feelings and thoughts. Be a bully.
4. Work in a high-stress, competitive job.
5. Keep life as frustrating, warlike, argumentative, and agitating as possible. Associate with people who share and encourage these toxic behaviors.
6. Do not meditate.
7. Drink alcohol in excess and use marijuana, speed, and cocaine.
8. Eat large amounts of spicy, hot, oily, sour, acid-producing, and salty foods. Indulge in large amounts of red meat, tomatoes, hot peppers, garlic, onions, sour foods, yogurt, and caffeine.

Summary of Ways to Balance Pitta People

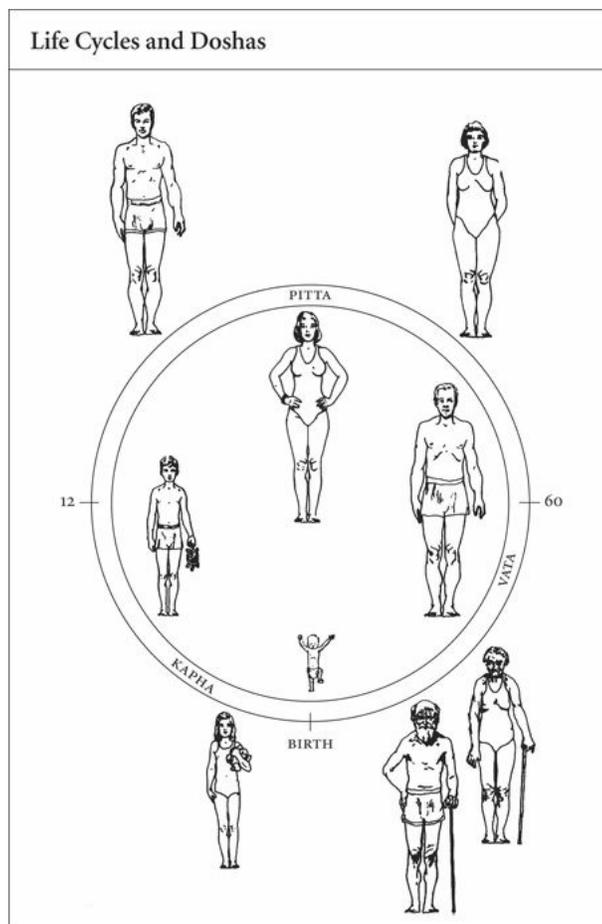
1. Live in a cool and calming personal, social, and work environment.
2. Avoid excess heat, humidity, and steam in the environment, such as hot tubs and excess sun, as well as in all relationships and activities.
3. Meditate regularly and strive for peace with self, friends, and humanity.
4. Learn to express feelings and thoughts in constructive and supportive ways to those around you.
5. Focus on being in a state of universal, unconditional love.
6. Eat cooling, sweet, bitter, and astringent foods, with an emphasis on fruits and vegetables.
7. Eat a bland, 80% raw-food diet.

Natural Cycles and the Dosha Energies

NOT ONLY CAN INDIVIDUALS BE DESCRIBED as being a particular dosha, but times of the day, the seasons, and periods in the life cycle (teenage, middle age, old age, etc.) also possess the dosha qualities. These natural cycles have an intimate effect on the energy and manifested qualities of the doshas.

Dosha Energies of the Life Cycles

In addition to one's given dosha constitutional type, from birth to the teen years the kapha dosha is the predominant force since kapha governs growth. Because kapha is predominant, no matter what one's constitution, kapha will tend to go out of balance the most easily during these years. This is why one sees a tendency for so many colds, flus, runny noses, and earaches in young children. These mucous conditions are typical of unbalanced kapha energy. This is often made worse by the excess consumption of dairy products in our culture. It is also true that many in our Western culture are outright genetically predisposed to be intolerant of dairy. During these years it is best to slant the diet toward those foods which balance kapha. That means minimal ice cream, cake, cookies, candy, and dairy.



From puberty to the sixties, pitta predominates. It is most obvious in the teenage years when the fire of life begins to express itself in such well-known forms as high sexual energy, pimples, heightened emotions, and rock and roll music. During the teenage years, more emphasis should be put on avoiding pitta-unbalancing foods, such as hot, spicy pizzas and Mexican foods. Alcohol, marijuana, and other drugs should be avoided, especially after the teen years and early twenties. Young adults need less focus on the pitta-unbalancing foods and more attention on avoiding foods and habits that unbalance their particular dosha.

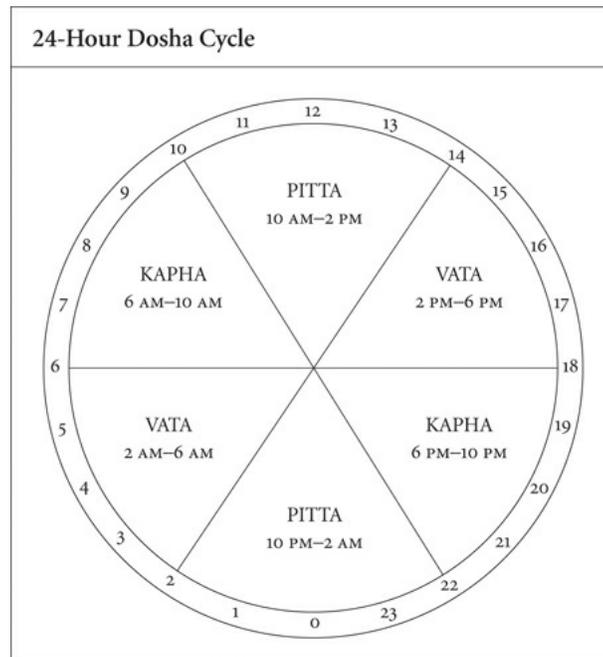
After age sixty or seventy, the vata force tends to predominate. Of course, if one doesn't take care of oneself, pitta will “burn out” more quickly and the vata phase will arrive sooner. The vata phase shows itself with the tendencies toward arthritis, emaciation, nervous system disorders, sensitivity to cold weather, and a decrease in the power of both digestion and memory. These vata-unbalancing tendencies are balanced in the same way that one balances constitutional vata (as outlined in the vata section).

Dosha Energy Cycles of the Day

The day cycle begins with the movement of vata from 2 AM to 6 AM. The vata force creates movement and lightness and is the upward awakening force. Kapha predominates from 6 AM to 10 AM. It is the time when those with a predominant kapha constitution are most easily thrown out of balance. Kapha people do well not to eat or drink too much for breakfast, especially if the food is still cold from being in the refrigerator. People with the constitution of a kapha may even want to take a little ginger or cayenne to bring heat to the system and clear the mucus at this time.

From 10 AM to 2 PM pitta predominates. This is the time of best digestion for most everyone. Because of this it is the optimal time to eat the largest meal of the day in the Ayurvedic system if all other factors are in balance. Whereas a kapha or vata person may enjoy some sun and do exercise to warm up, the pitta person will do well to avoid the sun and other heating activities during this time of day.

From 2 PM to 6 PM the vata dosha predominates. This is the time of day that many people may experience bloating and fatigue. Kapha then begins to predominate from 6 PM to 10 PM; therefore, it is better to eat early in the evening because kapha has a slowing force on digestion. It is particularly advisable for kaphas to eat lightly and earlier in the evening. Pitta again predominates from 10 PM to 2 AM. Pittas may find that their appetites are stimulated during this time. Although generally it is not recommended to eat late at night, pittas can get away with it if they eat lightly.



The Changing Dosha Forces of the Seasons

The seasons and the change of seasons have a powerful effect on the balance of the dosha. By maintaining an awareness of the predominant dosha-unbalancing force with each season, one is able to shift diets, clothing, and lifestyle to maintain the doshas in a balanced state.

The healthy practice of eating with the seasons is well-known in Chinese medicine also. In the Ayurvedic system, the change of seasons is a time of significant dosha imbalance. The peak energy change times are the equinoxes on March 21 or 22 and September 21 or 22, and the solstices on June 21 or 22 and December 21 or 22. During these transition times when the natural energies are in the extremes, it is beneficial to eat lightly and be particularly careful to follow a balanced, harmonious lifestyle.

Fall is usually a time of cooling temperatures and increased wind. These two forces aggravate the vata dosha. For vata people in particular, it is important to dress warmly in order to minimize exposure to the cold and wind. It is a time to eat more warming foods and to increase the intake of foods that have a more sweet, salty, and sour taste. These are foods that balance vata. Moderate amounts of pungent and warm foods may have a healing effect at this time. In the Chinese system, fall is a time when the air element (vata) and lungs and large intestine meridians tend to become most easily unbalanced. Fall is an important time to make sure one's bowels are moving regularly and to eat high-fiber foods, such as fruits and vegetables, to aid the elimination process. It is also a time to work on the assimilation of vitamin O, oxygen, with a focus on breathing exercises to build lung function. Ginger root is a good

tonic for the whole system and especially the lungs and sinuses during this time. Other good lung teas are burdock and comfrey. Coltsfoot is another good general lung herb to have occasionally. Licorice root is good for the adrenals and is a mild laxative to support the bowels. Grief is the emotion in the Chinese system that is associated with the lungs and large intestine. Repressed grief can inhibit the function of these organs, so the fall is a significant time to get in touch with one's grief and express it and release it.

Winter is a time of dampness and coldness. Damp and cold unbalance kapha and kapha-vata most strongly. Disorders of excess mucus such as bronchitis, colds, flus, and pneumonia happen more frequently during the winter. Heating activities such as physical exercise, saunas, certain breathing exercises, and consumption of warming herbs and foods that are dry, pungent, hot, bitter, and astringent will help to balance kapha. The winter is a time for kaphas to minimize fatty, oily, sweet, sour, salty, and dairy foods. It is distinctly not a time to eat ice cream. Raw, unpasteurized honey in small amounts, although a sweet, is a warming kapha balancer. In the Chinese system, winter is a time for the water element to become most vulnerable to imbalance. This often correlates with the tendency for the mucus imbalance of the kapha. The kidneys and bladder meridians are most easily unbalanced at this time. Herbs that support the kidneys include juniper berry, flaxseed, marshmallow root, nettles, fenugreek seeds, cornsilk, and parsley. Ginger and cayenne are particularly good for this season as well. Aerobic exercises that heat the body and stimulate circulation, and hatha yoga to keep the muscles loose, are also good for maintaining balance during this season. According to the ancient Chinese system, the kidneys are said to hold fear. Winter is a good time to make yourself feel safe and secure and even to work on your fears. Meditation and prayer are both soothing to the mind and help to eliminate fear.

Eating with Doshas of the Seasons

SUMMER	Eat more sweet, cool, bitter, astringent, raw, and high water-content foods: fruits, melons, vegetables, greens, sprouts
SPRING	Eat similar to winter but increase raw food, greens, sprouts, vegetables, fruits, and low-fat foods and decrease grains
WINTER	Eat more pungent, bitter, astringent, warm, dry, and light foods: ginger, cayenne, vegetables, grains, greens, and sprouts
FALL	Eat more sweet, naturally salty, sour, warming, heavy, and high-fiber foods: ginger, grains, vegetables, soaked nuts and seeds

Spring, with the melting of the snow and the arrival of wind and rain, is another time of kapha and kapha-vata imbalance. In addition to the balancing activities recommended for winter mentioned above, spring is a good time to fast to clear out the excess kapha buildup from winter. It is a time to eat more lightly and to eat more raw fruits, vegetables, and raw, soaked nuts and seeds, and to cut down on grains. Spring is the time for green foods, sprouts and salads; they should be eaten abundantly. In the ancient Chinese system, it is the time the wood element, which involves the liver and gallbladder, is most easily unbalanced. Thus these organs need the most support during the spring. Sour foods are particularly balancing for the wood energy as well as for vata. Lemon is a great cleanser for the liver. Foods that unbalance kapha, such as alcohol, fatty, fried and oily foods, dairy, and an excess of grains, also stress the liver. These should be avoided, as well as junk foods and processed foods. Avoidance of these foods gives the liver a chance to do its spring cleaning. A short fast during this time is also beneficial for this cleansing process. Herbs that are supportive of this process are dandelion, chaparral, milk thistle, barberry, and chelidonium. In the Chinese system, the liver is where anger is stored. During this spring season it is beneficial to the liver and the whole organism to begin to express these feelings in ways that are not harmful to others.

In late spring and summer the pitta energy of the sun predominates. Those who are predominantly pitta will do best to avoid the noontime sun, excessive physical exertion, and oily, hot, salty, and sour foods. Balancing agents are cool baths and sweet, cool, and high-water-content foods, such as watermelon and cucumbers. Foods with sweet, astringent, and bitter tastes are also good for balancing pitta. Late spring and summer is a time to maximize raw foods, sprouts, salads, greens, fruits, and vegetables in the diet. It is a time to minimize grain and dairy. Stimulants such as coffee and tobacco are best avoided. It's a time for less heating grains and beans. In the Chinese system summer corresponds to the fire element. The heart and small intestine meridians are the most easily unbalanced. Hawthorn berry is a good herb to take occasionally to support the heart, as well as peppermint, tansy, and sorrel. Although ginger is good for the heart, it is also heating and thus best taken in the fall. The emotions associated with the heart and small intestine are joy and sorrow. If there is some sorrow, try to let it be released so the joy of summer can be expressed without any holding back.

Dual-Dosha Constitutions

RARELY DO PEOPLE HAVE JUST ONE DOSHA. Most people have a constitution that is a mixture of two doshas. One is usually the primary constitutional energy and the other the secondary constitutional energy. The combination dosha constitutions are vata-kapha, kapha-vata, pitta-kapha, kapha-pitta, vata-pitta, pitta-vata, and vata-pitta-kapha. In denoting a combination dosha, the predominant dosha is named first. A vata-kapha, for instance, would be more vata energy than kapha. A kapha-vata would have more kapha than vata.

Under certain conditions either one or the other dosha may be unbalanced at a particular time. Although a two-dosha constitution can be thought of as a dual constitution, it still is one constitution with more tendencies of which to be aware. Sometimes these tendencies cancel each other out, and other times they may reinforce each other. Often the symptoms of only one dosha aspect will appear at a time if one is living in a way that is unbalancing that particular dosha.

An example of how one learns to work with this is my experience with my constitution, which is kapha-vata. The vata and kapha tendencies amplify each other in their coldness. Yet the kapha gives some protection against the cold that a regular vata does not have. Kapha-vata types tend to have a low digestive fire, are sometimes constipated, and produce much mucus. My raw-food diet minimizes the mucus production and stimulates bowel function by its high fiber. After several years on raw foods, my body heat has increased as my circulation and overall health have improved. Because most of the energetic and nutritional value remains in fresh live foods, I am able to eat less and get the same, or greater, nutritional value than if I ate more cooked food. Less food means less strain on my kapha-vata low digestive fire. The digestive fire and general health of a kapha-vata are improved by pungent, salty, and sour foods.

As the seasons change, one dosha may tend to predominate. Warm weather is best for me since vata and kapha both do better in warmth, but being aware of vata imbalances in the fall, and kapha tendencies to unbalance in the winter and spring, allows me to be more in tune with the appropriate foods and balancing activities.

The vata creative, theoretical, explorer, and spiritual tendencies balance my kapha tendencies to be too grounded and routine. The kapha grounding tempers my vata spiritual, inspirational life. My homebody kapha aspects allow me to be grounded enough to write books, have a 30-year marriage, and to raise and support my two children through college. My dosha tendencies express themselves in different ways. If I fast too much, I tend to lose my kapha buffer and fall into vata imbalances. However, my kapha dosha makes it easier for me to regain lost weight after fasting.

Food selection of a dual dosha requires some awareness and trial and error. For example, some oily foods in moderation, such as avocado, which are not the best for a pure kapha, turn out to be balancing for me, particularly during the summer when it is easy to get too dry. By understanding one's dosha characteristics, one learns to use the tendencies of the different doshas to best advantage.

Each combination has its own unique limitations and strengths to work out. Vata-pitta people need warmth, but their pitta dosha limits their tolerance of heat. They like to eat, but their vata tendencies limit how much they can eat without getting indigestion. An unbalanced vata-pitta may not be able to control their fiery emotional constitution and will alternate between pitta anger and vata fear. A vata-pitta has the pitta leadership drive and some of the lack of confidence of a vata. This can blend to make a humble and good leader, or result in the possibility of becoming a domineering, insecure leader. A balanced vata-pitta combines the vata capacity for original thought with the pitta ability to manifest the theory. Vata-pitta types have a tendency to amplify instability if they become unbalanced. Since vata and pitta are balanced by the moderate intake of sweets, vata-pitta people benefit from a moderate use of sweets, such as sweet fruits and grains. Sweets that are helpful do not include white sugar, which unbalances everyone.

Pitta-kapha types combine the pitta leadership, ability to balance energy, and adaptability with kapha's stability. Pitta's strong metabolism balances a kapha's tendency to a slow digestion, and adds to the kapha's strong physical body to bring robust health. The mental stability, calmness, and patience of a kapha helps to modify the anger, impatience, and irritability of the pitta. The pitta-kapha can do well in any climate. Pitta-kaphas tend to unbalance with an excess of oil. Pitta's overconfidence combined with the kapha's lack of openness to change may result in poor response to feedback. The pitta-kapha combination amplifies the drive, insight, and lack of spiritual discipline of the kapha. Pitta-kaphas tend to be the great business leaders, school principals, warriors, and athletes, but not the

great saints.

Marriages may often serve to balance each mate's dosha. For example, if the wife is vata-pitta it adds fire to a kapha-vata husband. Kapha adds stability to her vata-pitta. A good choice for them might be to live in Northern California because it is neither too warm for her pitta nor too cold for his kapha-vata doshas. A marriage of the doshas doesn't always work out so comfortably. The marriage of a predominant vata and pitta type might amplify instability, anger, and fear. The polarity between the pitta need for coolness and the vata need for warmth is ground for a continual struggle between opening the windows to bring in the cool breeze and closing the window and turning on the heat. The vata will choose sweet, sour, and salty food whereas the pitta does better with sweet, bitter, and astringent foods. It takes some insight and tolerance to work this out in marriage and to have the balancing foods for each dosha at a shared meal. Knowing one's constitution can be of help in finding an appropriate mate as well as an appropriate diet.

Dietary Patterns for Dual Constitutions

WHEN A PERSON HAS A DUAL CONSTITUTION there are two guidelines to follow. Eat to balance the dosha by the seasons or any other unbalancing force at that time, and practice trial and error. The trial-and-error element is created by the merging of the two doshas. For example, as I previously explained, avocado in moderation, which is aggravating for a pure kapha but balancing for a vata, works well for my kapha-vata constitution in all seasons. I will have less avocado in the winter, however. Generally, those with a kapha-vata constitution may get the best results by eating foods that decrease vata in the summer and fall and decrease kapha in the winter and spring. This means more pungent, bitter, and astringent foods in the winter and spring, and more sweet, sour, and salty foods in the summer and fall.

Pitta-kapha constitutional types do best following a pitta-decreasing diet in the late spring through the fall. Bitter and astringent tastes help to decrease both pitta and kapha. In the summer there can be more sweets and cooling foods and in the winter and spring, more mild, pungent, and heating foods. Salt and sour tend to aggravate both pitta and kapha so they should be minimized.

Vata-pitta constitutional types do well if they follow a vata-decreasing diet in the fall and winter and a pitta-decreasing diet in the spring and summer. Sweets help to decrease both vata and pitta, and pungent, spicy foods may aggravate both vata and pitta. In the summer there can be more bitter, astringent, and cooling foods, such as raw salads. In the winter there can be more sour and salty foods to balance the vata.

Summary

S MALL IMBALANCES IN THE DOSHA SYSTEM create the seeds for the growth of future disease. Maintaining the doshas in balance helps to bring us toward an optimal level of health. Although our focus in this book is on food, everything we eat, think, say, feel, or act on affects the overall state of harmony and balance in our lives and therefore requires some attention.

The awareness of our dosha constitution increases the knowledge of how to change food and other lifestyle habits to prevent disease and create optimal health. Knowing one's mind-body type makes disease prevention and treatment considerably more specific and individual. The dosha constitution helps us understand how nature specifically intended us to live. Simply eating the foods that balance our doshas can exert an astonishing positive influence on every aspect of our lives. Eating what is specifically best for ourselves, and not trying to fit into any external, generalized dietary concepts, is a major step in developing an individualized diet.

BLACKBOARD SELF-REFLECTIONS

Did you find your constitutional type?

- Vata
- Pitta
- Kapha
- Vata-pitta
- Pitta-vata
- Vata-kapha
- Kapha-vata
- Pitta-kapha
- Kapha-pitta
- Vata-pitta-kapha

In order to find the best dietary intake for your body, mind, and spirit it is important to discover your constitutional type.

Preview of Chapter 5

SOME FOODS WORK BETTER with some types of people and do not benefit other types. In this chapter you will find a detailed discussion of what food and food categories work best with the different constitutional types. Understanding this information is part of the process of conscious eating. This does not mean you necessarily cut out all the other types of foods that are not optimal for you, but that you begin to explore what works best for you and to minimize those foods that tend to unbalance your constitution. Are you ready to take the time to understand what foods are best for your psychophysiological constitution? Are you ready to make the changes necessary to take advantage of this understanding?

I. Vata food guidelines

A. Food varieties

B. Blended and pre-blended foods

C. Oils, vegetables, and salads

D. Soups

E. Fruits

F. Nuts and seeds

G. Grains

H. Legumes

I. Dairy

J. Spices and herbs

K. Drinks

L. Sweets

II. Kapha food guidelines

III. Pitta food guidelines

IV. Guideline chart



Foods That Can Balance or Unbalance Your Constitution

Guidelines and Perspective for Vata Food Intake for Vata People

VATA PEOPLE ARE MOST BALANCED when they eat regular, small meals three times a day plus snacks. Excesses in eating, both in timing and amount of food at one time, may lead to vata imbalance. Anorexia nervosa and bulimia are extreme examples of this type of imbalance.

For vata, a meal is best if limited to a small number of food varieties. This is because of the tendency for vatas to become unbalanced when there is too much variable input. According to some styles of Ayurvedic thinking, several foods made into a soup is easier for vatas to assimilate than eating these foods at the same meal separately. The fire and water used in cooking serve as alchemical agents to transform the separate ingredients into a unified whole that is easier for vatas to handle.

This same thinking seems to be found in some Western, natural, herbal healing traditions, as well as in Chinese food preparation. In the Chinese system, there is a definite awareness of the synergistic effects of combining their herbal medicines. In other words, the energies of each individual element combine in a way that enhances their separate qualities, as well as creates a new whole that is more effective than the herbs or foods taken separately. In my own food experiments with live, unheated soups and blended foods, the same principle of synergistic improvement of foods for vatas applies. This has been the experience of others as well. The change agent in this case is the blender's ability to break down the individual identities of the foods into one identity and to break open the cells so that the enzymes further the digestive process. These foods are easier to digest and often are given to people recovering from illnesses or who have digestive disorders. Those with vata constitutions and others whose digestion is compromised due to ill health have been able to successfully digest blended foods that in their separate, preblended state would not be the best food combinations. For example, people are able to assimilate, without digestive difficulties, blended combinations such as bananas or figs with grains, tahini, and fruit, and fruit and vegetable juices. Each of these becomes its own synergistic food. In addition, the liquidity of these blends counters the vata dryness.

The traditional Ayurvedic teachings discourage vatas from eating a lot of raw foods, but in my clinical research I have found that many vata constitutional types such as vata, vata-kapha, and vata-pitta do quite well with live foods if they follow certain principles. Vata-pittas do particularly well with raw food because they have the additional fire of the pitta energy to give heat to the system. One approach is the use of soaked nuts and seeds, particularly in the seed sauce form. There are many raw foods that are high in oil content, such as avocado, nuts, and seeds, which I have found to be balancing for vatas. Sprouted or soaked grains can be blended with water or juices, which balances the dryness of the sprouted or soaked grains. Warming the blended grains, raw soups, and blended vegetables adds heat to compensate for the vata coolness. A warmed, blended, soaked, raw grain cereal in the morning is very soothing for vatas (please see recipe section). Warm-to-the-touch temperature, approximately 118° F, does not destroy enzymes and supplies the needed warmth for a vata. Some people have even benefited by placing their food in an oven for a minute or two to bring the food up to body temperature.

Using herbs to balance vata by improving digestion, adding heat and water to the system, and decreasing the vata tendency for gas are general strategies for a healthy vata eating style. Vatas have less vata imbalance from gastric stress if they eat simple meals because the dryness and the instability of the vata digestive system prevent it from handling a lot of different food types at once. Blended foods and soups help with this. Food-combining practices and mono meals have the most relevance for vatas. Using these practices, I've witnessed a growing number of vatas doing extremely well on live foods. Some even find themselves getting unbalanced if they go off the raw-food diet. Some of my vata clients who are primarily eating live foods have even begun to change the traditional attitudes of their Ayurvedic teachers. There are also some modern Ayurvedic practitioners who are beginning to acknowledge that this raw-food approach for vatas does work to produce the best health for their vata clients.

Vata Food Guidelines				
BALANCING FOODS		Okra	Alfalfa sprouts*	SWEETENERS
FRUITS	Plums	Onion (cooked)	Black & red lentils*	All sweeteners are acceptable except white sugar
Sweet fruits	Raisins	Olives	Clover sprouts*	
Apricots		Parsley*	Potatoes (sweet)	Garbanzos, sprouted*
Avocados	VEGETABLES	Radishes	(in spicy hummus)	CONDIMENTS
Bananas	Asparagus	Spinach*	Mung*	All spices are good
Berries	Beets	Sprouts*	Tofu	
Cherries	Carrots	Squash		DAIRY
Coconuts	Cucumbers	Zucchini		All dairy products are acceptable (in moderation)
Dates	Dulse		NUTS	
Figs (fresh)	Garlic	GRAINS	All nuts are acceptable in small amounts	
Grapefruit	Ginger (fresh)	Amaranth*		OIL
Grapes	Hijiki	Barley		All oils are good
Lemons	Horseradish	Oats (cooked)		
Mango	Jicama	Rice (all types)	SEEDS	
Melons (sweet)	Kelp	Rice cakes*	All seeds, soaked	
Oranges	Kombu	Wheat	All seeds, dry*	
Papaya	Green beans	LEGUMES	Psyllium*	
Peaches	Leafy greens*	Aduki*		
Pineapples	Lettuce*			
* Okay if eaten in small amounts				
UNBALANCING OR AGGRAVATING FOODS				
FRUITS	VEGETABLES	Onions (raw)	GRAINS	LEGUMES
Dried fruit	Broccoli	Peas	Buckwheat	Black beans
Apples	Brussels sprouts	Peppers	Corn	Black-eyed peas
Cranberries	Cabbage	Potatoes (white)	Millet	Kidney beans
Pears	Cauliflower	Tomatoes	Oats (dry)	Navy beans
Persimmons	Celery		Quinoa	Pinto beans
Pomegranates	Eggplant	SWEETENERS	Rye	Soy beans
Watermelon	Ginger (dry)	White sugar		Split peas
Prunes	Mushrooms			White beans

The key taste for a vata is sweet because it satisfies and calms the system and makes it feel secure. Salty tastes add some heat, and sour-tasting foods increase acidity. Bitter-, pungent-, and astringent-tasting foods tend to create emotional instability by “drying out” the nervous system. Heavy, oily, and hot foods balance vatas. Cold, dry, light foods tend to unbalance vatas. *Vata people are benefited by a warm, oily, sweet, salty, watery, soupy cuisine.* Pungent spices are okay unless used in excess. Actually, any taste in excess may eventually unbalance vata, and any food in excess aggravates vata. Cold foods, carbonated drinks, and ice water aggravate vata. A little warm water with ginger at the beginning or end of a meal is soothing. Ginger is the best spice for vatas. It is most important for those with vata constitutions to eat in a warm, comfortable, calm setting and perhaps meditate before eating.

Vatas may have the full range of **vegetables** and **salads**, particularly if they are combined with high-oil-content foods, such as avocado or soaked nuts and seeds. These high-oil-content foods can be made into salad dressings or blended with vegetables in the form of raw soups. Although I do not generally recommend extensive use of extracted oils even if they are cold-pressed, a person with a predominant vata constitution may find that a little of these extracted oils provides a balance in the transition to eating only foods with naturally occurring oil in them. Combining the watery vegetables such as cucumber and squash with the drier, bitter, and astringent ones such as the leafy greens can balance the drying effects of these bitters. The drier greens are still best taken as a minor rather than major part of the diet. The vegetables that help to balance vata are asparagus, beets, carrots, celery, cucumber, garlic, green beans, okra, parsnips, radishes, turnips, sweet potatoes, zucchini, and onions (if cooked). The cabbage (*Brassica*) family, which tends to produce air (gas), and the nightshades, from which allergies may produce joint pains, should be taken in moderation and with an experimental attitude to see if one is affected by these foods. Vegetables that cause gas and vegetables with a lot of roughage should be minimized or blended into raw soups for the vata raw-food person. The blending creates more water in the food and releases the cellulase enzymes stored in the vegetables for digesting the cellulose film on them, which is generally difficult for vatas to digest. Warmed vegetables are easiest for the vata constitution to consume, but raw vegetables, leafy greens, and sprouts that are balanced by oily dressings and warming spices are neutral to balancing for vatas. Often just warming the vegetables to 118° F, which doesn't destroy the enzymes, supplies enough heat to balance the vata person.

Raw cultured vegetables are an excellent way to take in the healing power of cabbage. In its fermented form there is better nutrient assimilation of the cabbage. Fermented cabbage has high amounts of lactobacilli and plantatum bacteria, which have predigested the cabbage for us. These micro-organisms add much energy to our systems and aid in our general digestive process. The lactobacilli create an intestinal environment that is unfriendly to candida.

Raw cultured vegetables have been found to be effective in the treatment of a number of disease processes, including candida, peptic ulcers, ulcerative colitis, colic, food allergies, cystitis, and constipation. According to Dr. Johannes Kuhl, author of *Cancer in Check*, the regular consumption of raw cultured vegetables is an effective cancer prevention approach. According to Lita Lee, author of *Radiation Protection Manual*, cultured vegetables have an antiradiation effect.

At the Tree of Life we serve cultured vegetables on a regular basis. Raw cultured vegetables are balanced in terms of yin and yang and are less vata-aggravating than plain raw cabbage.

Recipes for making cultured vegetables are found in Part IV. For those of you who are unable to make your own cultured vegetables, one of the best commercial sources of raw cultured vegetables is Rejuvenative Foods at 800-805-7957. They have a delightful variety of veggie combinations. Dairy and Food Labs found 5.5 million lactobacilli per gram in their Vegi-Delight Live Zing salad.

In summary, although traditionally prepared raw vegetables can be unbalancing to vatas, blending the vegetables into soups, juicing them, warming them to 118° F, adding spices that are warming or adding digestive stimulants, and using oily or creamy dressings make it possible to eat most raw vegetables without aggravating the vata dosha.

Many **fruits**, especially sweet fruits, are balancing for vatas, except for astringent, unripe, drying, and dried fruits, which are aggravating for vata. Unripe fruits such as bananas are astringent and therefore mildly aggravating for vata. Ripe bananas, however, are balancing. Dried fruits, unless reconstituted in water, may accentuate the dryness and thus also cause imbalance. Astringent fruits, such as unripe persimmons, cranberries, and pomegranates, are best taken in moderation, if at all. Apples and pears may have a slight drying effect but can be neutral in their effect on vata if they are taken with some warming spices like ginger or cinnamon. Melons in excess can unbalance vata. Mangos and green grapes are particularly good for vata. The fruits that seem to be the most balancing for vatas include apricots, avocados, bananas, berries, cherries, coconuts, dates, figs, citrus, melons, nectarines, papayas, pineapples, and plums. Some fruits are good for all three doshas. They are called tridoshic, which means “balances all three doshas.” They are mangos, raisins, sweet grapes, sweet cherries, sweet apricots, fresh sweet berries, and pineapple.

Nuts and **seeds** with their high oil content may be balancing for vata if eaten in small amounts. Almonds are the best nut, and sesame seed is the best seed, as it is heating and oily. One reason for avoiding nuts and seeds in excess is because they are concentrated foods. They are not easy to digest and may cause gas, especially since vata digestive energy is usually not very strong. Soaking overnight alleviates some of this difficulty. Overnight soaking washes away inhibitory digestive enzymes and starts a predigestive process for proteins and fats that makes assimilation easier. Seeds and nuts are well-absorbed by a vata person when made into seed sauces and seed milks. In this form they are predigested. Liquid has also been added, which makes them less concentrated and less dry. Seed and nut butters are also a more assimilable form.

Grains are generally good for vata. Wheat and rice are the most balancing and soothing. A warm oat cereal in the morning is quite nourishing. Amaranth and barley are balancing in moderate use. Millet, buckwheat, corn, and rye, although listed as aggravating, can be eaten in moderation if cooked in plenty of water with a little oil added to make them less drying. Yeasted breads are not as balancing as nonyeasted grain preparations because yeasted bread has the gas of fermentation.

Legumes are not easy for vatas. Legumes tend to be gas-producing. Mung beans, garbanzo beans, tofu, and black and red lentils are acceptable (if cooked well, and if certain spices are used, such as asafoetida, cumin, ginger, and garlic). These are the safest beans that a vata should even attempt to eat. In general, I have observed that the legumes, whether sprouted or cooked, tend to produce gas in many people who are not even predominantly vata. Even frequent use of tofu for a vata person may cause a vata imbalance. If legumes are eaten in small amounts, however, an aggravation in vata can be avoided. Garbanzo beans, if made into a spiced hummus (see recipe section), are acceptable. Sprouted legumes tend to be aggravating for everyone, especially vata, and should be minimized.

Oils are generally good for vata. Sesame seed oil is particularly good. Safflower oil is the least balancing. Although I generally do not recommend free-flowing oils, limited amounts may be balancing for vata constitutions at different stages of their health evolution. The oils should be cold-pressed and fresh so that some enzymes are preserved. I do not suggest cooked oils because the fatty acids become transformed from a cis to the trans configuration. A cis structure for fats contains the same number of atoms as a trans structure, but its shape is curved rather than a straight-line like trans structure. The cis structure is biologically active because of the electromagnetic field of the curve, whereas the trans straight-line structure is not biologically active. The cooked fatty acids become incorporated into the cell membrane and because they are not biologically active, they consequently have the effect of weakening cell membrane structures in the body.

All **dairy** products are good in moderation. The oily and watery qualities of dairy products may be balancing for a vata person if they are consumed in a raw form and if the person is not allergic to dairy products. The only exception

to the balancing effects of dairy is use of hard cheeses, which are drying for vatas.

Sweets, such as grains, sweet fruits, vegetables, and honey, are all acceptable, except for white sugar and any foods containing white sugar, such as baked goods and candy.

Spices and herbs are generally balancing for vata. Ginger is the most balancing herb. The best spices and herbs are those which aid the digestive process, minimize gas, and bring warmth to the system. The sweet spices, such as cinnamon, fennel, and cardamom, are also good. Asafoetida is particularly good for those with gas problems. Garlic is another excellent vata-balancing herb. Cumin is also beneficial. The one danger for vata is using too many hot spices, which may eventually aggravate vata. Coriander, saffron, parsley, and fenugreek are neutral to unbalancing for vata. Cayenne in small amounts is good for its heating quality, but in excess may sometimes be too activating and drying.

Drinks that aggravate vata contain caffeine; are carbonated, ice cold, or cooling; or are astringent and bitter. Cathartic drinks, such as prune juice, also aggravate. Most teas are acceptable unless they are bitter, astringent, diuretic, or drying teas. Blackberry, cornsilk, dandelion, and yarrow teas are best avoided because they have these vata-aggravating qualities.

Guidelines and Perspective for Kapha Food Intake for Kapha People

THOSE WITH A PREDOMINANT KAPHA CONSTITUTION—kapha, kapha-vata, or kapha-pitta—generally do well on live foods. Kapha-pitta people have the easiest time being on raw foods because the pitta energy gives additional gastric fire for the winter. Raw food can tone up the digestive power of kapha and kapha-vata people so that they may do quite well all year. Kaphas tend to have excess mucus, so the living foods help them feel better because raw foods are less mucus-producing than the same foods in cooked form. Kaphas do best if they avoid fried, fatty, oily, heavy, and cold foods. These foods further slow and strain the already-slow digestion and increase the tendency to gain weight. Because of their slow digestion and tendency to gain weight, kaphas generally do well on just two main meals a day which are separated by at least six hours. It is best for their system if they avoid snacking between meals and train themselves to not overeat.

Sweet, sour, and salty foods unbalance kaphas. Pungent, bitter, and astringent foods tend to balance them. During seasons or day cycles in which kapha tends to be unbalanced, watery foods should be eaten with great care, if at all. (The times for kaphas to be particularly vigilant are between the hours of 6 AM and 10 AM, and 6 PM and 10 PM, during the winter and spring seasons, and when it is raining.)

Vegetables are a particularly balancing food for kaphas. Leafy green vegetables, because of their dry, astringent qualities, are probably the most healing for a kapha person. Vegetables and warmed raw foods, in combination with pungent spices, make an excellent diet for kapha. By eating some astringent and bitter foods at the beginning of the meal, kaphas create a stimulant to digestion that helps their whole process of digestion. Having a salad first or some fresh raw ginger in a little warm water or in the salad dressing are examples of this. Raw vegetables also supply fiber to stimulate the bowel function.

The sweet, sour, and watery vegetables may be neutral to aggravating unless taken during a season and time of day when kapha is less likely to be aggravated. Cucumbers are neutral because they are watery, yet bitter and astringent. Tomatoes are the least aggravating for kapha. Black and green olives, which are oily and salty, aggravate kapha. Sweet potatoes, because of their sweetness, also aggravate. Warmed, raw, leafy greens and vegetables are excellent for kapha. Root vegetables are acceptable, but because they have more earth quality, they may reinforce the inertia of a kapha person who is already too earthy and fixed. Good vegetables for kaphas are pungent and bitter ones, such as asparagus, beets, broccoli, Brussels sprouts, cabbage, carrots, cauliflower, celery, eggplant, leafy greens, lettuce, mushrooms, onions, parsley, peas, peppers, white potatoes, spinach, and all types of sprouts.

Fruits that are drying and astringent, such as pears, apples, and pomegranates, are preferred. Fruit juices can be taken if they are diluted by 33 to 50%. Sour juices such as orange are best taken in minimal amounts. Bananas, if spiced with herbs like dried ginger, are neutral for kapha. Sweet and sour fruits are neutral to aggravating for kapha unless eaten in the right season and time of day. For example, on our fasting retreats, when we served watermelon juice in the morning, several kapha people got congested because the morning is a time of kapha aggravation. When the watermelon juice was given at the pitta time of day (10 AM–2 PM), all the kapha people who had previously become congested did well. Particularly good fruits for kaphas are apples, apricots, cranberries, mangos, peaches, pomegranates, dry figs, persimmons, prunes, raisins, berries, and cherries. Oily fruits, such as coconuts and avocados, should be eaten in moderation for the pure kapha, but can be eaten more liberally by the kapha-vata or kapha-pitta types.

Kapha Food Guidelines				
BALANCING FOODS		Peas	LEGUMES	except raw
FRUITS	Brussels sprouts	Peppers	All legumes &	honey and
Apples	Cabbage	Potatoes (white)	tofu (warm,	fruit juice
Apricots	Carrots	Radishes	in small	concentrates
Berries	Cauliflower	Spinach	amounts) are	
Cherries	Celery	Sprouts	good except	CONDIMENTS
Cranberries	Dulse* (rinsed)	GRAINS	kidney beans,	All spices are
Figs (dry)	Eggplant	Amaranth	soy beans,	good except
Mangos	Ginger (fresh or	Barley	black beans,	salt
Peaches	dry)	Buckwheat	mung beans	
Pears	Hijiki (rinsed)	Corn	SEEDS	DAIRY
Persimmons	Horseradish	Millet	Chia	No dairy
Pomegranates	Jicama	Oats (dry)	Flax*	except ghee
Prunes	Kelp* (rinsed)	Quinoa	Pumpkin	& goat milk
Raisins	Kombu* (rinsed)	Rice,* basmati	Sesame*	
VEGETABLES	Leafy greens	Rice cakes	Sunflower	OIL
Pungent & bitter vegetables	Lettuce	Rye	Sprouted and	No oils except
Asparagus	Mushrooms	NUTS	soaked seeds	almond,
Beets	Okra	Almonds,*	are okay	corn,
Broccoli	Onions	soaked	SWEETENERS	flaxseed or
	Parsley		No sweeteners	sunflower in
				small
				amounts
			* Okay if eaten in small amounts	
UNBALANCING OR AGGRAVATING FOODS				
FRUITS	Melons	Potatoes	SEEDS	White sugar
Sweet & sour fruits	Oranges	(sweet)	Psyllium	
Avocado	Papaya	Squash	SWEETENERS	LEGUMES
Bananas	Pineapple	Tomatoes	Barley malt	See above
Coconuts	Plums	Zucchini	syrup	NUTS
Dates	VEGETABLES	GRAINS	Brown rice	Black walnuts
Figs (fresh)	Sweet & juicy	Oats (cooked)	syrup	Brazil nuts
Grapefruit	vegetables	Rice (brown)	Fructose	Cashews
Grapes	Cucumber	Rice (white)	Molasses	Coconut
Lemons	Olives	Wheat	Sucanat	

Nuts and **seeds** are heavy and oily and therefore best eaten in minimal amounts. Nuts and seeds that are soaked or sprouted do well for a kapha type on a raw diet, however. The partially digested oils in sprouted and soaked seeds allow kaphas to comfortably obtain adequate amounts of the essential oils without suffering any ill effects. Although kaphas don't do well on large amounts of oil, there is a minimum amount of oil the body needs for its basic functioning. The best seeds are sunflower, pumpkin, and flax.

Grains are not the best food for kapha because they are heavy and mucus-producing, and kaphas already have a tendency to produce excess mucus. Millet, buckwheat, corn, and rye, which are heating and drying, are the best grains for a kapha. Wheat, which is cold, oily, and heavy, is the worst grain for a kapha. Rice and oats are moderate aggravators. All raw, sprouted, and soaked grains are acceptable.

Legumes are a heavy food that is not needed for the kapha constitution because legumes are concentrated foods and body builders. Since kapha bodies almost effortlessly build and add weight to the point of excess, they don't need this extra push. Black beans, mung beans, garbanzo beans, pinto beans, and red lentils are safe legumes for kaphas. The heaviest legumes, such as black lentils, kidney beans, and soybeans, are best taken in minimal amounts. A little tofu, although a soybean product and high in fat, can be eaten by kaphas.

Oils in the extracted form are specifically aggravating. In minimal amounts, almond, sunflower, and corn oil can be tolerated.

Dairy is heavy, oily, cooling, and sweet. With the exception of ghee and raw goat's milk, dairy products are very aggravating for a kapha constitution.

Sweets aggravate kaphas into the heaviness of mental inertia and physical weight gain. Raw honey, which is heating, specifically balances kapha; taken at one tablespoon or less per day, honey is acceptable.

Spices in general are beneficial to kapha. Garlic and ginger are two of the most healing herbs for kapha. With the exception of salt, which is specifically aggravating for kapha, the same spices and herbs that benefit vatas are also an aid to kaphas. Kaphas are significantly aggravated by salt; this includes canned soups and juices with salt already added, most processed and junk food because of their added salt, and salted potato and corn chips. A minimal amount of miso soup is neutral but in excess will aggravate kapha. Tamarind is another spice that aggravates kapha. Sea vegetables are fine if they are soaked and rinsed with fresh water.

Drinks that are warm and pungent are balancing to kapha. Sour, salty, and carbonated drinks are aggravating. This includes miso in excess. Cold soy milk is also aggravating.

Guidelines and Perspective for Pitta Food Intake for Pitta People

A BLAND VEGETARIAN DIET THAT IS PREDOMINANTLY RAW is best for the pitta, pitta-vata, and pitta-kapha individuals. Flesh food, eggs, alcohol, salt, caffeine, coffee, tobacco, mustard, garlic, onions, ginger, and other stimulants aggravate the emotional and physical heat and natural aggressiveness of pitta. Fruits, vegetables, and sprouts with some grains comprise the bulk of the diet. Foods that are sour, such as citrus, yogurt, sour cream, vinegar, and dill pickles, also aggravate pitta. Lemon, although sour, can be tolerated in small amounts because of its overall alkalizing and liver-purifying effect. It is best for a pitta to avoid pungent foods and herbs such as cayenne, mustard, catsup, barbecue sauce, and salsa. The cold tastes, which are bitter and astringent, such as the leafy green vegetables, are balancing. Foods that are sweet-tasting are also balancing, except honey and molasses, which are heating. High-protein foods increase the metabolic heat by 30% and should be kept to a moderate intake. Foods that stress the liver are usually aggravating, such as coffee and alcohol. Such foods as carrots and beets, which purify and cleanse the liver, are balancing or neutral to pitta, even though they are considered slightly heating. Balancing herbs for the pitta are coriander, cardamom, fennel, and turmeric. Fruits and vegetables are the most balancing for pitta. Pittas do best when they avoid salty, pungent, and sour tastes, as well as hot, light, and dry foods. Pitta people have a speedy metabolism so they generally need to eat three main meals a day, separated by at least four hours. If necessary, light snacking two to three hours after a meal is acceptable.

Pitta Food Guidelines				
BALANCING FOODS		Squash	SEEDS	except
		Zucchini	Flax*	coriander,
FRUIT	Asparagus		Psyllium*	cinnamon,
Sweet fruits	Broccoli	GRAINS	Pumpkin	cardamom,
Apples	Brussels sprouts	Amaranth*	Sesame*	fennel,
Avocados	Cabbage	Barley	Sunflower	turmeric,
Dates	Cauliflower	Oats	Sprouted and	and a little
Figs	Celery	Rice, basmati	soaked seeds	black pepper
Grapes (dark)	Dulse (rinsed)	Rice,* brown	are accept-	
Mangos	Green beans	Rice, white	able	DAIRY
Melons	Hijiki (rinsed)	Rice cakes		Butter
Oranges (sweet)	Jicama	Wheat	SWEETENERS	(unsalted)
Pears	Kelp* (rinsed)		All sweeteners	Cottage cheese
Pineapple (sweet)	Kombu (rinsed)	LEGUMES	are accept-	Ghee
Plums (sweet)	Leafy greens	All legumes	able except	Milk
Pomegranates	Mushrooms	acceptable	molasses and	
Prunes	Okra	except lentils	cooked honey	OILS
Raisins	Parsley	Tofu	Raw honey*	Coconut
	Peas			Olive
VEGETABLES	Peppers (green)	NUTS	CONDIMENTS	Sunflower
Sweet and bitter	Potatoes	No nuts except	No spices	Soy
vegetables	Sprouts	coconuts		
			* Okay if eaten in small amounts	
UNBALANCING OR AGGRAVATING FOODS				
FRUITS	Papaya	Garlic	Corn	SEEDS
Sour fruits	Peaches	Horseradish	Millet	Chia
Apricots	Persimmons	Olives	Quinoa	
Bananas	Pineapple (sour)	Onions	Rye	OILS
Berries	Plums (sour)	Peppers (hot)		Almond
Cherries		Radishes	DAIRY	Corn
Cranberries	VEGETABLES	Spinach	Buttermilk	Safflower
Grapefruit	Pungent	Tomatoes	Cheese	Sesame
Grapes (green)	vegetables		Sour cream	
Lemons	Beets	GRAINS	Yogurt	SWEETENERS
Oranges (sour)	Carrots	Buckwheat		Molasses
	Eggplant			

Vegetables are very good for pitta. The exceptions are tomatoes, which are heating and pungent, and vegetables like radishes, raw onions, hot peppers, and raw garlic. White or yellow onions will become sweet on cooking and may be eaten in moderation. Although beets, carrots, and daikons are slightly heating, they can be eaten unless pitta is already aggravated. The vegetables that are most balancing for pitta are the whole *Brassica* family, such as cabbage and Brussels sprouts; asparagus, cilantro, cucumbers, celery, cress, leafy greens, green beans, lettuce, mushrooms, okra, peas, parsley, potatoes, and sprouts; and the squash family.

Sweet fruits such as apples, figs, raisins, sweet grapes, sweet plums, prunes, sweet berries, and melons are most balancing for the pittas. Sour fruits such as citrus, sour cherries, and pomegranates should be minimized. Well-ripened, sweet, citrus fruits are acceptable because for pittas the sweet taste is balancing. Other fruits that are balancing are mangos, avocados, persimmons, and apricots.

Nuts and seeds are best used sparingly because they are hot and oily. If they are soaked or sprouted, they can be used in moderation. Coconut, which is cooling, is very balancing for pitta. Sunflower and pumpkin seeds can be eaten, especially if soaked.

Grains that are heating, such as corn, millet, buckwheat, and rye, are best avoided or minimized. Barley, which is cooling and drying, is the best grain. It also helps to reduce stomach acid, which is a pitta tendency. Rice and wheat, which are sweet and heavy, are also good. Sourdough breads and other yeasted breads create a sourness that aggravates pitta.

Legumes should be taken in moderation because of their high protein content and tendency to produce gas if consumed in excess. The least aggravating legumes are mung beans, garbanzo beans, tofu, and black lentils.

Oils are generally aggravating for pitta. Small amounts of coconut, almond, olive, soy, and sunflower oils are okay. Coconut, with its oil, is beneficial to pitta because it is cooling but should be used in moderation because of the high percentage of saturated fat it contains. Sunflower and pumpkin seed oil are fine for pitta people.

Dairy products have variable effects. Sweet dairy is acceptable. Sour dairy products and hard cheese aggravate. Ghee, which is a clarified, raw, unsalted butter, is very balancing and calming for pitta.

Sweets are cooling to pitta. Even white sugar, which I do not recommend, can help to cool pitta. Honey is moderately heating but can be used in minimal amounts. Molasses is heating and best avoided.

Spices that are hot or pungent are aggravating to pitta. Cardamom, cinnamon, coriander, and fennel are balancing. Black pepper can be used occasionally, and cumin can be used in moderation, although it is somewhat heating.

Drinks that are cooling, sweet, bitter, and astringent are balancers. Pittas need a lot of water. Carbonated drinks and alcohol aggravate pitta. Salty drinks and an excess of hot teas are unbalancing to pitta. Sour drinks and citrus in excess, including orange juice, may also aggravate pitta.

Drink Guidelines		
BALANCING DRINKS		
VATA	PITTA	KAPHA
Apple juice	Apple juice	Apple juice
Carrot juice	Carrot juice	Caffeine*
Coconut milk	Coconut milk	Carrot juice
Grape juice	Cold drinks	Coffee**
Grapefruit juice	Grape juice	Cranberry juice
Mango juice	Grapefruit juice	Grape juice*
Miso broth	Mango juice	Grapefruit juice*
Orange juice	Miso broth	Mango juice
Papaya juice	Orange juice	Miso broth*
Prune juice*	Papaya juice	Orange juice*
Soy milk* (if warmed and spiced)	Prune juice	Papaya juice*
	Soy milk	Pear juice
		Prune juice
		Soy milk* (if warmed and spiced)
* Okay if taken in small amounts		
** Okay for Kapha but not healthy for anyone		
UNBALANCING OR AGGRAVATING DRINKS		
VATA	PITTA	KAPHA
Alcohol	Alcohol	Alcohol
Caffeine drinks	Caffeine drinks	Carbonated drinks
Carbonated drinks	Carbonated drinks	Coconut milk
Coffee	Coffee	Cold drinks
Cold drinks	Cranberry juice	
Cranberry juice		
Pear juice		

Preview of Chapter 6

IN THIS CHAPTER YOU WILL LEARN about some of the silent messages Mother Nature is continually giving to us about the food we eat. These communications come in terms of tastes, colors, and qualities. You will learn about the six tastes, six qualities, directions of action of foods, and the color code of foods as explained through the rainbow diet. The rainbow diet is like learning how to select a good wardrobe—it helps us to color-coordinate our foods with the energies of our own bodies. As we select our foods and eat them, are we ready to listen to and act on these silent messages? Are we ready to read these love notes from God?

I. Mother Nature's Clues

II. Six Tastes

A. Sweet

B. Sour

C. Salty

D. Pungent

E. Bitter

F. Astringent

III. Six Food Qualities

A. Heavy

B. Light

C. Oily

D. Dry

E. Cold

F. Hot

IV. Direction of Action of Foods

V. Rainbow Diet



Subtle Food Messages from Nature

IT IS APPARENT TO THE READER BY NOW that food is more than just carbohydrates, proteins, and fats. The spectrum of nutrition ranges from undifferentiated energy to various levels of differentiated energy, with these energies playing an important role in balancing, building, healing, activating, and cleansing the glands, organs, nervous system, tissues, and more subtle elements of the body, such as the dosha energies and subtle energy centers. Each food has a particular taste, quality, shape, and color that is part of Mother Nature's clues and efforts to communicate with us. Each food has its own “personality” that affects our psychophysiological and spiritual nature. For example, the golden-colored mango and papaya have the shape and color radiance that match the pineal gland and pituitary. I have developed the system of the rainbow diet, as explained in detail in *Spiritual Nutrition and The Rainbow Diet*, which correlates the colors of foods with the subtle energy centers, organs, glands, and nervous system. The Chinese system has classified the yin and yang effect of the foods according to color. The more red a food is, the more yang it is; the more a food is toward the purple side of the rainbow, the more it is considered yin. In the Ayurvedic and Chinese systems, the tastes and food qualities are important clues to the energetic effect of the foods.

The Six Tastes

THERE ARE SIX TASTES AND FOOD QUALITIES that help to inform us how a food will tend to affect and interact with our doshas. Each taste is nature's way of signalling us as to how the food will energetically act on our body and mind. The six tastes are: sweet, sour, salty, bitter, pungent, and astringent.

The **sweet taste** can be experienced by the varying degrees of sweetness that are in sweet fruit, sugar, milk, rice, and grains. Sweetness increases kapha and decreases pitta and vata. Sweetness has the qualities of being cooling, heavy, and oily. It relieves hunger and thirst and nourishes the body. Because it increases kapha, sweetness increases tissue mass. Sweet is the overwhelmingly predominant and favorite taste in America, creating a kapha imbalance that contributes to the obesity of millions of overweight people. Eating sweets gives satisfaction and a sense of fullness on the mental plane. For those who feel lacking in their lives, sweets can become addicting because they supply the short-term illusion of mental and physical satiation. Sweets have a cooling effect on the pitta anger and a temporary calming effect on the vata fear. Too many sweets may contribute to complacency and greed, especially for kaphas, who have a propensity for manifesting that tendency anyway.

The **sour taste** (lemon and yogurt) unbalances kapha and pitta. The sour qualities are heavy, heating, and oily and therefore balancing for vata. Sour-tasting foods usually improve digestion and appetite. "Sour grapes" is a term that relates to a certain feeling of being deprived, or bitterness about lacking something in life. An overindulgence in sour foods may lead to envy or jealousy about what is lacking. This sourpuss tendency to envy and possess creates an imbalance in pittas. Not only does the sour taste amplify these tendencies, but these tendencies create anger. The greed tendency of kaphas may also be amplified by sour foods. Sour balances vatas by creating mental heat.

The **salty taste** is heavy and heating. These qualities help to balance vata and unbalance kapha and pitta. Salt increases digestive fire and helps to clean the body of wastes. Salt enhances all our appetites for life and physical indulgence in the senses. In excess, it can contribute to unbalancing the mental state of kapha. It reinforces the kapha tendency toward complacency and sense indulgence. The heat of pitta is also aggravated by salt, especially if the desires fired up by the salty food are not expressed. The vata mind, which is sometimes too ungrounded to indulge in the earthly senses, is brought more into balance by salt, in a way that draws awareness to the physical level.

Pungent foods (spicy foods such as ginger and cayenne) are heating, light, and dry. The heating and drying qualities of pungent foods help to balance kapha. Pungent foods aggravate pitta and vata. Pungent foods such as cayenne are good for reducing mucus and stimulating gastric fire in the kapha dosha. The anger and irritability of pitta are aggravated by pungent foods because fire brings out an extroverted energy and a desire for external stimulation. These qualities of pungent foods help kaphas come out of their complacency and inertia.

Foods of **bitter taste** (spinach and other leafy greens) are cooling, light, and dry. Foods of bitter taste balance kapha and pitta but may tend to aggravate vata. Bitter-tasting foods dry and purify secretions and increase appetite, which is perfect for kapha. Bitter foods tend to amplify dissatisfaction, criticism, and grief. Mild dissatisfaction may be a stimulus to change and thus is good for balancing the complacency aspects of kapha. These same qualities of bitterness bring out insecurity and fear in vata because they enhance the tendency to change and also enhance the dry sadness of excessive dissatisfaction.

Astringent foods make the mouth pucker. Examples are unripe persimmons, turmeric, and okra. Astringent foods are cooling, light, and dry. Because of this, they tend to aggravate vata and balance pitta and kapha. These foods purify and reduce secretions, as well as dry out the body, which is excellent for kapha. Their drying and shrivelling energy creates introverted tendencies. If this withdrawal is excessive, it causes mental contraction that brings out fear and anxiety. This may unbalance the vata mind. This same contraction energy helps to balance the extroverted energies of the pitta personality.

In general, the bitter, pungent, and astringent tastes unbalance vata and decrease kapha. The tastes of bitter, pungent, and astringent have a "lightness" quality to them, helping to free kaphas from their tendency to be complacently attached to the body and the desires of the material world. Sweet, sour, and salty tastes increase the attachment to the body and worldly desires. Because of this, sweet, sour, and salty tastes decrease vata, as vatas need to increase these attachments because of their lack of groundedness. Perhaps the food industry is aware of this because there is so much emphasis on sweetness and saltiness in most fast foods. Eating these processed, empty, foodless foods feeds the life of the senses.

Pittas are balanced by sweet, bitter, and astringent foods. Pungent, salty, and sour foods unbalance pitta. Vatas are

aggravated by excessive amounts of any taste. My experience eating in the homes of Ayurvedic physicians is that they serve meals with all the tastes to create a general balance. The wisdom of eating in a way that maintains one's own dosha balance requires artful intelligence, intuition, and trial and error concerning what tastes of foods are balancing and when to eat these foods.

Chinese medicine has also systematized the meaning of the tastes of foods. They recognize five flavors (tastes): pungent, sweet, bitter, sour, and salty. According to the Chinese system, each taste affects specific organ systems.

Pungent foods act on the lungs and large intestine. They also induce perspiration.

Sweet-flavored foods act upon the stomach, spleen, and pancreas and neutralize toxins.

Bitter foods act upon the heart and small intestine. Bitter foods are also said to reduce fever and induce diarrhea.

Sour foods act upon the liver and gallbladder. They also stop diarrhea and perspiration.

Salty foods act upon the kidneys and urinary bladder and also soften hard masses and tissues.

Food Qualities

THE SIX MAJOR FOOD QUALITIES in Ayurveda are **heavy** (cheese, yogurt, wheat); **light** (barley, corn, spinach, apples); **oily** (dairy, fatty foods, avocados); **dry** (barley, corn, potatoes, beans); **hot** food and drink (hot tea); and **cold** food and drink (iced tea). Generally, heavy, oily, and hot foods tend to balance vatas and unbalance kaphas. Hot, light, and dry foods tend to balance kaphas and unbalance pittas. Pittas are more balanced by heavy, oily, and cold foods.

In the Chinese system, foods are considered for their medicinal qualities by flavor, energetic quality, direction of action in the body, and specific affinity for different organs and glands. The energy of the different foods is broken into five categories:

Cold energy (very yin), such as banana, grapefruit, kelp, lettuce, persimmon, sugar, water chestnut, and watermelon.

Cool energy (slightly yin), such as apples, barley, tofu, mushrooms, cucumbers, eggplant, oranges, mangos, spinach, strawberries, and tangerines.

Neutral energy (balanced), such as apricots, sesame seeds, soybeans, cabbage, carrots, celery, eggs, corn, apples, figs, honey, kidney beans, milk, olives, papaya, peanuts, pineapples, plums, potatoes, pumpkin, radishes, rice, sunflower seeds, and sweet potatoes.

Warm energy (slightly yang), such as asparagus and malt.

Hot energy (very yang), such as vinegar, cinnamon, cloves, cayenne, dates, garlic, ginger, green onion, nutmeg, raspberries, and black pepper.

Foods in the Chinese system are seen to have a directional influence on the flow of energy in the body. The foods with an **upward** movement are those that move energy from the lower parts of the body toward the chest and head. Their tastes may be neutral, pungent, sweet, and bitter. Some of these foods are apricots, sesame, soybeans, cabbage, carrots, celery, sunflower seeds, apples, figs, grapes, honey, kidney beans, milk, peanuts, rice, and sweet potatoes. By moving the direction of energetic flow upward, some of these foods are said to alleviate diarrhea and prolapsed organs.

Outward-moving foods move toward and affect the surface of the body. Their tastes may be pungent or sweet. Some of them are good for inducing perspiration and reducing fever. Examples of outward-moving foods are black pepper, ginger, cinnamon, and red pepper.

Inward-moving foods tend to ease bowel movements and abdominal swelling. Examples of these foods are hops, lettuce, salt, kelp and other seaweed. These foods have cold, bitter, or salty tastes.

Downward-moving foods are said to relieve nausea, vomiting, hiccupping, and asthma. Their tastes may be sweet or sour. Examples of downward-moving foods are apples, bananas, barley, tofu, cucumbers, eggplant, lettuce, mango, persimmons, spinach, wheat, and watermelon.

The Six Tastes			
SIX FOOD QUALITIES			
	VATA	PITTA	KAPHA
HEAVY	YES	YES	NO
OILY	YES	YES	NO
HOT	YES	NO	YES
LIGHT	NO	NO	YES
DRY	NO	NO	YES
COLD	NO	YES	NO
SIX TASTES			
	VATA	PITTA	KAPHA
SWEET	YES	YES	NO
SOUR	YES	NO	NO
SALTY	YES	NO	NO
PUNGENT	NO	NO	YES
BITTER	NO	YES	YES
ASTRINGENT	NO	YES	YES

Foods may also be classified as to how they move nutrients. Honey is a “delivery system” that enhances the movement of nutrients. Olive oil is considered an obstructive food because it slows down the movement of nutrients.

It is significant that both these ancient medical systems of India and China, which have been used for thousands of years with impressive results, equally go to great lengths to delineate the energetic properties of foods and how these energies influence the flow and balance of the body's energies. Based on this understanding, the Chinese as well as the Ayurvedic systems prescribed specific foods to rebalance the energy of a person. For example, if a person was suffering from a deep, inner cold, both systems would probably prescribe the heat-producing herbs cayenne, black pepper, and ginger. Though these two great healing systems might use different terms and concepts to describe the action of these foods, they would share a basic understanding of what tastes and qualities of foods are needed to remedy the situation.

The Secrets of the Rainbow of Foods

THE NEXT STEP IN THIS CONNECTION back to Mother Nature and health is the understanding of vegetarian foods and their multiple colors as condensations of sunlight. The color of foods is a silent communication of Nature about the characteristics of Her gifts to us. This is discussed in great depth in *Spiritual Nutrition and The Rainbow Diet*.

Dr. Bircher-Benner and Rudolf Steiner, two great minds from the earlier part of the twentieth century, have said that raw foods contain the sunlight energies that are stored in their living tissues through the process of photosynthesis. I feel these sunlight energies are stored in photosynthesis-activated carbon-hydrogen bonds just waiting to be released into receptive, happy humans who appreciate the secret gifts of Mother Nature. Although it isn't completely understood how these energies are stored, particular energetic vibrations are indicated by their colors. This forms the basis of what I call the Rainbow Diet. The Rainbow Diet says that the outer covering of the plant is the key to understanding and recognizing the particular light and micronutrient energies stored in that vegetable, fruit, grain, or grass as it occurs in nature. It is a way to tune in to the color-coded secrets of nature.

Each of the seven primary colors of food associated with the seven primary colors of the rainbow relates to a specific subtle energy center in the body and its associated glands, organs, and nervous system plexuses. For example, the green-colored vegetables are high in magnesium and calcium, which is beneficial for heart function. The heart center is also associated with the green color. The basic survival center in the body is associated with red. Red fruits and vegetables, such as red peppers and rose hips, are very high in vitamin C. The adrenals, which are one of our primary survival glands—often nicknamed the “flight or fright gland”—have the highest concentration of vitamin C. The vitamin C in the red fruits and vegetables also is important for the function and strength of connective and muscle tissue, another part of our survival system. As we become more sensitive to the colors of fruits and vegetables, we are drawn to the color we need to assimilate to balance, build, heal, and cleanse our system on any particular day.

The general principle of the Rainbow Diet in practice is to eat a full spectrum of colored foods throughout the day to cover the full spectrum of our physical and subtle biological systems. Generally the red, orange, and yellow colors are taken at breakfast. This includes a wide variety of fruits, vegetables, nuts, seeds, and grains. At lunch the green color predominates, but yellows (which includes grains, nuts, and seeds) and blues are also included. Green salads, grains, nuts, seeds, and blue-green sea vegetables are the mainstay. The evening meal is the top end of the rainbow with blue, indigo, and purple or gold. This is easier in the summer when the blue and purple fruits are in season. The gold includes grains, as well as golden fruits like papayas and mangos. Reddish-purple beets and red and purple sea vegetables are also included. These foods are emphasized but you don't need to limit yourself to those foods for dinner. They make separate meals, such as a fruit meal or a vegetable meal.

The gradual incorporation of a rainbow awareness is a way to organize and be sensitive to our patterns of taking in food during the day. By bringing in this full spectrum of light to our systems, we are energized by the full spectrum of light from the sun. As we become more sensitive to these subtle clues of Mother Nature as to what is in the different foods, we find that we are spontaneously drawn to the different colors of the foods depending on our particular needs. Yes, Mother Nature feeds us with her benevolent light energy as well as her physical nutrients.

BLACKBOARD FACTS

Rainbow Diet Spectrum

Breakfast: Primary colors are red, orange, yellow (apples, oranges, bananas, etc.)—fruits, vegetables, nuts, seeds, grains, and all white foods.

Lunch: Primary colors are green, yellow, and blue—green salads, grains, nuts, seeds, and sea vegetables.

Dinner: primary colors are gold, blue, indigo, and purple—includes grains, golden fruits (papayas and mangos), reddish-purple beets, red and purple sea vegetables, and all white foods.

*“At the end of the rainbow,
you’ll find a pot of plenty.”*

Preview of Chapter 7

THIS CHAPTER INTRODUCES YOU to the powerful effects our food choices can have not only on the body, but on the emotional moods, mind, and spirit. The effect of diet on spiritual receptivity, strength of moral character, clarity of mind, and the enhancement of the spiritualizing energies in the body is something well known in the Judaic-Christian tradition as well as other traditions around the world. Food choices may have either a dulling or enhancing effect on our ability to receive God's grace. Are you ready to consider how what you are eating may be affecting your mind and spiritual sensitivity?

- I. Historical observations
- II. Creating three states of mind and lifestyle from diet
 - A. Sattvic
 - B. Rajasic
 - C. Tamasic
- III. Fast foods and effect on American culture
- IV. Chinese approach to food and mind-body
 - A. Yin
 - B. Yang
 - C. How to balance for a spiritual life
- V. Enhancing spiritual energy and sensitivity with diet
- VI. Hypoglycemia and the mind
- VII. Effects of overeating or excess acid
- VIII. Timing of eating and the mind



Food Effects on Body, Mind, and Spirit

“Let Food Be Thy Medicine”

HIPPOCRATES TAUGHT THIS MESSAGE IN 431 B.C., yet in the late twentieth century its meaning is just beginning to influence modern public and medical opinion in the West. Food can be looked upon as possessing several levels of energy. *Particular energies exist within each food that affect our physical functioning, the nature of our thoughts, and even the expansion of our consciousness.* The color of the outer coating of a food, the five (Chinese) or six tastes (Ayurvedic), their aromas (which I haven't yet worked out), and the six qualities comprise several systems with which one can tune into these more specific food energies. Foods can also be classified by their shapes, yin or yang energy (Chinese), and the three *gunas* (mental state characteristics in Ayurveda).

For thousands of years different cultures have been aware that the types of food we eat have subtle effects on the mind. Herodotus, the Greek historian, reported that grain-eating vegetarian cultures surpassed meat-eating cultures in art, science, and spiritual development. It was his view that meat-eating nations tended to be more warlike and more focused on expression of anger and sensual passions. It is said that the ancient Egyptian priesthood ate specific foods to increase their spiritual sensitivity and awareness. In India today, the Brahmin priests still prepare their own food and eat separately from people of other social classes. They also keep themselves on a vegetarian diet that is aimed at enhancing the subtle spiritual qualities of the mind. The implication of this practice is that the dietary patterns of a social group affect the spiritual consciousness of that group. The logical extension of this is that the type of diet a whole nation follows may affect the mental state of that nation. Rudolf Steiner, the founder of biogenic gardening, the Waldorf School, and Anthroposophical medicine, felt that the spiritual progress of humanity as a whole would be enhanced by a progressive increase in a vegetarian eating pattern. Conversely, he felt that overemphasis on a flesh-eating diet would exert a negative influence regarding an interest in spiritual life.

Ayurvedic physicians and yogis have been aware for thousands of years that a dietary pattern specifically affects the state of a person's mind. They divided the types of foods and the states of mind into three categories (*gunas*): *sattvic*, *rajasic*, and *tamasic*. A *sattvic* state of mind is clear, peaceful, harmonious, and interested in spiritual life. *Sattvic* foods help to create this state. This is typified by the mental states of monks and nuns of many religious traditions. A *rajasic* state of mind is active, restless, worldly, and aggressive. *Rajasic* food creates this mental state. It is the diet for warriors and the stereotypical corporate executive. A *tamasic* mental state is lethargic, impulsive, cruel, violent, and morally and physically degenerate. It is the state of the stereotypical drug addict or criminal. *Tamasic* foods help to create this state of mind.

Consciously or unconsciously, *people tend to choose the diet that reinforces and reflects their own mental and spiritual state of awareness.* Spiritual aspirants have a tendency to gravitate to *sattvic*-centered diets. A *sattvic* diet is made of pure foods that keep the body-mind complex clear, balanced, harmonious, peaceful, and strong. *Sattvic* foods are easy to digest and result in a minimal accumulation of toxins in the system. In the Ayurvedic system of medicine these *sattvic* foods include all fruits, vegetables, edible greens, grasses, beans, raw milk, honey, and small quantities of rice or bread preparations. It is basically a vegetarian diet. From the Western Essene tradition and the spiritual nutrition perspective, a *sattvic* diet would be essentially a vegetarian diet with approximately 80% raw and 20% cooked foods. It is a diet with an abundance of different sprouts of legumes, grains, seeds, baby greens, and grasses; fresh fruits and vegetables; soaked nuts and seeds; grains, legumes, and honey.

Rajasic foods are more stimulating to the nervous system. They include coffee, green or black teas, tobacco, fresh meats, and large amounts of stimulating spices, such as garlic and peppers. These foods are sought as stimulants by people who consciously or unconsciously use them to help carry out worldly activities. The unbalanced stimulating effects on activity level may propel the eater of primarily *rajasic* foods into a state of agitation, restlessness, and eventual burnout as these foods push the mind and body beyond their natural limits. Coffee addiction and hypoglycemia are typical imbalances that may result from a *rajasic* diet. *Rajasic* foods include flesh foods and spicy cooked foods with rich oily sauces. It is a diet that includes butter, cheese, eggs, sugar, and oily, fried foods. The taste-stimulating effects of these foods tend to distract one from inner, somatic messages and propel one outward into stimulating physical, emotional, and mental activities, but often in an unbalanced way.

Tamasic foods are stale, decayed, decomposed, spoiled, overcooked, leftover, heavily processed, and fast foods. They basically include what one might call synthetic foods. These foods are chemically treated with preservatives, pesticides, fungicides, artificial and processed sweeteners, artificial colors, sulfites, and nitrites, etc. Alcohol, marijuana, cocaine, and other drugs of today's addicted society fall into the category of *tamasic* foods. Cocaine and

amphetamines are initially rajasic in their stimulating effect, but the end result of long-term use is often an exhausted tamasic mental and physical state. The addicted mindset that accompanies cocaine or amphetamine abuse, even during the stimulation phase, falls more into the degenerate tamasic category. Any flesh foods that have not been freshly killed are tamasic foods because within a short time they begin putrefying. This includes almost all meats found in the supermarket. These foods have almost no positive energetic life force left in them. These foods do, however, supply us with the toxic chemical breakdown products that adversely affect the functioning of our mind and irritate our nervous system. These foods accelerate premature aging and chronic degenerative disease. They tend to bring out the worst psychological characteristics because of the irritable, negative, lethargic state they create in us. The tamasic state that I am referring to can be described as that “raunchy, yuck” state that some people experience when they overeat, particularly of tamasic foods. While in this unbalanced energy condition it is difficult to meditate or be in harmony with one's self or the environment.

In assessing the American fast-food diet, which is eaten by hundreds of millions in this country, it becomes obvious that this is a strong tamasic diet that also has stimulating rajasic overtones. This type of diet, along with its accompanying drug use, contributes to the fact that *Americans rank 21st in life expectancy* and number one in murders among the industrialized nations. According to federal statistics, the US has more than 20,000 murders per year, which is more deaths per year in peacetime than averaged in Vietnam during the war. Our society has become very violent.

The link between a tamasic-type diet and social violence has been supported by consistent research findings on teenage offenders. When teenagers' diets were changed from their typical high white sugar, fast food, tamasic-type diet, a marked decrease in the teens' acting-out, violent behavior occurred. For example, Mrs. Barbara Reed, a probation officer in Cuyahoga Falls, Ohio, found that when she switched offenders from what was essentially a tamasic diet of fast foods, et cetera, to a diet higher in fruits and vegetables, every one of the 252 teenagers in her case load stayed out of court as long as they maintained themselves on the healthy diet. A two-year, scientifically precise study with 267 subjects by Steven Schoenthaler, Ph.D., published in the *Journal of Biosocial Research*, showed that while the average American eats approximately 125 pounds of white sugar per year, juvenile delinquents in custody averaged about 300 pounds per year. When this sugar intake was significantly reduced, junk food was reduced, and fruits and vegetables were increased, there was a *48% decrease in antisocial behavior of all types*, including violent crimes, crimes against property, and runaways. This was true for all ages and races. This amazing result was achieved simply by changing the diet with no cost to the taxpayer.

A tamasic diet of fast and junk convenience foods can cause vitamin deficiencies, which can disrupt the proper working of the brain, not to mention create a disharmonious lifestyle. Our bodies may shift into an unbalanced state, in large part due to vitamin deficiencies, especially of vitamins B1, B3, B6 and B12. A deficiency of these vitamins has been shown to create a number of mental and nervous system imbalances.

Allergies are often a key symptom suggesting a general breakdown of the body's functioning. As a physician, I find that as a person gets healthier in general, their allergies often disappear. Today there is a tendency for people living a high-stress life to compensate for imbalances by megadoses of B vitamins. Used in this way, vitamins become like accepted drug stimulants, helping us cover up the essential rajasic disharmony that is creating the imbalance. These stimulants aid us in the destructive process of self-exploitation. Some people lead lifestyles and eat diets that increase exposure to toxic chemicals and heavy metals. Toxins and heavy metals have been associated with hyperactivity, mental retardation, and other forms of nervous system degeneration. Eating organic foods can significantly improve this situation.

Chinese System of Yin/Yang Foods

THE INTERRELATING AND COMPLEMENTARY PRINCIPLES of yin and yang are key concepts in traditional Chinese philosophy that are used to describe the dynamic nature of the universe. The principles of yin and yang, though polar opposites, do not exist without each other. According to traditional Chinese thought, everything, even the personality, can be viewed from the perspective of yin and yang elements.

Yang attributes are contractive, hot, fiery, dense, heavy, flat, and low to the ground. A yang personality is powerful, strong-willed, extroverted, grounded, outgoing, focused, concrete, active, and prone to getting angry easily. An unbalanced yang personality can be overly aggressive, tense, coarse, and irritable and angry. Excessive intake of yang foods can intensify and amplify these yang mental characteristics. For example, although in ancient India they did not call it yin or yang, they fed their warriors flesh foods as a way to increase their warlike characteristics.

Yin attributes are expansive, receptive, cool, dilated, light, vertical, and thin. The yin personality is introspective, receptive, self-contained, quiet, mellow, easy-going, reflective, sensitive, and has an expansive, spiritually oriented mind. An unbalanced yin personality may be “spaced out,” timid, ungrounded, weak-willed, and passive. An excess of yin foods without other yang-balancing factors could cause yin imbalances in the mind and body.

Foods are also classified by their predominant yin and yang characteristics. Foods are not all yin or yang. Each food has a combination of yin and yang elements that are complementary, existing in that food in a dynamic balance. Yin foods are predominantly alkaline-forming, but a few yin foods are acid-forming. Yang foods are predominantly acid-forming, but a few yang foods are alkaline-forming as well. The yin/yang chart on page 130 helps to visualize this. The following categories of foods are listed in the order of most yin to most yang: chemical additives, processed foods, fruits, vegetables, sea vegetables, seeds, nuts, beans, grains, dairy, fish, poultry, pork, beef, eggs, miso, and sea salt or commercial table salt.

Yin alkaline-forming foods are fruits, vegetables, and honey. Seeds, nuts, and beans are acid-forming but slightly yin to neutral. The basic yang foods, such as grains and flesh foods, are acid-forming. Yang alkaline-forming foods are radishes, pickles, miso, and salt. Yin acid-forming foods are sugar, chemical drugs, soft drinks, and alcohol.

Each of these foods has its own yin and yang force and can be said to be an energy in itself that influences the mind toward more expansive or contractive tendencies. Choosing the proper balance of yin and yang food intake is relative to many different factors in a person's life and total environment. A few of these factors are constitutionally determined. For example, a constitutionally hot yang person will be balanced by cooler yin foods. In the Chinese system, the organs and glands of the body are classified by their yin or yang nature or state of imbalance. Appropriate yang or yin foods are given to help balance and heal these particular organs or glands. One's work in the world, environmental conditions, spiritual practices, and level of awareness are all forces that affect the yin/yang balance in a person. Food is one of the main factors influencing yin/yang balance.

Sometimes when eating a very yin food, one may crave some yang foods to balance. For example, wine, which is yin, balances cheese, which is yang. Beer, which is yin, balances salty pretzels, which are yang. Alcohol, which is yin, balances meat, which is yang. If a diet is too far to one side, it may stimulate cravings of foods from the other extreme in an attempt to achieve some balance. If one eliminates one extreme yang food from the diet, sometimes it is best to eliminate an extreme yin food to maintain balance. So, if you give up beer, you may maintain the balance better if you also give up pretzels.

Our degree of spiritual awareness and transformation affects how much our mind is shifted by the yin and yang energy of foods in a somewhat different way than the other factors affecting yang and yin. In the spiritual process, because it is expansive, it is my impression that people spontaneously shift to more yin foods to support the lighter, more superconductive needs of the mind and body. The mucus- and acid-forming, enzyme-less, yang grains, flesh foods, and other cooked foods tend to decrease the spiritualizing energy of the body-mind complex. The uncooked, primarily yin foods support and activate this expansion of consciousness and sensitivity to the Divine. It sometimes happens that spiritual evolution proceeds too rapidly for a person and they become too quickly expanded for comfort. They might find themselves craving yang foods to slow down the process. On the other hand, if a person's awareness is expanded in a way that is grounded and balanced, then yang foods will not be craved. A retrospective research project of mine, on a group of 106 people involved in a spiritual program where there was no training or emphasis on diet, found that 63% of the people shifted to a more yin diet as their awareness expanded over a year's

time. It is as if the organism spontaneously shifts to a more yin diet to support the shift in expanded spiritual awareness and sensitivity. The process of eating to enhance spiritual life involves consciously choosing a diet that will support the expansion of consciousness so that we are active co-creators of the dietary change process.

As consciousness expands in a mature, balanced way, it is my observation that more and more yin foods can be eaten without developing a yin imbalance. One does not necessarily develop the symptoms of a yin imbalance such as spaciness, lack of motivation, and poor concentration even if one eats primarily yin foods. The power of a shift toward an expanded spiritual awareness of the Divine is often a stronger force than the yin or yang energies of the foods one eats. This does not negate the general observation that the judicious use of yin or yang foods can be helpful when one feels a need to gently counterbalance certain yang or yin mental or physical states. Food is a supportive rather than determining factor in the development of spiritual awareness. Choosing a more yin diet is particularly effective for supporting the development of spiritual transformation.

Enhancing Spiritual Energy and Sensitivity with Diet

SINCE THE BODY IS A CONDENSATION of various levels of energy, it is not surprising to realize that within the body there are certain energies that one is able to experience on a subtle, yet sensory, level. For example, most people can experience sexual energy shifts or variations in digestive energies. When the flow and conductivity of the spiritual energy existing within all is awakened, it can also be experienced. This Divine energy transforms the body-mind complex and enables it to withstand more intense and subtler energies involved in the process of spiritual evolution.

If subtle channels of the body are not blocked due to undisciplined habits of eating and an immoderate lifestyle, the spiritualizing energy is able to act with its full force. This is a key connection between nutrition and spiritual life. With an appropriate diet, the transforming and purifying action of the spiritual energy takes place faster and more easily than if one is not on a supportive diet. It is just that a primarily live-food, vegetarian diet enhances the awakening of, sensitivity to, and flow of the spiritualizing process of God's grace and light.

In 1975, God's grace awoke the spiritual energy in me. Among other aspects of grace, I received the message that I needed to understand how to eat to support the awareness of the Divine presence and to amplify the power of God's spiritualizing energy. In an attempt to fulfill that transmission of will, since 1975 I have personally worked with several thousand people interested in developing a diet to enhance their spiritual lives. A few basic patterns have emerged. The most important observation is that spiritual energies and sensitivity to the sacred and eternal of the Divine are most enhanced by a light, vegetarian diet of live foods. The sensitivity to the Divine presence is most dulled by a diet of flesh foods. An 80% live-food, vegetarian diet seems quite sufficient for supporting the development of moral strength, ability to follow God's will, and the activity and power of the spiritualizing energy and sensitivity. Closer to a 95% live-food diet and periodic fasting seems to distinctly accelerate this process. Juice fasting particularly seems to have a powerful effect on the awakening and activation of spiritual energy and sensitivity.

Foods have such a strong effect on the process that, when necessary, I even advise the use of certain foods to slow down the energies if people feel uncomfortable or overwhelmed by them. If slowing and dulling is requested, I first recommend 50% or more of cooked grains. This often has a moderate effect in decreasing the sensitivity and the power of the spiritualizing energy. If more slowing than that is needed, I have observed that flesh foods from one to three times a day in large quantities are a powerful numbing force. For all the reasons already mentioned in this book, I hesitate recommending the eating of flesh food, except in rare situations.

Some people come to me complaining that although they have received the grace of spiritual awakening, they have slipped back to a heavier diet, have become less disciplined in their spiritual practices and their focus on God, and feel very little spiritual energy. It has consistently impressed me that time and time again, when people switch to a lighter, high-life-force food regimen, not only does the energy flow significantly better, but they seem to become inspired to intensify their spiritual practices and devotion to God. I have observed this spiritual inspiration to be especially true for people after participation in our spiritual juice fasting retreats.

To conclude, appropriate diet is a powerful aid to awaken and increase overall sensitivity, receptivity, and ability to hold God's grace and light. I want to emphasize that one does not necessarily have to be on such a diet to feel the blessing of God's grace and energy and to be spiritually aware. There are many who eat flesh food who receive grace and grow spiritually. My observation is simply that on a primarily living foods, vegetarian diet—the original diet that was first given to us in Genesis 1:29—it is easier. *Flesh food weakens the moral will-power, weakens the clarity of mind and intellect for understanding God's messages to us, dulls the subtle senses of spiritual receptivity to the light and grace of God, and strengthens the animal tendencies, allowing them dominance over our mental and spiritual powers.* My finding is not original; it is in alignment with the teachings of Jesus in *The Essene Gospel of Peace, Book One* (p. 36):

But I do say to you: Kill neither men nor beasts, nor yet the food which goes into your mouth. For if you eat living food, the same will quicken you, but if you kill your food, the dead food will kill you also. For life comes only from life and from death comes always death. And everything which kills your bodies kills your souls also. And your bodies become what your foods are, even as your spirits, likewise, become what your thoughts are... Therefore, he who kills, kills his brother. And from him will the Earthly Mother turn away, and will pluck from

him her quickening breasts. And he will be shunned by her angels, and Satan will have his dwelling in his body. And the flesh of the slain beasts in his body will become his own tomb. For I tell you truly, he who kills, kills himself, and whoso eats the flesh of slain beasts, eats of the body of death. For in his blood every drop of their blood turns to poison; in his breath their breath to stink.... And their death will become his death.

In my personal and clinical experience, there is an obvious connection between a healthy, vibrant body, mind, and intellect and the awareness of the light of God. In *The Essene Gospel of Peace, Book One* (p. 20), Jesus states it clearly:

I am sent to you by the Father, that I may make the light of life to shine before you. The light lightens itself and the darkness, but the darkness knows only itself, and knows not the light. I have many things to say to you, but you cannot bear them yet. For your eyes are used to the darkness, and the full light of the Heavenly Father would make you blind. Therefore, you cannot yet understand that which I speak to you concerning the Heavenly Father who sent me to you. Follow, therefore, first, only the Laws of your Earthly Mother, of which I have told you [vegetarian and live-food diet as one of the main laws]. And when her angels shall have cleansed and renewed your bodies and strengthened your eyes, you will be able to bear the light of our Heavenly Father.

After many years on this diet, as well as much prayer and meditation on God, I have noticed in myself and others who have followed this approach that there arises an experience of an extraordinary, exquisite, gentle flow of the Divine spirit, God's light, and Divine sound filling the body. It is a constant reminder of God's presence and love. Although I often feel it through most of the day, many mornings the Divine presence and light are so intense I simply cannot move. I will just lie there reveling in gratitude and joy for the experience of God as reflected in the mirror of my human body. This is the blessing of a live-food vegetarian diet. *The energy of God is extraordinary and powerful, and a live-food vegetarian diet helps to build a larger and stronger Divine tuning fork to resonate and amplify God's grace. It is a Divine tuning fork that every one of us can build.*

Hypoglycemia and the Mind

PERHAPS THE MOST SOCIALLY SIGNIFICANT DISRUPTION of brain-mind function is caused by white sugar. Dr. Paavo Airola, the internationally famous nutritionist, naturopath, and author, estimates that the annual intake of white sugar is 125 pounds per person. One way the cumulative effects of excess white sugar consumption manifest is in the form of hypoglycemia (what people commonly call “low blood sugar”). This imbalance seems to affect somewhere between 10% and 70% of the population, depending on whose statistics one uses.

Hypoglycemia, with the exception of the rare occurrence of organic hypoglycemia, is not a disease but a symptom of a generalized physiological endocrine imbalance. A malfunctioning pancreas, as shown by my hypoglycemia research reported in *Hypoglycemia, A Better Approach*, is not the only cause of hypoglycemia. Functional hypoglycemia may also be caused by allergies, poorly functioning adrenals, thyroid, pituitary, ovaries, or liver, or a combination of all of these organs and glands. Functional hypoglycemia is caused more from general endocrine stress; it is not just the opposite of diabetes. Other possible causes are chromium, zinc, pantothenic acid, magnesium, potassium, or pyridoxine deficiency. In rare cases, pancreatic tumors, Addison's disease, and pituitary tumors may cause organic hypoglycemia.

Allergies are a common contributor to hypoglycemia. The allergen is often white sugar itself, but it may be any substance. The major cause of a phenomenon that affects at least 24 million people is most likely not specific vitamin deficiencies, allergies, or tumors, but a self-exploitive, stressful, overextended lifestyle and a diet high in fast foods, white sugar, and other sorts of stimulants. One could say that it is a result of living the “all-American dream” of moving faster, wanting more and more things, and living a highly competitive, aggressive lifestyle, which is out of harmony with our inner self and Mother Nature. Hypoglycemia is literally fueled by the preoccupation with convenience and fast foods.

To relieve the pain of this self-exploitation and to energize oneself for short periods, people use white sugar, megavitamins, alcohol, cigarettes, and coffee and other caffeine-containing foods. This destructive way of compensating for inner emptiness and a lack of peace is another example of trying to treat a headache caused by banging one's head against the wall. People seem to be willing to try anything and everything to treat the headache *except* stop banging their heads!

A stable blood sugar is important for the normal functioning of the brain and nervous system. This is because the blood glucose is the primary fuel for the neurological and brain tissues. I have observed that many meditators seem to increase their desire for sweets after beginning to meditate. It is my impression that meditation has a healing effect on the nervous system, and this healing requires more energy input in the form of glucose. The mistake many meditators make is to seek more glucose for the system by eating refined foods with excess white sugar. Unfortunately, this poor dietary choice unbalances the body toward hypoglycemia and produces irregular glucose levels in the blood. A high-complex-carbohydrate diet of soaked nuts and seeds, fruits, vegetables, and grains will supply an adequate and gradual release of glucose into the blood, unlike the ups and downs created by white sugar ingestion. I have had the experience of treating many monks and other spiritual aspirants involved in intense spiritual practices who developed hypoglycemia because they did not understand this basic idea. My clinical research has shown that when meditators with hypo-glycemia go on a diet to prevent hypoglycemia, their ability to concentrate and become steady in their meditation improves.

With meditators as well as those who do not meditate, I have found that those who move away from fast foods and other highly sugared foods tend to be more emotionally stable, awake, and aware. It is common to find that those who are suffering from emotional instability, unexplained crying spells, panic attacks, drowsiness in the late morning and mid-afternoon, low energy, and concentration lapses have some degree of hypoglycemia. Mental function seems to improve when one adopts an antihypoglycemic diet comprised of high complex carbohydrates and low protein, with *no*

sweets, caffeine, alcohol, marijuana, or cigarette intake.

Specific Healing Qualities of Food

THE NEXT STEP IN UNDERSTANDING the particular energy of a food is to realize that each food has specific healing qualities, which is different from a general pitta or vata or yin or yang effect. This is highlighted in Dr. Bernard Jensen's book, *Food That Heals*, and in the classical juice therapy book by Dr. N. W. Walker, *Raw Vegetable Juices*. Jensen's book lists the foods and Walker's book lists the food juices and their specific healing qualities. The juices in our spiritual juice fast retreats are used according to these healing principles. The different Chinese medical texts also give extensive lists of foods and their specific healing qualities. In both East and West, herbs are considered food, and there are hundreds of herbal books that describe the specific healing qualities of herbs. The importance and role of food in the preservation of health cannot be underestimated. Dr. Jensen quotes Dr. Victor G. Rocine, who said in 1930:

If we eat wrongly, no doctor can cure us; if we eat rightly, no doctor is needed.

Rocine was among the first Western doctors to understand that particular foods have particular minerals that our bodies need more of when we have certain diseases. For example, if one had hypothyroid from an iodine deficiency, eating foods that are high in iodine, such as kelp, supplies the iodine needed to help correct the condition. Rocine also clarified that there are personality types that can be traced to the dominance of calcium, silicon, or sulphur in a person's system.

The homeopathic system developed by Samuel Hahnemann more than two hundred years ago has shown in daily practice that when certain minerals, herbs, and other plant and animal substances are energetically amplified by way of homeopathic preparation they help to heal specific constitutional types. Homeopaths have discovered that certain personalities respond to specific potentized substances. Sulphur, club moss, calcium carbonate, phosphorus, and arsenicum album are just a few of hundreds of substances that are specific remedies for different personality types and medical conditions.

BLACKBOARD FOOD FOR THOUGHT	
Food/Body/Mind Connection	
If you feel:	If you want to be:
<input type="checkbox"/> Tense & tight	<input type="checkbox"/> Relaxed
<input type="checkbox"/> Heavy	<input type="checkbox"/> Light
<input type="checkbox"/> Slow	<input type="checkbox"/> Quick
<input type="checkbox"/> Overheated	<input type="checkbox"/> Comfortable
<input type="checkbox"/> Irritable	<input type="checkbox"/> Calm
<input type="checkbox"/> Dull	<input type="checkbox"/> Smart & intuitive
Minimize:	Increase:
All flesh food	Fruits
Dairy	Vegetables
Eggs	Grains

The highly respected spiritual teacher Paramahansa Yogananda found that many foods affect specific characteristics of our personality. For example, in *Fourteen Steps to Higher Consciousness*, by J. Donald Walters, Yogananda is quoted as saying that almonds improve "self-control" and "calmness of the mind and nerves;" bananas

increase “humility and calmness;” blackberries create “purity of thought;” dates help to remedy an overly critical nature by bringing out the quality of sweetness and tenderness; oranges help to banish melancholia and stimulate the brain; and raspberries enhance “kindheartedness.” The Bach Flower Remedies developed by the English physician Edward Bach in the 1930s are specifically based on how flowers, trees, and herbs can “flood our natures with the particular virtue we need, and wash out from us the fault that is causing the harm.” In this way, the Bach Flower Remedies heal specific emotional imbalances. The book *Flower Essences*, by Gurudas, goes into depth on the particular energies and specific effects that the different flowers and herbs have on the physical constitution, personality, mind, and spirit of a person. The point is that in their natural living forms, food, juices, herbs, and minerals are living energies that affect us on every level of our being in very specific ways.

Effects of Overeating or Eating Acid Foods in Excess

OVEREATING IN GENERAL, ESPECIALLY OF EXCESS PROTEIN, and eating late in the evening are two sure ways to make the mind and body go numb. The body-mind life force becomes drained because it has to divert essential energy to support the overstrained digestive system and compensate for low cellular oxygen from blood sludging and high fats.

By eating too much protein, one not only encourages bowel toxicity but often tends to become too acidic. The more acidic our system, the slower and less clear becomes our thinking process. When our blood pH moves from its normal level of 7.4 to even a slightly acid pH of 6.95, the nervous system begins to shut down, one becomes stuporous, and may slip into an acidotic coma. That is one way that excess acidity may affect the mind. If one's pH becomes too alkaline, one may become physiologically and emotionally sensitive and irritable, or in some cases, a "space" case with difficulty concentrating. *A stable acid-base balance of the body is important for maintaining a stable mental state.* For more on acid-base considerations, see Chapter 11.

Timing of Eating and the Mind

PAYING ATTENTION TO THE NATURAL DIGESTIVE CYCLE is also quite important. When the digestive system is not overworked and the body is functioning well, it is easier to maintain a clear mind, which in itself enhances our desire and ability to meditate with increased clarity. According to the Ayurvedic system of medicine, the time of optimal digestive power is 10 AM to 2 PM. In the Chinese system it is 7 AM to 9 AM. Eating between 1 PM and 3 PM is also a good time. Nighttime, when most people in the US customarily eat their largest meal, is a slow time for the digestive system. If a big meal is eaten after 7 PM, or less than three hours before going to sleep, undigested food often accumulates, which serves as a breeding ground for food-rotting bacteria. The food then putrefies and consequently adds toxins to the system, both from the rotting food and toxins given off by the putrefactive bacteria. In the morning, instead of awakening refreshed with a clear mind, one may feel bloated, tired, and sometimes just wretched. Because of the toxic feeling, one feels much like a clogged sewage pipe and is unable to meditate, pray, or exercise, thereby missing out on activities that are essential to maintain balanced health and spiritual growth.

Because digestion depends also on the emotional and mental peace of the eating atmosphere, some people may not feel comfortable eating the biggest meal at lunchtime and might choose to wait until returning home to a more emotionally friendly space where they feel more relaxed. Though digestive energies may not be optimal at this time, there is some validity to this approach if one's evening meal remains moderate and relatively low in protein.

When it comes to eating high-protein meals, I have observed a subtle stimulation when excess protein is eaten. According to Dr. Mörter in *Your Health, Your Choice*, the body metabolism speeds up by about 30%. The body may keep this increased rate for 3 to 12 hours. Protein does not actually increase body energy, but stimulates it. A large protein meal, even if eaten several hours before going to sleep, can then act as a stimulant and keep one awake. This excess stimulation may also manifest as “nervous” energy with a variety of “fidgety” mannerisms. For this reason, I suggest eating any large protein meal at breakfast or lunch, depending on what time you feel your assimilation powers are the strongest. The Chinese recommendation of eating the biggest meal between 7 AM and 9 AM works best for me.

Discovering the dietary pattern that works best for me is an ongoing experiment linked to my evolving body-mind-spirit complex. Presently I primarily do not eat after 2:30 PM except for maybe a piece of fruit or fresh juice in the evening. Prior to this, I used to take several glasses of fresh vegetable juice in the evening, but I discovered it made me too alkaline and also overhydrated me. Remember, kaphas can easily overhydrate on even less than six glasses of fluid a day. This same amount would leave a pitta underhydrated. Jesus, in *The Essene Gospel of Peace, Book One* (p. 38), also recommended eating only two times per day.

For I tell you truly, he who eats more than twice in a day does in him the work of Satan.

Other spiritual and/or health practitioners have had similar practices of not eating after 2 or 3 PM. For centuries, Buddhist monks have understood this and have practiced not eating anything after 2 PM. One French healer I met had discovered an ancient system in which one could eat anything one wanted until 2 PM. After that, one would not eat anything for the rest of the day and night until morning. He found that this system was very powerful in helping people regain their health and lose weight. Although this may seem to be an extreme example, it supports the importance of the timing of when one eats. For many people, two meals a day may be imbalancing, especially for fast oxidizers or parasympathetics. I have found that clients who make the evening meal their lightest meal also achieve good results.

On this system of not eating after 2:30 PM, I wake up feeling clear and energized in the morning. In the years I have been experimenting with this approach, my weight has remained the same. I especially like it because it gives my digestive system an 18-hour rest each day. Eating by this time pattern and eating so moderately that after each meal I do not feel full and can be physically active within an hour seems to be working out well for my total body-mind health. What is most profound for me about this light eating pattern is the flow of cosmic energy I feel coursing through my body. Although years of meditation is the primary cause for this, overeating (even of health foods) or late-evening eating distinctly dulls the magnificence of my awareness of this energy. It is a wonderful and spontaneous communion. During the day it feels as if joy is simply running through every cell independent of external factors. This noncausal joy is always there, of course, but light eating, with one's larger meal at the

beginning or middle of the day, seems to accentuate these ongoing feelings. *Part of eating consciously is to eat in a way that maintains and supports ones consciousness.*

Fasting as Part of the Diet for Enhancing Body-Mind-Spirit

FASTING IS PERHAPS THE SIMPLEST and most remarkable self-healing approach related to our food intake for rebalancing and clearing the body and mind and elevating the spirit. I call it the elixir of fasting. It is one of the greatest health benefits. Although classically defined as complete abstinence from food and water, in a larger context it means to abstain from that which is toxic to body, mind, and spirit. Fasting is the elixir of spiritual nutrition. I base this statement on my own experiences of fasting two to four times per year for seven to ten days' duration each, my experience of one forty-day spiritual fast, a 21-day water fast, and my observation of the awesome body, mind, and spirit transformations of many people on my biannual, seven-day spiritual fasting retreats offered since 1988. Within four days of fasting, participants on the retreats have shared that their concentration improves, creative thinking expands, depression lifts, insomnia stops, anxieties fade, and the mind becomes more tranquil. It is my hypothesis that when the body's toxins have cleared from brain cells, mind-brain function greatly improves. I have also observed that a natural joy begins to make its appearance.

It is becoming more apparent to me that the toxic wastes that accumulate in our brain cells have a much more significant effect on our mental and spiritual functioning than has been previously recognized. I still am amazed on each spiritual fast to see how rapidly people's minds clear and what a difference it makes in their spiritual capacity. The fasting retreats also accelerate the spiritualizing process in the following ways: the complete break from one's customary social setting and routine; doing meditation, hatha yoga, and exercise; practicing the Essene communions; holding small group detox healing sessions; doing enemas; doing foot, abdominal, and head massage; and participating in group discussions where people share their feelings. People who normally have trouble meditating or praying for one half-hour find themselves going two hours at a time without difficulty. Because the conductivity of the force is so enhanced by the fasting and meditation or intense prayer, often more than 90% of the retreat participants have a spiritual awakening or quickening. Fasting is a powerful part of the live-food spiritual nutrition program and an essential part of any nutritional program for spiritual life and health. The mental and physical toxic environment we live in exposes everyone to a toxic buildup that regular fasting at least two times per year helps to unload.

Body Toxins Are Real

MANY PEOPLE THINK that the phrase “toxins in the body” is just some jargon of food faddists. Research over the last hundred years shows that these bowel toxins actually exist. Not only do they exist, but they have a tremendous negative impact on mental and physical well-being. Toxins usually come from a process called intestinal toxemia, an overgrowth of putrefactive intestinal bacteria in the small and large intestine. These toxins are then absorbed into the blood stream and from there affect both our mental and physical functioning. Intestinal toxemia is predominantly caused by an excessively high animal protein diet. Overeating, eating late at night, and/or a slowing of bowel eliminative function directly contribute to it. Constipation also contributes a lot to this bowel toxemia.

In 1933, Dr. Anthony Basler, a professor of gastroenterology, summarized his 25-year study of 5,000 cases by saying:

Every physician should realize that the intestinal toxemias are the most important primary and contributing causes of many disorders and diseases of the human body

Dr. H. H. Boeker, as far back as 1923, said:

It is now universally conceded that autointoxication is the underlying cause of an exceptionally large group of symptom complexes.

In general, research shows that when the intestinal toxemia is removed, symptoms such as fatigue, nervousness, gastrointestinal conditions, impaired nutrition, skin manifestations, endocrine disturbances, headaches, sciatica, various forms of low back pain, allergy, eye, ear, nose, and throat congestion, and even cardiac irregularities have been healed in hundreds of cases. Excessive amounts of a chemical called indican have also been associated with sacroiliac, upper lumbar, and thoracic subluxations that do not respond to appropriate adjustments. This is not to say that reducing intestinal bacteria is the only cure for many of these diseases, but often it is an important factor that is overlooked because we consider the toxemia of our high-protein, overeating habits to be a normal state.

Some of the main bowel toxins are ammonia, indole, indican (a conjugated indole), skatole, clostridium perfringens enterotoxin, guanidine, phenol, and high concentrations of histamine. I have found that a simple test for indican in the urine is an easy and effective way to diagnose bowel toxemia. The liver is able to detoxify some of these toxins, but when high concentrations are reached, the liver becomes overwhelmed and these toxins saturate the blood stream. Skatole and phenol cannot even be detoxified by the liver at all.

Bowel toxins have more than just a symbolic effect on the mind and nervous system. An increased concentration of ammonia in the blood, for example, increases the cerebrospinal fluid concentration. This seems to interfere with brain metabolism in some way. The results of a high cerebrospinal ammonia are evidenced by clinical reports of neurological and mental disturbances, tremors, brain wave changes, and even coma. Eleven different research laboratories on bowel toxins have reported that schizophrenics have five times more 6-hydroxyskatole in their urine than normal people (a skatole breakdown product from bacterial putrefaction). These findings correlate with the findings of Russian researchers, who, according to Dr. Allen Cott in *Fasting as a Way of Life*, have had excellent success using water fasts to cure 65% of the so-called “incurable schizophrenics.” It is interesting to note that one of the main causes of relapse for these “incurables” was a return to high-protein, flesh food intake, which is a diet that stimulates bacterial putrefaction and intestinal toxemia.

Intestinal toxemia not only has been associated with severe mental symptoms such as psychosis, but with a variety of mental imbalances. As early as 1917, Drs. Satterlee and Eldridge presented 518 cases at an American Medical Association conference that had mental symptoms which were cured by removing the intestinal toxemia. They reported symptoms of intestinal toxemia which are familiar to many people: mental sluggishness, dullness, and stupidity; loss of concentration and/or memory; mental incoordination, irritability, lack of confidence, and excessive and useless worry; exaggerated introspection, hypochondrias, and phobias; depression and melancholy; obsessions and delusions; and hallucinations, suicidal tendencies, delirium, and stupor. Senility symptoms are also common with intestinal toxemia.

Fasting is one of the best and quickest treatments for bowel toxicity I have found in my research that the urinary

indican was “markedly decreased” even after a seven-day fast. Phenols, another class of bowel toxins, have also been decreased significantly by fasting. The fasting process allows the bowels to rest and the inflammation to subside. If there are no proteins on which to feed, the putrefactive bacteria will also diminish.

For those who do not want to fast, excluding surgical intervention, a low-protein diet (20-30 grams of protein per day), along with a high-complex-carbohydrate, 80% raw-food diet, is a slower but effective cure. When connected with periodic fasting, it is even more powerful. Fats should be kept to a minimum, as heated fats especially intensify the process of intestinal toxemia. Learning to eat in a way that causes no strain on the digestive system is extremely important. This means eating in a manner in which one rises from the table feeling almost as light as when one sits down. If we eat too much or too late, there is incomplete digestion and the process of putrefaction is reinforced. Adding lactobacillus acidophilus (normal large intestine bacteria) culture to the system helps to re-populate the small and large intestine with healthy bacteria, therefore diminishing putrefactive (abnormal) bacteria. Exercise also helps to stimulate the digestive system. Although many will respond to these basic aids to digestion, in the short run one may need some digestive enzymes and/or digestion-stimulating herbs to help rest and rebuild the digestive power that has been weakened after long years of abuse.

Sweet Mind–Bind Cycle

Symptoms of Sugar

- Spacy
- Exhausted
- Poor Concentration
- Hyperactive
- Crave Sweets
- Low Energy
- Sad without a reason/or too easily
- Angry without a reason/or too easily
- Violent without a reason/or too easily
- Anxious without a reason/or too easily
- Crying without a reason/or too easily

Sugar is seductive, safe sex—
and it's everywhere.
Are you trapped in this cycle?

How to Break the Sweet Mind–Bind Cycle

1. Eat sprouted grains, seeds, and/or nuts, seed sauces, sea vegetables, vegetables, or fruits at each meal.
2. Eat three regular meals at constant times.
3. Snack between meals so blood sugar doesn't drop.
4. Stop eating all refined foods, sweets, junk and fast foods (such as anything with white sugar), chocolate, and pastries.
5. Avoid stimulants and other drugs, such as coffee and alcohol.
6. Lead a balanced life.
7. Let go of life in the fast lane.

Preview of Chapter 8

IN THIS CHAPTER WE DISCUSS the implications of physical and mental degeneration documented in animal and human studies. This is highlighted by the Pottenger Cat Study of raw- vs. cooked-food diets and the Price study which surveyed the results of introducing processed foods into the diets of indigenous people. A link is made between these studies' results and our current health crises, including hyperactivity and widespread drug addiction. The chapter ends with suggestions for reversing this process and the affirmation that the addictive brain can be healed.

- I. Evidence for physical degeneration from poor diet
 - A. Pottenger Cat Study
 - B. Price study of indigenous cultures
- II. Results of poor pre-pregnancy and prenatal nutrition
- III. Manifestation of poor nutrition in our culture
- IV. How this degeneration process can be prevented and reversed



Deficient Diet: A Cause of Physical and Mental Degeneration

I AM WORKING TO DEVELOP AN INSIGHT into the effects of poor nutrition on the human organism over the generations. By nutrition, I mean the total effect of all the energetic input affecting the quality of life and energy of our human organism. This includes the health of the parents, the prenatal nutrition, the quality of the general food intake or diet, the environmental influences such as weather, amount of pesticides, herbicides, and radiation exposure, quality of education, level of emotional and spiritual development, and the ability to draw energy from the different elements of nature. Modern culture has created a mass-consciousness diet of synthetic, denatured, fast, frozen, cooked, pesticided foods high in refined carbohydrates and trans fatty acids and low in fiber. Many vegetables, fruits, and grains are grown on deficient soils. This is a deficient diet which I believe is significantly impacting the physical and mental health of our whole society on a core biological level. This chapter is an attempt to look at the effects of this diet on our mass culture. It is easier for me to select the diet for study because it is more concrete than other aspects of nutrition.

One of the most dramatic implications of the role of diet in our lives and the quality of our culture is the mental and physical degeneration related to inadequate diet. The degenerative effect of a chronically deficient diet on the physical and mental state of succeeding generations is a difficult reality to grasp. It is hard to perceive because humans have a longer generational cycle than mice or fruit flies. Too few have even asked the essential question of this chapter. Abram Hoffer, M.D., Ph.D., a leading authority on nutrition and nutritional therapy in relation to mental states, has asked the question and offered some answers. In the introduction to *Nutrition and Physical Degeneration* by Dr. Weston Price, Hoffer states: “Recent intergenerational research in animals and people has shown that, on a uniformly poor diet, the offspring of each generation deteriorates more and more, and in rats this continues up to eight generations. We do not know what the final stage will be in human deterioration. I suspect that many of the people with psychiatric disorders today, the addicts, the high degree of violence, the tremendous number of depressions and tension states, and the great number of physical degenerations such as diabetes, arthritis, etc., are the modern manifestations of this continuing degeneration. I have seen no experiences which show what happens when the diet continues to get worse with time. I shudder to think of the final outcome.”

The data are clear that our diet of fast, frozen, and processed food—high in refined carbohydrates like white sugar and white flour, high in pesticides, with food grown on nutrient-depleted soils—supplies a uniformly inadequate diet to Americans and most of the modern industrialized world. As you read this chapter you will see some of the data to support this statement.

Diet and Physical Degeneration

THE PHYSICAL DEGENERATION ASPECT of poor diet is more obvious than the mental degeneration aspect. For example, Dr. Thomas Cleave, a British medical officer in World War II who later became the Surgeon-Captain of the Royal Navy, found that when Iceland's diet became Westernized in the 1930s and sugar and refined carbohydrate consumption rose significantly, diabetes became commonplace twenty years later in the 1950s. In Africans, he found that wherever rapid dietary change was introduced with refined carbohydrates, heart disease and diabetes began to spread approximately two decades later.

In his studies, from the Kurds to Yemenites to Zulus, Cleave repeatedly found that when refined-carbohydrate foods were introduced into the diet, there was an increase in chronic disease within twenty-five years. In 1956 he wrote a paper in which he theorized that the cause of many chronic diseases was the rise of saccharine foods or sugar-related foods in the diet. Cleave made the point that the refining of carbohydrate foods in which the roughage is taken out slows the passage of bowel contents and therefore gives rise to hemorrhoids, diverticular disease, varicose veins, colitis, ileitis, and possibly cancers of the colon and rectum. He believed that refined foods were so concentrated that there exists a sugar over-consumption, which is associated with obesity, diabetes, and heart disease. Because of this, he argued that the introduction of refined carbohydrates into the diet was responsible for a large percentage of the increasing chronic degenerative diseases seen in Western industrialized nations.

The Pottenger Cat Study, done between 1932 and 1942 and reported in the book called *Pottenger's Cats* by Francis M. Pottenger, Jr., M.D., is a powerful statement about the process of intergenerational degeneration. The research was done with approximately nine hundred cats. Dr. Pottenger worked in conjunction with Alvin Foord, M.D., professor of pathology at the University of Southern California and pathologist at Huntington Memorial Hospital in Pasadena. This study met the most rigorous scientific standards of its time. Six hundred of the nine hundred cats had complete medical histories, and medical observations were recorded on all the cats.

The cats were kept in large outdoor pens, with all groups of cats having the same controlled conditions. Cat controls or "normals" were put on a raw-food diet including raw meat, raw milk, and cod liver oil. "Deficient" cats were those put on a deficient diet which had either cooked meat or milk, but they still received cod liver oil. Normals were born of healthy parents and kept on an optimal diet. A first-generation deficient cat was an adult cat put on the deficient diet (one that included cooked food). A second-generation deficient cat was a kitten born to a first-generation deficient female and maintained on a deficient diet after it completed nursing. Third-generation deficient cats were born of second-generation deficient cats and maintained on a deficient diet all their lives. Fourth-generation cats in this line were not available because third-generation deficient cats were unable to produce viable offspring and usually died by the age of six months.

One of the major experiments in this study involved giving control cats or "normals" a diet of two-thirds raw meat and one-third raw milk and cod liver oil. The "deficient" cats were given a diet of two-thirds cooked meat and one-third raw milk plus the same amount of cod liver oil as the normals. The comparison between the normal or raw-food cats and the deficient or cooked-meat cats was impressive. The normals were uniform in size and development without any skeletal, tissue tone, or fur changes. The calcium and phosphorus content of their bones remained consistent, and internal organs showed full development. They were resistant to infections, fleas, and parasites and showed no signs of allergies. Their mental states were friendly, with purring and predictable behavior patterns. They maintained a high level of nervous system coordination. They reproduced one homogeneous generation after another, all in good health. The mothers had no trouble with the birth process or nursing. The average litter was five kittens, with the average weight being one hundred nineteen grams.

In contrast, cats fed the cooked-meat diet gave birth to heterogeneous offspring with many variations in skeletal structure. By the third generation, their bones became as soft as rubber. All deficient generations of cats suffered heart problems, nearsightedness and farsightedness, underactivity or inflammation of the thyroid and bladder, arthritis and inflammation of the joints, inflammation of the nervous system with paralysis and meningitis, and infections of the kidney, bones, liver, testes, and ovaries. There was also a general decrease in the health of visceral organs. On autopsy the females had ovarian atrophy and uterine congestion, while the males showed a failure in active spermatogenesis. In the first-generation cooked-food cats, abortions ran about 25% and went up to 70% in the second generation of deficient animals. Deliveries were difficult and many females died giving birth. Mortality rates of the kittens were high. The average cooked-food kitten weight was nineteen grams less than the raw-meat-nurtured

cats. Vermin and intestinal parasites became numerous. Skin lesions and allergies were frequent and got worse with each generation of deficient cats. In the third generation, the cooked-meat cats were so physiologically deficient that none survived beyond the sixth month.

In general, the calcium/phosphorus content of the bone decreased with each generation of cooked-food cats. In the first generation, the percentage of calcium in the bone was 12 to 17% and dropped to between 1 and 1.5% by the third generation of cooked-food cats. The bone phosphorus content diminished in a similar pattern. Bone structural changes among the cooked-food cats included lessening of the anterior-posterior and transverse diameters of the dental arch. There was an apparent angle of the corpus of the mandible and an apparent failure in the anterior development of the forward movement of the face. There was a lessening of the development of the frontal sinus and an increase in the angle formed by the roof of the mouth and the base of the brain. Cats on the cooked-food diet developed irregularly spaced, uneven, crowded incisors and had a decrease in the size and regularity of their teeth with increased malocclusion. The long bones of the femur or hip decreased in diameter and increased in length. The internal bone osseous structure became coarser with less calcium. By the third generation, the bones actually became rubber-like.

The mental status of the deficient-diet or cooked-food cats showed considerably more irritability than the normals, with much increased biting and scratching and more unpredictable behavior patterns in the females. The males became more docile with a drop in sexual interest. A role reversal in the cats was observed, with the males becoming more docile and the females becoming more aggressive. Increased same-sex sexual activities were observed. These behaviors were not observed in the cats fed only raw foods.

When cats fed the cooked-meat diet were returned to a raw-meat diet, it took approximately four generations to regain normal health. Improvement in resistance to disease was observed in the second generation, but allergies persisted into the third generation. Most skeletal deformities lasted until the third generation and were gone by the fourth generation. Once a female cat was subjected to twelve to eighteen months of a cooked-food diet, she was never able to give birth to normal kittens.

This same type of experiment was repeated, with the control cats receiving two-thirds raw milk and one-third raw meat plus cod liver oil, and the deficient-diet group receiving one-third raw meat plus two-thirds pasteurized milk, evaporated milk, or sweetened condensed milk. The results of this experiment were essentially the same as the raw-meat versus cooked-meat experiment. The most marked deficiencies and degeneration occurred with the sweetened condensed milk. Those fed the pasteurized milk had less degeneration in each generation than either the evaporated or sweetened condensed milk-fed cats. The cats fed the sweetened condensed milk showed extreme nervous system irritability.

Because the percentage of sterility, thyroid problems, and food and environmental allergies seems to be increasing in our society, and a growing number of people are suffering from the environmental sensitivity syndrome, it is worth looking at these symptoms of degeneration in more detail. Normal raw-food cats did not suffer from any problems. The cats who received the cooked meat or cooked milk in some form developed many kinds of allergies with sneezing, wheezing, and scratching. Milk allergies became common. The cooked-food cats had increased nervousness and irritability, and stopped purring. By the third generation of cooked-food cats, the incidence of allergies was almost 100%. If the second-generation deficient cats were put back on a raw-food diet, their allergy symptoms diminished, and by the fourth generation some cats had no evidence of allergies.

The normal or raw-food cats had no incidence of hypothyroidism. In the deficient cats, a low thyroid was associated with significant bone changes in the skull, jaw, and teeth. The kittens of nursing mothers on the cooked-food diets had a high incidence of hypothyroidism. My own clinical observations and those of other doctors have revealed a general increase in hypothyroidism in our human society.

There seems to be a general correlation between hypothyroidism and sterility in the overall cat study results. By the second generation of cooked-food cats, 83% of the males were sterile on the pathology examination, with no evidence of any spermatozoa. Approximately 53% of the females in the second generation of cooked-food cats showed an underdeveloped ova. According to the *Kellogg Report* by Joseph Beasley, M.D., and Jerry Swift, M.A., of the thirty million couples in the US in 1980 with a woman of child-bearing age, 44% were unable to have children. In 1965 there were 482,000 couples with a wife younger than thirty who were classified as infertile. By 1976 the number of nonsurgical infertile couples rose to 920,000. Among black couples ages twenty to twenty-four, the proportion of nonsurgical infertile couples quintupled from 3% to 15% in the eleven-year span from 1965 to 1976. The trend for nonsurgical infertility for couples under thirty years of age is distinctly rising. As Francis Pottenger, Jr., M.D., gently put it in his book, "While no attempt will be made to correlate the changes in the animals studied with malformations found in humans, the similarity is so obvious that parallel pictures will suggest themselves."

The point I want to make with the Pottenger Cat Study is not simply that raw foods are superior to cooked foods,

although this study makes a strong statement about this. *The message is that a diet deficient in essential nutrients or enzymes, as was the cooked diet for these cats, has a powerful degenerative effect on the health of these animals. It becomes progressively more degenerative over succeeding generations.* Additional animal studies in Dr. Price's book *Nutrition and Physical Degeneration* further support this general finding. These studies show a significant difference in the quality of health between an all-natural, whole-foods diet and a processed-food diet. Rat studies reported in Dr. Price's book show that rats grown on whole wheat were healthy, whereas rats grown on white flour were undersized, had tooth decay, were unable to reproduce, and had hostile dispositions. It is not hard to extrapolate the effects of processed foods on rats to their effect on humans.

Like the Pottenger Cat Study, pigs put on a deficient diet had certain deformities in their offspring. When the diets of these pig parents were changed back to a healthy natural diet, the offspring of their next litter were normal. If these congenital deformities were a genetic problem, this would not be the case. Therefore it has to be seen as a problem of the germ cells. Germ cells are the male and female reproductive cells, or sperm and ovum. *Poor nutrition depletes the healthy reproductive power of the germ cell plasm of the sperm and the ovum, which leads to congenital malformations and a degeneration of mental and physical function in the offspring.* With proper prenatal nutrition, the germ plasm health of the pigs was restored and they no longer had defective offspring.

I believe that humans mirror the same biological process as the cats, rats, and pigs. With poor nutrition, the germ plasm is weakened and we produce children with physical congenital changes and diminished brain function. This helps to explain the almost epidemic proportion of hyper-activity and increasing rates of addiction in our children. Recent statistics show that one hundred thousand children between the ages of ten and eleven get drunk on a weekly basis. The rates of drug addiction among children are increasing. Dr. Price's research in the 1930s showed there was a deterioration in the younger members of families in America. He estimated that between 25 and 75% of the children are affected. He found that not only did they have structural changes, but their IQs were lower and they developed inferiority complexes as a result. This connection between delinquency and lowered mental capacity has been made in a variety of studies. Chasell studied reports from different countries regarding this question and reported a positive correlation between delinquency and less-than-average mental capacity. Burt made an extensive study over a long period of time in London and Birmingham, and found that between 60 and 70% of the delinquents were classified as mentally "dull."

This information suggests that there is more going on than just heredity. It suggests that our environment, the diet of the mother during pregnancy, and of the parents before pregnancy can affect the health of the germ cell to the extent that it can result in an interrupted healthy pattern of heredity. The quality of brain functioning in our children may be a direct result of parental diet.

There is an increasing incidence in our culture of chronic degenerative diseases such as heart disease, arthritis, allergies, environmental sensitivity and other forms of immunodeficiency diseases, cancer, hypothyroidism, hyperactivity, drug abuse, depression (there are an estimated forty million depressed adults and five hundred thousand children taking Prozac and other antidepressants), social violence, and sterility. With all these chronic diseases, the condition of our human population does not seem too different from the degeneration observed in the diet-deficient cats in the Pottenger Cat Study. Could this cat study be a sped-up version of what is happening to health in our society? Can we afford to wait until all the evidence is recorded before we change the direction in which we are going?

Effects of Processed Foods on Indigenous Cultures

THE MOST POWERFUL DOCUMENTATION of the effect of a deficient and inadequate diet on human physical and mental degeneration was done by Dr. Weston Price, a dentist and internationally famous researcher on nutrition. His study of fourteen indigenous cultures, published in 1939 in his book *Nutrition and Physical Degeneration*, is a classic. The cultures he studied included the New Zealand Maori; descendants of the ancient Chimu culture in Peru, isolated Peruvian Indians, high Andes Indians, and Amazon jungle Indians; Torres Strait Islanders including racial groups from the Papuaans, New Guineans, Mobuiags, Arakuns, Kendals, and Yonkas; Australian Aborigines; isolated and modernized African tribes including the Neurs at Malakal on the Nile River and the Dinkas in Sudan; the Arab schools at Khartoum and Omdurman in Sudan; the Ikblas school in Cairo, Egypt; Ethiopians, Masers tribe, Polynesians, Melanesians, Malay Micronesians, North American Indians in Canada and the US; Eskimos; Gaelics living in the Outer Hebrides; and isolated Swiss villages in the Loetschental Valley.

These studies are unique because they were done around the time that processed foods were introduced into these cultures. This allowed Dr. Price the opportunity to compare the before and after effects of the introduction of processed foods, especially white flour and white sugar. Price had the opportunity to compare the health of indigenous people of the same racial stock who stayed on the indigenous natural diet to those who began eating the industrialized processed food. He was even able to compare changes in the health of offspring of parents who changed their diets to processed foods in the middle of the child-rearing cycle.

Price made several generalizations based on his scientific data. The indigenous diets in each culture contained two to six times the nutrients as the processed-food diets that were introduced as a process of “modernization.” The people who stayed with their traditional diet maintained a high level of immunity to dental caries. Those on the processed diet of modern commerce lost their immunity to caries. Price found that those who had lost their immunity because of poor nutrition were able to halt the process of dental cavities by reverting back to a natural diet or taking special supplements that were equivalent to the nutritional content of their indigenous diets. The results are noteworthy. For example, Weston Price found that by putting children back on a healthy diet, the epidemic of caries could be stopped in some of the indigenous cultures he studied. In some modernized tribes the rate of caries jumped from less than 1% on their whole, natural, organic, indigenous diet to up to 60% on the processed-food diet.

One of the most radical findings was the gross structural changes that occurred in only one generation in the head and facial structure. These included changes in the dental arch, narrowing and lengthening of the face, hips, and chest, and significant changes in the bones of the head, especially the maxillary bones. It is most significant that these changes occurred in a single generation when the diet changed, rather than over many generations as might be expected if such changes were primarily genetic.

Another interesting finding was in the families of modernized indigenous and modernized white people eating the processed foods. There was a tendency for more structural and mental damage to occur in children born in the later part of the birth cycle. This suggests a depletion and lowering of reproductive capacity in the parents who had switched to the modernized, processed foods. With the indigenous people who stayed on their natural pre-modernization diet, there was no tendency for more congenital changes and mental deterioration with the younger children.

Data offered by Dr. Price suggest that changes in the bone structure of the skull may also create disturbances in brain development. It is fascinating to think that personality development and character may be a product of biologic diet as well as heredity. Brain embryonic defects may be as biologic as club feet. Both are created by lowered germ cell health of the parents from poor nutrition and the biological stress of too many children from a weakened mother.

Poor nutrition lies at the basis of this generational degeneration that I believe we are witnessing in our present Western society. *Research by Dr. Price shows that the diets of indigenous people that have provided freedom from degeneration processes are significantly better than the modernized processed diet.* The indigenous diets all provided a natural food intake which gave that average adult at least four times the minimum nutritional need, while the industrialized diet that they later turned to made of processed white flour, white sugar, white rice, and canned goods usually does not even provide the minimum nutrition. For example, the diet of native Eskimos contains 5.4 times the amount of calcium, 5 times the amount of phosphorus, 1.5 times the amount of iron, 7.9 times as much magnesium, 49 times as much iodine, and approximately 10 times the amount of soluble vitamins as the minimum daily requirements. For the Australian Aborigines, calcium was 4.6 times greater, phosphorus 6.2 times greater,

magnesium 17 times greater, iron 50 times greater, and fat-soluble vitamins at least 10 times greater than the modernized diet. The superiority of indigenous diets was also confirmed for the Polynesians, coastal Indians of Peru, cattle tribes in the interior of Africa, the Gaelics in the Outer Hebrides, and the Indians of Northern Cannonade.

Returning to Dr. Price's observations of bone structure, one of the most remarkable findings in the studies of different cultures is the degeneration in the younger members of families after the family switched from the whole natural foods of the indigenous diet to the processed and refined foods. Weston Price found that regardless of racial stock, structural changes in the face appear after the introduction of processed foods. In the older children of the families, the tribal facial patterns normally reproduced. In the children born after the introduction of the processed foods, the tribal facial patterns are significantly lost. These changes are documented with photographs of the Maori of New Zealand, the Aborigines of Australia, the Quichua Indians, white children in Peru, and the natives of Badu Island north of Australia.

As the quality of nutrition further degenerates with progressive births, congenital abnormalities associated with facial abnormalities also begin to be noted. Field research by Dr. Murphy of the University of Pennsylvania on 1,476 cases of physical abnormalities recorded at birth gives us further insight into events associated with congenital defects. He found that miscarriages, stillbirths, and premature births occurred more often before and after the birth of a child with a congenital defect, especially immediately preceding the birth of a child with congenital defects. From this we may theorize that a congenitally malformed child is just one expression of a decrease in the germ cell health and consequently, reproductive function. Miscarriages, stillbirths, and premature births may be other expressions of a weakened germ cell plasm. The biggest single cause for this weakening is poor parental pre-fertilization and prenatal nutrition.

Another interesting point about the importance of peri-natal nutrition is that children born to indigenous parents living on the processed-food diet had a "greatly increased incidence of tuberculosis as compared to the children whose parents stayed on the native diet of natural whole foods. Those with the increased incidence of tuberculosis also had changes in their facial structures and dental arch form."

What Weston Price established in his book and what is established in this chapter is the theory that these structural changes are indicative of a weakened germ plasm and prenatal injury. It seems that there is also a connection between these changes in facial structure and dental arch and susceptibility to certain diseases such as tuberculosis and dental caries. In one study at the New York State Hospital for tuberculosis, Dr. Price observed that 94% of the tuberculosis patients had abnormal facial and dental arch structures. He found this also to be true in other institutions in New England, Quebec, and Eastern Ontario.

The data he presents in *Nutrition and Physical Degeneration* strongly suggest that a high percentage of those with significant alterations in normal facial form have some disturbance in their mental and moral character. As with susceptibility to diseases such as tuberculosis, an unhealthy germ plasm as evidenced by facial and dental arch alterations in architecture seems to be associated with lower IQ and social delinquency problems. A study by Clouston showed that deformed palates are present in 19% of the population, 33% of psychotics, 55% of criminals, and 61% of those classified as mental defective. Peterson, in another study, found palate defects in 82% of the mentally deficient, 76% of epileptics, and 80% of psychotics. Weston Price studied a group of 189 juveniles in the Cleveland School for pre-delinquents. He found that 98.4% of these juvenile delinquents had marked abnormality in their facial structure and dental arches. He also found that 38.7% of these children were either fifth or last children. Twenty-four percent of these juvenile delinquents were last children, and 22.5% were the fifth child or later. Statistics also suggest that there is a higher percentage of damaged children from abnormally young mothers. At the other end of the range, children with the mongoloid syndrome are often born last in a large family, which is the time when the mother would usually be most nutritionally depleted and the germ cell the weakest.

The point is that a poor nutritional pattern of highly processed foods, high in white flour and white sugar, weakens the germ cell plasm. The process of multiple childbirths close to each other can further weaken the quality of the germ plasm. The more it is weakened, the more structural changes occur in the bones of the face, and the more often subtle congenital brain injuries are created. This subtle congenital brain injury manifests in a variety of ways, such as lowered IQ, mental disturbances and illness, hyperactivity, learning disorders, increased incidence of drug usage, increased tendency toward aberrant social behavior such as juvenile delinquency, and increased social violence. Since all of these are happening in our society, it behooves us to pay attention.

Most people are aware that there are major physiological and structural changes in the head, brain, and body of children with mongoloidism or Downs syndrome. I have tried to make the connection between the appearance of facial and dental arch structural changes and brain function of an individual. These structural changes are not only indicators of altered physiology, but they may even alter the physiology. One dramatic case of a sixteen-year-old boy with Downs syndrome seen by Dr. Price illustrates this point. At age sixteen his genitals were that of an eight-year-old and his mind was that of a four-year-old. His maxillary arch was so small that he had trouble chewing. He

received an operation to widen his maxillary arch about one-half inch. After the operation, he grew three inches in four months. After three months he had developed fully mature genitalia. A mustache began to grow immediately. His mental state dramatically improved. He went from playing on the floor with blocks and rattles to being able to go to the grocery store with money to do errands. He could make phone calls, travel by himself over long distances, and even date women. This increase in mental capacity occurred over a period of sixteen weeks. The operation had shifted the pressure on the pituitary gland in a way that stimulated its function. When the appliance he wore in his mouth to keep the maxillary bones separated slipped out of place, he reverted to his old state. When it was repaired, he regained his much-improved state.

This finding of the connection of Downs syndrome with abnormal pituitary function is supported by the research of Dr. Clemens Benda, the clinical director of the Wrentham State School in Wrentham, Massachusetts. He found in fourteen cases of Downs syndrome a definite failure of pituitary development. This is interesting to correlate with the rat studies showing that a low vitamin E level in the diet of pregnant rats results in offspring with inadequately functioning pituitary glands. The larger implication of this is the connection between changes in the structure of the maxillary bone or cheekbones and dental arches with the physical pressure effect on the pituitary and other brain function. Experiences with cranio-sacral work, in which the bones of the skull are readjusted and loosened resulting in improved brain and mental function, also speak to this insight.

One of the most important points I am making in this chapter is that *we can significantly improve the health of our offspring by proper prenatal nutrition of both parents, and high-quality nutrition for the mother during pregnancy*. The nutrition of prospective fathers also plays an important role. They are one-half of the germ plasm biology. These ideas are explored in depth in Chapter 30, "Nutrition for Pregnancy."

Insight regarding the importance of nutrition in the creation of healthy babies and the maintenance of healthy germ cell plasm for all our offspring is not new. Many indigenous cultures are aware of this. One key aspect of this concept is awareness that the frequency of giving birth is a strain on the mother's germ cell plasm health. For example, the Ibos of Nigeria consider it a matter of disgrace for a woman to bear a child at intervals less than three years. In other indigenous cultures such as those of Peru, Ecuador, and Colombia, and among the Melanesians and Polynesians, the accepted interval is approximately two and one-half years. In one of the Fiji Island tribes the accepted interval is four years.

In our American culture, over the last twenty-five years of holistic health practice I have seen a number of women who have never recovered from the biological stress of child-bearing. They often remain energetically and emotionally depleted and depressed, with exhaustion in several parts of their endocrine system and a marginally functional immune system. It is amazing how quickly they respond to proper nutrition and the rebuilding of their endocrine system. Almost all of these women had been to a variety of doctors without receiving any relief for their condition. It is a syndrome that is not given much attention in the literature. It is a problem that is becoming more pronounced as the quality of our cultural nutrition patterns in general, and our prenatal nutrition patterns specifically, move further away from the high quality of an organic, whole, natural food diet.

In addition to the problems of a high processed-food diet, we have the problem of nutritionally depleted soils, which undermines the quality of all our foods. Healthy soils create healthy plants, and healthy plants create healthy babies. Going organic not only protects us and our prospective children from the deleterious effects of pesticides and herbicides on the nervous, endocrine, and immune systems of babies, but it supports organic farming. Organic farming is important because it builds the soil rather than depletes it. Eating organic food from organic healthy soils builds organic healthy children. Organic food is a must for maintaining health and for optimal pre-fertilization and prenatal nutrition.

Many indigenous cultures were and are aware of the importance of pre-fertilization and prenatal nutrition. In some cases special nutritional food was given to prospective fathers as well as to the mothers in preparation for pregnancy. Some of these peoples include the Eskimos, South Sea islanders, natives of Badu Island north of Australia, the Gaelics in the Outer Hebrides, coastal Peruvian Indians, the cattle tribes of Africa, and the Swiss in the Loetschental Valley. They all had special nutrition programs and special foods before insemination and during pregnancy.

The effects of poor peri-natal nutrition have been easily demonstrated in animal research. For example, rats given a vitamin E-deficient diet have a longer gestation and their offspring develop slowly, are thin and undersized, have thin skulls, and changes in the quality of the hair. Vitamin E seems to be connected with proper pituitary development. One interesting study of vitamin A deficiency peri-natal makes several points. A litter of pigs was born blind to a farmer who gave them inadequate nutrition. The blind pigs and the mother were then fed high amounts of vitamin A and a generally healthy diet. When a male blind pig from this litter mated with the same pig mother who produced him, they produced all normal piglets. If the blindness had been from hereditary causes, mating the blind pigs with each other and with the mother would have produced some blind pigs even if adequate

vitamin A had been available. This experiment again makes the point that the nutritional strength of the germ plasm plays a major part in creating normal offspring. An interesting aside to vitamin A deficiency is, according to Dr. Price, associated with impacted third molar teeth. His findings show that in indigenous cultures there is no problem with the third molar or wisdom teeth such as we are experiencing in our modern American culture.

The main purpose of this data and the whole chapter, as I said earlier, is to show that *physical health as well as brain function are affected significantly by the peri-natal health of the mother*. A weakened germ plasm of both parents and poor prenatal health and nutritional status of the mother affects both the mental and physical state of the children. We as conscious eating and living parents have the opportunity to make a large impact on the quality of physical and mental health of our biological children. We can't easily control the irresponsible use of pesticides and herbicides, irradiation exposure from nuclear plants and food irradiation plants, and other environmental toxins, but we can choose to eat high-quality, natural, whole, raw, and organic foods in our diet.

What Can Be Done to Reverse This Process?

IN OUR SOCIETY problems such as hyperactivity and early-onset addictions among children, as well as depression, addictions, and anxiety among adults who have depleted their brain biochemistry from stress, poor nutrition, and/or drugs, *can be reversed*. In my clinical experience at the Tree of Life Rejuvenation Center, many of these problems can be treated effectively with specific replacement supplements and a change from highly processed, fast, frozen, junk, high-pesticide and -herbicide, and microwaved foods to a whole, natural, organic, raw-food diet. Even those born with altered neurotransmitter pathways and function can receive significant help by adopting or returning to a healthy diet and using certain supplements. The exciting news is that much can be done to reverse the process of physical and mental deterioration resulting from one's own poor diet and that of one's parents. There is even more we can do to prevent it. It is helpful to know there are simple ways using a conscious eating approach. *What we eat affects the quality of our physical health, the nature of our thoughts, and the very structure and integration of our brain tissue and that of the next generation.*

Preview of Chapter 9

THE NEXT STEP IN UNDERSTANDING the impact of diet on our mental and physical states involves the subtle brain damage that manifests as neurotransmitter deficit. This deficit creates a world of addiction as people with an addictive brain attempt to feel better (i.e., self-medicating with food, alcohol, sex, etc.). A holistic addictive-brain model follows that allows a new look at healing depression, alcoholism, eating disorders, and other addictive-brain disorders.

- I. State of our society
- II. Neurotransmitters
- III. Stress
- IV. Neurotransmitter model
- V. Holistic addictive-brain model
 - A. Applied to depression
 - B. Applied to alcoholism
 - C. Applied to eating disorders
- VI. Lover's electron diet and way of life



The Addictive Brain

AFTER A LULL IN THE LATE EIGHTIES, drug usage is apparently on the upswing again in the US. Americans consume five billion tranquilizers per year. One-third of all US high school students binge-drink every two weeks, and 100,000 children ages ten and eleven get drunk weekly. Four hundred fifty million cups of coffee are drunk every day, and 2.7 gallons of alcohol per person are imbibed each year. About 2.2 million people in the US use cocaine once a week. The national cost for alcohol and other drug abuse is approximately \$238 billion annually. More than 15 million people experience problems as a direct result of alcohol use. Nearly half the violent deaths from accidents, suicide, homicide, and traffic fatalities are alcohol-related. Among young alcoholics the rate from suicide, accidents, and cirrhosis of the liver is ten times normal. Alcoholics die approximately twenty years sooner than the population average. Approximately forty million spouses, children, and close relatives suffer from the destructive energy of alcohol abuse. In 1986, 27,000 people died from diseases associated with alcohol abuse, including liver, cancer, and heart disease. We are talking about a significant social plague.

The average age of drug addiction is getting lower. *The New York Times* reported three studies concerning children. One showed that Prozac prescriptions for children between the ages of six and twelve jumped 300% in 1997 over the previous year. More than a half million children were taking antidepressants in 1997. More than 200,000 children were taking the anti-depressant Prozac in 1997, another 200,000 children were taking the antidepressant Zoloft, and 100,000 more children were taking the antidepressant Paxil. Only 1% of children in the US from ages two to nineteen met the federal recommendations for a healthy diet. This so-called healthy diet includes 10% of calories from fat and artificially added sugar. Our youth exceed this unhealthy recommendation with an average of 40% of their diet from fat and white sugar. There is also an escalating problem with childhood obesity. I am certain the problem is not from genetics.

Although the exact connection between all addictions and physical and mental degeneration secondary to poor nutrition is not fully understood, to me there seems to be an obvious relation. In this chapter we explore this connection and potential ways to heal our culture's downward health spiral.

In order to more fully understand the issues of addiction we must go beyond traditional moral and psychological approaches. Drug abuse has long been seen as a complex psycho-social-spiritual phenomenon for which there are many theories but few real answers in terms of new treatment and prevention in the last forty years. In 1984, eminent Harvard psychiatrist Dr. George Valliant studied more than 650 young men in hopes of finding traits that predict alcoholism. He did not find any evidence to support the social theory that personality disorders predispose a person to alcoholism. Instead, he found that it was more likely the use of alcohol which causes the personality alteration. Even sociopathic behavior was found to be a consequence and not a cause of alcohol abuse. His findings bring into question the sociological, moral, and spiritual theories of the cause of alcoholism. In these popularly held theories, alcoholism is thought to be a moral deficiency problem, a sociological issue, or the result of a spiritual deficiency—depending upon which theory is chosen.

Biological Approach to the Addictive Brain

IN THE LAST FEW YEARS, some exciting breakthroughs in biological research have opened new doors for prevention and treatment of addiction. While not ignoring the psycho-social-spiritual approach, the following discussion focuses on the biological understanding of the problem of addiction.

Alcohol is the most studied drug and constitutes a model for understanding many other addictions, including cigarette, coffee, sugar, carbohydrate, gambling, and sex addictions. For alcoholism the prevalent rate for men is five times higher than that of women. For other drug abuse the rate for men is two to three times that of women. This begins to point us in the direction of the genetic aspects of alcoholism and their biological ramifications.

In one study it was found that in *identical* twins, if one twin is alcoholic the chance of the other twin being alcoholic is four times greater than it is if one *fraternal* twin is alcoholic. This directly suggests a strong genetic component, since identical twins have the same genetic makeup while fraternal twins do not. One study of three thousand adoptees in Sweden showed that the rate for alcoholism in those with one biological parent who was alcoholic was three times greater than among adoptees who did not have a biological parent who was alcoholic. In a reverse study, it was found that children whose biological parents were not alcoholic, but who were raised in a home in which the stepparents were alcoholic, did not have a higher rate of alcoholism than the normal population. A study by Goodwin in 1973 compared 133 sons of alcoholics raised by parents who were not alcoholic to a similar group of boys whose biological parents were not alcoholic. The sons of alcoholics had an alcoholism rate three times greater than that of biological sons of nonalcoholic parents. A genetic study done at UCLA found that the sons of recovering alcoholics had neurocognitive defects like their fathers'. It was also found that these sons of alcoholic fathers had a serious risk at an early age of developing cravings for addictive drugs such as nicotine, marijuana, and alcohol. The data suggested that sons of alcoholics had psychomotor, neuroelectric, and hormonal differences from that of control groups of sons of nonalcoholics.

The closer we look at the problem of addiction, the closer we come to the idea that there is a biologically altered brain and that this is the prime cause for addictions. It is my hypothesis that the biologically altered brain involves an interface of four major forces: genetic forces, interrupted genetic forces from a weakened germ plasm of parents, the results of poor prenatal nutrition, and environmental forces. The degenerating environmental forces include poor diet. In the infant, child, and adult stages, mental stresses and physical stresses, including an increasing amount of toxins and allergy-causing chemicals in the environment, add to the problem.

In 1990 Kenneth Blum, Ph.D., and Ernest Noble, M.D., found at the D2 dopamine receptor gene site a less-common form of the gene called the Ai allele. This less-common form of the D2 receptor occurred in a higher percentage in the DNA of alcoholic brains than in the DNA of nonalcoholic brains. This uncommon allele was found in 69% of alcoholic brains as compared to 24% in the nonalcoholic brains. In the neurotransmitter-pleasure-reward cascade in our brains, dopamine plays an extremely important role. When our reward cascade is working well, we have a sense of pleasure and ease; when it is not, there may be anxiety, cravings, and a sense of discomfort. Noble and Blum found that those with the Ai allele had one-third fewer dopamine receptors in their brains. They then analyzed data from ten independent studies in the US. With a statistical significance of ten million to one, these researchers found that the Ai allele of the D2 receptor gene was associated with severe alcoholism and other forms of drug abuse. The implications for a genetic association for alcoholism are significant. There are approximately twenty-nine million children of alcoholics in the US. Their chances of developing alcoholism are at least several times greater than children of nonalcoholics.

Research by David Comings, M.D., with eight hundred fifty patients found the D2A1 allele present in 40 to 55% of patients with Tourette's Syndrome, attention deficit hyperactivity disorder (ADHD), autism, and post-traumatic stress disorder. These researchers hypothesized that the D2A1 gene was not the major cause of any of these disorders, but rather it appeared to play a role in the degree of expression of these disorders. They found (as I also believe) that this gene is related to addictive and impulsive behavior and susceptibility to stress.

There does seem to be an overlap between the occurrence of ADHD and alcoholism. The D2A1 allele is one of the connecting links. Studies suggest that a significant number of children with ADHD develop problems with alcohol and drugs. About one-third of alcoholics meet the definition of ADHD and have a history of childhood ADHD.

Role of Stress

THE ROLE OF STRESS IN THIS PROCESS supplies some significant pieces to the puzzle. When a healthy individual is experiencing a sense of well-being, a “normal” amount of opioids or endorphins is present in the brain. The most common of these opioid neurotransmitters is called enkephalin. Under stress the level of opioids/endorphins drops significantly. The mechanism for lowering the opioid level involves the release of enkephalinase, an enzyme that destroys the endorphins. So under stress, enkephalinase release is increased.

This is part of a normal coping mechanism, because when opioids drop a sense of urgency develops. This sense of urgency helps to motivate the person to get the job done, whether it is a response to an emergency, going to work, or doing any specific task requiring alertness, concentration, and focus. The low opioid output causes an increase in the dopamine output, which heightens the person's clarity of thought and instinctive reactions. The high dopamine also decreases serotonin output and decreases the ability to sleep. The low serotonin causes norepinephrine and GABA (gamma amino butyric acid) to increase, which enhances memory access and increases anxiety. The increased GABA reduces opioid availability and thus further increases dopamine output.

When stress passes in a person with normal endorphin functioning, the endorphins return to their normal level and the sense of well-being is regained. Some people, however, are not born with a normal endorphin system. They suffer throughout life from a low endorphin output and consequently a sense of urgency, internal stress, discomfort, and “disease.” With the addition of modern levels of stress, their endorphin levels decrease even further. Some researchers estimate that the amount of stress in our society doubles every ten years.

It is my opinion that lack of ability to produce adequate opioids can be partially explained by the brain injury associated with weak germ plasm from both parents—encompassing existing genetics, a poor pre-pregnancy nutritional status, and drug addiction (of both parents), as well as poor prenatal nutrition of the mother, especially if the mother is taking drugs while pregnant. This fits with the data from Weston Price's research showing that up to 97% of juvenile delinquents studied have altered facial and dental arch structures indicative of prenatal injury (see Chapter 8). The prenatal injury in the case of low endorphin output is interference in the genetic expression of the ability to produce opioids; this results in children with a diminished ability to produce enough opioids to (1) feel calm and at peace, (2) be without a prevailing sense of urgency and (3) be able to regain a sense of well-being following stress. This hypothesis is supported by research showing that children of alcoholics have a lower plasma beta-endorphin level. It is also supported by the Pottenger ten-year cat experiment (see Chapter 8) showing deteriorated behavior in the second and third generation of cats born from parents with poor nutrition. In particular, the cats demonstrated behavior patterns of increased anxiety, hostility, and lack of sociability. Similarly, in experiments I mention in Chapter 30, “Nutrition for Pregnancy,” rats born from parents who were put on a poor-prenatal and poor-germ-plasm diet became hostile and irritable.

In individuals with low opioid production and increased environmental stress there is a tendency to enter into addictive habits, thereby increasing opioid production for a temporary sense of well-being. An addictive habit may be continuous heavy exercise, which produces the endorphin high, or perhaps eating, gambling, cigarette, or sex addiction, all of which increase endorphins; or it can be the use of opiate drugs such as heroin, or opiate-stimulating drugs such as marijuana, cocaine, or a variety of others. Research with marijuana has located specific tetrahydrocannabinol (THC) sites in the brain as well as natural substances within the brain similar to THC. Researchers have found that marijuana augments dopamine activity, as is true for cocaine, amphetamines, heroin, and morphine.

Alcohol gives significant opioid relief but in a slightly different way. When alcohol is ingested it is metabolized to tetrahydroquinolines (TIQs). These TIQs preferentially bind to one or more opioid receptor sites. They actually have the capacity to displace enkephalins and endorphins from these sites. The TIQs act like opioids and induce a sense of well-being, peace, and ease. They also create a feedback-system loop which decreases enkephalin synthesis. In addition, alcohol use increases the level of enkephalinase in the system, further decreasing levels of natural opioids available to us. Research has shown that the natural opioid activity in chronic alcoholics is as much as one-third less than normal. One study by Genazzani in 1982 found that the beta-endorphin level in the cerebrospinal fluid of twenty-nine chronic alcoholics was approximately two-thirds less than the average nonalcoholic person. Even drinking a four-martini lunch can decrease the immediate amount of natural opioids and supporting neurotransmitters. Research with alcohol-preferring mice showed that they had a lower level of enkephalins.

Research also showed that when normal mice were stressed, they tended to prefer alcohol to water immediately after the stress. Presumably this is to reestablish a sense of well-being via the production of TIQs.

Chronic stress in otherwise normal individuals can also greatly decrease the level of endorphins. In sustained stress the endorphin release seems to get reset at a lower level; without proper treatment to remedy the situation, such people stay at a level of chronic depletion and anxiety. In the battle of Stalingrad, Russian soldiers resisted block by block. The rate of hypertension in this group of individuals rose from 4.1% to 64%. It did not drop after the battle ended, and most of the soldiers involved died about twenty years sooner than their normal life expectancy. Research by Branchey, Davis, and Lieber in 1984 found that in Korea and Vietnam, twice as many combat veterans were either alcoholics in remission, alcohol abusers, or active alcoholics when compared to noncombat veterans. The rate of alcoholism increased proportionately to the time in combat. In 1983, McGivern and associates showed that chronic stress can cause a chronic deficiency of beta-endorphins in the corpus striatum and pituitary of laboratory animals. This study helps make the connection between chronic stress, lowered endorphins in the brain, and the turning toward alcoholism in an effort to relieve the stress and create a sense of well-being.

A poor diet that does not supply sufficient endorphin-neurotransmitter precursors and co-factors may also decrease the amount of natural opioids in the body. A diet high in alcohol not only directly decreases the natural opioids, but also decreases their production because of the poor nutrition from which a chronic alcoholic often suffers.

A Neurotransmitter Model of the Addictive Brain

IT IS TIME TO PUT TOGETHER A MODEL of neurotransmitter brain function that helps us best understand the neurochemistry of the addictive brain and its relationship to emotions and a state of well-being. Neuro-transmitters in the normal brain interact in synergistic, complex patterns that produce a variety of mental and emotional states. In this discussion we are looking at the neurochemistry patterns that create a state of well-being, no stress, ease, peace, and inner contentment. This synergy is more complex than simply four neurotransmitters released in a linear sequence. These broad strokes, however, create the essence of a conceptual model for us. The flow starts with an ample amount of serotonin in the hypothalamus and involves several centers in the meso-limbic system of the brain. Serotonin stimulates an opioid called enkephalin, which is released in the hypothalamus to inhibit the release of GABA in the part of the brain called the ventral tegmental region. The inhibition of GABA allows the release of dopamine in the nucleus accumbens and in the hippocampus region of the brain. The dopamine then activates dopaminergic receptors, which creates a feeling of well-being. The inhibition of GABA also causes a release of norepinephrine in the hippocampus area of the brain, amplifying feelings of contentment and well-being. Proper regulation of the opioids with a balanced release of the enkephalinases is part of the regulation of this system.

When there are enough neurotransmitters and opioids, these pleasure centers are activated in a way that creates well-being. When there is a deficit somewhere in this complex system, people experience anxiety, urgency, angst, discomfort, irritability (with a consequent inability to cope with stress), aggressiveness, anger, hyperactivity, and the potential to experience low self-esteem. If pleasure-center stimulation is too low for comfort, one may be driven toward addictive behaviors in the attempt to both hyperstimulate the dopaminergic receptors and raise endorphins. Such people become driven to compulsive behaviors including drugs, sex, overeating, and gambling. Compulsive behaviors may occur at an early age, along with other forms of deviant behavior in childhood, in an effort to relieve the discomfort. Affective disorders, especially depression, may also develop. Psychosis is another variation of the breakdown of this reward synergy. ADHD, Tourette's Syndrome, and post-traumatic stress disorders are also linked to this system.

A look at ADHD and Tourette's may deepen our understanding of this neurochemistry synergy. ADHD is the most common childhood behavior disorder. It affects 5 to 8% of boys and 2 to 4% of girls. About half of the children have significant symptoms into adulthood. Children with ADHD have a higher percentage of learning disorders and anxiety. Adoption and family studies show that ADHD is common in relatives of ADHD children. Significantly more ADHD children develop drug and alcohol addictions. One Swedish study showed that children with more severe ADHD symptoms had a higher percentage of alcoholism than ADHD children with less symptoms. Studies also showed that a higher percentage of ADHD relatives experienced depression and alcoholism than relatives of non-ADHD children. There is some obvious genetic overlap. We can hypothesize a gene that expresses as ADHD, alcoholism, depression, anxiety, and learning disorders. This fits well with the model. Tourette's Syndrome (TS) is also connected with this gene sequence hypothesis. Approximately 50 to 85% of those with TS have ADHD. People with TS also experience problems such as obsessive-compulsive disorders, learning disorders, depression, anxiety, sleep disorders, anger, irritability, and addictive behavior, with more drug and alcohol use in men and eating disorders in women.

There may be genetic changes that compromise other major neuro-transmitter activity. Serotonin is one of the main brain neurotransmitters. It seems particularly related to the functioning of the limbic system and emotions, as well as the prefrontal lobe areas associated with concentration, thinking before acting, and motivation. It is no surprise that Dr. Comings' research found a significant decrease in serotonin levels in a study of 1440 TS and ADHD patients. He also found a significant decrease in tryptophan levels in these patients. Tryptophan is an amino acid precursor of serotonin. In my work with people with depression, anxiety, and drug and alcohol addictions, serotonin/tryptophan deficiencies are common. This overlap of low serotonin in all these syndromes suggests the possibility of a gene associated with serotonin production. I find that a high percentage of people with tryptophan and serotonin deficiency benefit tremendously from supplementation with tryptophan and 5-hydroxy-tryptophan. In addition, I find that many of these people are deficient in phenylalanine or tyrosine, the precursors to dopamine and norepinephrine. I also frequently find low concentrations of GABA.

The point here is that the brain neurochemistry depends on a critical balance of neurotransmitters and opioid neurotransmitters. In many people with depression, anxiety, addictions, TS, and post-traumatic stress disorder this

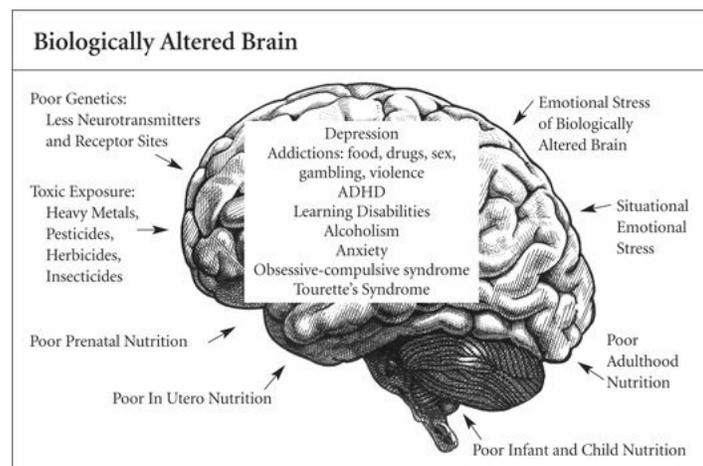
balance is disturbed. There may be separate genes that affect serotonin, dopamine, norepinephrine, and GABA production, and their expression may also be affected by genetic defects in the dopaminergic receptors, as seen with the D2A1 allele. The neurotransmitter deficiencies are a critical aspect of the addictive brain problem, but there is more.

Holistic Addictive-Brain Model

IN ORDER TO BRING THE NEUROCHEMISTRY back into harmony we need to repair the results of chronic stress, poor diet, and mental and physical stress from chronic drug and alcohol use. Perhaps there is weak genetic expression and/or interrupted genetic expression because of poor germ plasm resulting from the poor nutrition of both parents; or damage to the brain and nervous system from poor prenatal, lactation, and post-natal nutrition. A total holistic approach is needed that includes treating the emotional and psychospiritual aftereffects of these biological problems.

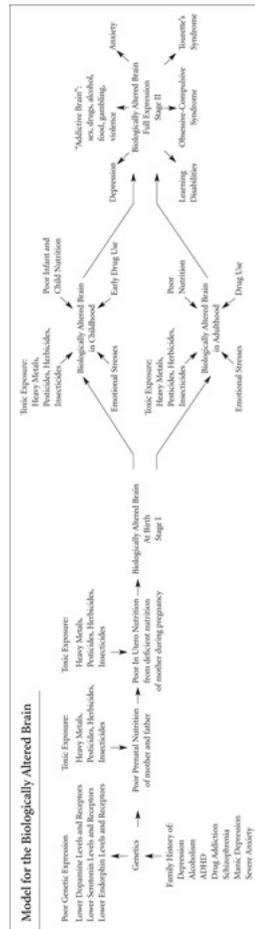
In summary, we have a working model for beginning to significantly ameliorate a variety of general problems such as compulsive activity, depression, anxiety, ADHD, TS, post-traumatic stress syndrome, juvenile delinquency, some psychoses, a variety of addictions to food, sex, drugs, and alcohol, and more.

Using the neurotransmitter models developed by others, I have created a complete holistic model to heal the addictive brain and all that is associated with it. My model involves the expression of at least two sets of hypothesized synergistic genes: one set for serotonin production and receptor sites, and the other for dopamine production and receptor sites. There are probably additional gene sets for the expression of opioid-neurotransmitter production and receptor sites, enkephalinase production, GABA production and receptor sites, and other neurotransmitters. These genetic tendencies, which are the “hard wiring of the computer,” are significantly impacted by the quality of the nutrition of both parents in terms of its effect on germ plasm health and prenatal nutrition for the developing nervous system and brain in utero. The quality of the germ plasm and prenatal nutrition can significantly impact the brain function of a newborn and set the stage for the full, partial, or zero expression of serotonin or dopamine neurotransmitter defects or other neurotransmitter genetic tendencies. Brain function is later impacted by infant, childhood, and adult nutrition. Many environmental toxins also play a role in the expression of disease and the addictive brain syndrome (with its concomitant drug and alcohol abuse, depression, anxiety states, etc.). These toxins include pesticide and herbicide exposure, both in the germ plasm, in utero, and post-birth; excess estrogen in milk and flesh products; radioactive fallout in utero and at birth. Also relevant are emotional stresses on the pregnant mother, and a variety of physical stresses on the mother such as insufficient vitamins, minerals, and essential fatty acids ([EFAs] like the long-chain omega-3 fatty acid, and docosa-hexaenoic acid [DHA], which is absolutely critical for normal brain-tissue development). The input of certain amino acids in a synergistic way can significantly improve neurotransmitter levels and positively affect the healing of this syndrome. Each neurotransmitter has a specific function and is affected by a variety of foods and drugs. I list the main ones below. I use these substances synergistically because I found that in cases of alcoholism, recovery from drug usage, and depression, people are often deficient in most, if not all, of these substances.



• **Endorphins** create a feeling of pleasure, decrease cravings, and enhance

feelings of love, laid-back joy, and euphoria. In high enough amounts they create ecstasy. Endorphins may also give relief from physical and psychological pain. Deficiencies of endorphins create a feeling of anhedonia (difficulty experiencing pleasure) and inability to give or receive love. Heroin, marijuana, alcohol, sugar, and tobacco can affect neurotransmitter sites. *D-phenylalanine* inhibits the activity of enkephalinase and therefore increases endorphin levels.



- 5) **Serotonin** helps maintain emotional stability, self-confidence, and a sense of well-being, and decreases alcohol and carbohydrate cravings. A deficiency of serotonin creates depression, a tendency to suicide, obsession, anxiety, insomnia, sweet cravings, and irritability. Sugar, marijuana, the drug “ecstasy,” and tobacco affect the serotonin neurotransmitter site. *L-tryptophan* and *5-hydroxy-tryptophan* are amino acid supplements that enhance serotonin production in the brain.
- 5) **GABA** (gamma amino butyric acid) creates calmness and relaxation and has anti-anxiety effects, and in some cases helps with insomnia when the mind feels too active. When there is a deficiency, the symptoms are free-floating anxiety,

fearfulness, insecurity, insomnia, tendency to panic attacks, and cravings. Valium, alcohol, marijuana, and tobacco affect GABA function as a neurotransmitter. The supplements that increase the amount of GABA in the system include *L-glutamine* and *GABA* itself.

- **Norepinephrine** gives energy, motivation, ambition, power, alertness, and a feeling of well-being. A deficiency seems associated with lethargy, lack of energy, melancholy, and depression. Cocaine, speed, caffeine, tobacco, marijuana, alcohol, and sugar affect norepinephrine's neurotransmitter function. *L-tyrosine* and *L-phenylalanine* are precursors to norepinephrine.
- **Dopamine** is the prime activator of the pleasure centers. It creates a feeling of well-being, ease, love, contentment, and inner peace. It decreases cravings. A deficiency creates angst, anxiety, depression, irritability, a sense of urgency, and lack of a sense of well-being. Cocaine, speed, marijuana, alcohol, tobacco, and sugar all interfere with its function as a neurotransmitter. *L-tyrosine* and *L-phenylalanine* are natural precursors. L-phenylalanine also seems to increase the number of dopamine receptors, a fact that is important because many people are born with a diminished A2D1 allele, which means that they have about one-third fewer dopamine receptors.

We can apply this holistic treatment model to the wide variety of aspects of the addictive-brain syndrome. I would like to choose depression, alcoholism, and eating disorders to illustrate how the model works.

Holistic Addictive-Brain Approach to Depression

DEPRESSION IS A MAJOR PROBLEM IN THE US. More than forty million people are depressed and about fifteen million are clinically depressed. That means there are millions who have lost their ability to fully enjoy life. Using a holistic approach for the treatment of depression, one thing is sure-physiological deficiency causing depression cannot be remedied by Prozac or even the herb St. John's Wort. St. John's Wort inhibits serotonin breakdown and enhances serotonin receptor-site activity. The herbal action of St. John's Wort enhances serotonin levels by artificially keeping the inter-neuronal levels high like Prozac does, but without the side effects of Prozac. Neither substance speaks directly to the core of the problem, although either may ameliorate it.

My approach to depression is holistic in that I look at all the contributing factors. A red flag goes up if the person has a parental history of drug or alcohol usage or any mental or emotional disorder, especially depression. There is a very high correlation between such a history and neurotransmitter deficiencies. Sometimes the parents' neurotransmitter-deficiency patterns are identical to the children's. I ask about the prenatal nutrition and the postpartum status of the mother. If there is a history of postpartum depression in the person's mother or in the person I am seeing, I think about general nutritional deficits, particularly DHA and other omega-3 or omega-6 EFA depletions. I look for nutritional deficiencies in general, and vitamins B12, B3, B6, and folate acid in particular. Any of these can be a contributing factor to depression.

Certain medical conditions may also contribute to or even be a primary cause of depression, such as iron deficiency anemia, hypoglycemia, diabetes, heavy metal toxicity, hypothyroidism, allergies to food or the environment, PMS, post-viral flu syndrome, chronic fatigue, extended postpartum syndrome (more fully explained in Chapter 30, "Nutrition for Pregnancy"), post-hepatitis, and heart and lung diseases. Certain drugs can cause depression, including beta-blockers, anti-hypertensives in general, anti-inflammatory drugs, birth control pills, and excessive use of sedatives, tranquilizers, alcohol, cigarettes, caffeine, and anti-histamines.

I also apply the principles discussed in Chapter 3, "A Revolutionary Breakthrough in Personalizing Your Diet," creating an optimal brain blood pH of 7.46 by means of diet. It is amazing how dramatically fast a depression may disappear by simply changing a person's diet from a fast-oxidizer high-protein diet to a slow-oxidizer high-carbohydrate diet (or vice versa) to achieve optimal brain cell energetic metabolism and pH. To this dietary change I add the synergistic mix of amino acid neurotransmitter precursors to build or rebuild neurotransmitter function in the brain.

Exercise and lifestyle changes are extremely important. Research shows that exercise alone can give relief from depression in 80% of cases. In comparison, Prozac has about a 65 to 70% success rate. The underlying supportive matrix to the whole program is the lover's electron diet and way of life. I discuss this in detail at the end of this chapter; it is effective in raising the general endorphin level. Once the whole program is in place on the physical level, I examine the emotional and psychospiritual issues that may be involved in the depression. I wait on this approach because it amazes me how many depressions clear when the physiological approach is applied. Sometimes, however, I will start with an emotional approach when it is obvious to me (as a psychiatrist with a deep background in family dynamics and transpersonal psychology) that psychospiritual issues are the predominant ones to be addressed. My success rate with this approach to depression is greater than 90%.

Addictive-Brain Model Applied to Alcoholism

THE APPROACH TO ALCOHOL PROBLEMS is similar to that of depression. The prime issue is that alcoholics are not producing enough opioids and other neurotransmitters to keep their pleasure centers sufficiently activated. People lose their cravings for alcohol or never develop them when their endorphin receptors are filled with their own natural endogenous opiates. Alcohol is used in an effort to create a feeling of well-being. The traditional twelve-step programs are a great support to sober alcoholics, yet we find that the suicide rate among sober alcoholics and active alcoholics is about the same, and the mortality rate among treated and untreated alcoholics is about three times higher than the general population. One reason for this is that sober alcoholics continue to suffer from the causes that initially brought them to alcohol, such as depression, a sense of not feeling right, anxiety, insomnia, irritability, and a lack of joy. Their sobriety, of course, protects them from the disaster of chronic alcoholism, but not from the pain of these other issues.

As mentioned, alcohol activates poorly functioning pleasure centers and gives a sense of joy and well-being. The prime mechanism for this is the conversion of ethanol into acetylaldehydes and then TIQs. These TIQs activate the opiate receptor sites and create a synthetic euphoria. They actually interfere with the normal binding of the endogenous opiates. Long-term natural endorphin production is inhibited in two ways: The filling of the opiate receptor sites by the TIQs creates a feedback signal that no new opioids need to be produced by the pre-synaptic neuron. These TIQs then stimulate the production of enkephalinase, which further breaks down the natural endorphin supply. The individual becomes more and more dependent on alcohol for a sense of well-being.

Alcohol induces dopamine release on an acute basis, but the chronic use of alcohol leads to a decrease in dopamine content in the brain tissue. Low serotonin is a common finding of mine. This is supported by research which shows that chronic alcohol use decreases hypothalamic serotonin output in rodents. This is further supported by the observation in humans that a decreased tryptophan, which is a precursor of serotonin, has been linked with blackouts. A low serotonin level or dysfunctional serotonin level has been linked to decreased enkephalin utilization and release in rat studies.

Alcohol also affects GABA function. Short-term use of alcohol stimulates GABA activity and transmission in the brain, but as with dopamine, chronic alcohol use diminishes GABA function. It decreases GABA binding and reduces the firing of GABA neurons in the substantia nigra part of the brain. This in turn stimulates the release of dopamine from the substantia nigra. During the withdrawal period of early recovery, there is an increase in the delta-enkephalinergic receptors, potentially leading to a supersensitivity response in the opioid receptors. This may explain the protracted and increased sensitivity to alcohol during the recovery period. It is essential that alcohol not be consumed during this recovery time.

A primary part of the treatment of chronic alcoholism is to increase the endorphin levels, repair the neurotransmitter pathways, replace essential mineral and vitamin co-factors, and increase the EFA levels (especially the DHA), which are depleted by alcohol usage. The treatment for the amino acid neurotransmitter precursors usually involves almost all of the precursors. DL-phenylalanine is particularly important because the D-phenylalanine blocks the breakdown activity of the enkephalinases and thus indirectly raises the endorphin level. The L-phenylalanine increases the amount of dopamine and norepinephrine in the system and also increases the amount of dopamine receptors.

Additional treatment involves replacing all the nutritional deficiencies caused by chronic alcohol intake, with special focus on the B vitamins and zinc. Hypoglycemia exists in about 88% of alcoholics and must also be addressed. A certain number of alcoholics have a gene defect for the conversion of essential fatty acids to prostaglandin-1 (PGE1). It appears mostly in those from Ireland, Scotland, and the Netherlands. PGE1 has specific anti-depressant effects. Alcohol helps this conversion take place and thereby treats the depression. The problem is that these people do not absorb the EFAs well, thus with chronic alcohol use they become deficient in EFAs because the conversion is happening faster than the raw material of EFAs can supply. The gamma-linolenic acid (GLA) in omega-6 EFA (can be found in primrose oil) is helpful in solving this problem. One study in Scotland involving two groups with this defect—both with a 50% lower than average EFA—showed an 83% success rate in sobriety when given primrose oil versus 28% with the control group.

Allergies are another consideration in alcoholics. Seventy-three percent of alcoholics have allergies, especially to wheat, dairy, rye, potatoes, and grapes, because most alcohols are made from these five items. Fifty-five percent

have environmental allergies, especially to gasoline, plastics, paints, and art supplies. When such people are exposed to these allergens there is a tendency to drink alcohol as a way to cope with the allergies.

In summary, my approach at the Tree of Life Rejuvenation Center has four parts. The first is to avoid detrimental substances such as alcohol, drugs, sugar, nicotine, and caffeine. The second is to build up endorphins and rectify neurotransmitter deficiencies that are genetically present or environmentally caused by intake of alcohol and drugs, and exposure to environmental toxins and allergens. Third is to replace all nutritional deficiencies and treat any other disorders directly related to alcohol intake, such as hypoglycemia and *Candida albicans*, which loves to grow on alcohol. Usually the whole endocrine system needs to be built up. Most of my work is with alcoholics who have already stopped using alcohol for several weeks, months, or years and want to go to the next level of repair. I do some work with alcoholics who have just stopped the alcohol. The Tree of Life Rejuvenation Center is not an acute alcohol detox center. It is for people who want to take the next step in freedom from their addictions. The fourth component is the psy-chospiritual support and healing every person seems to need.

One of the most important aspects of psychospiritual support is introducing people to the lover's electron diet and way of life with practical on-site training in all aspects. I recommend the traditional Twelve-Step programs when a person returns home until that person is grounded in the new lifestyle and no longer feels cravings or depression.

The results when compared to traditional programs which use no nutritional input and often allow people to continue on cigarettes, white sugar and flour, coffee, and other junk foods are quite impressive. One study reported in *Seven Weeks to Sobriety* by Joan Matthews Larson, Ph.D., showed that 92% of alcoholics treated by a primarily nutritional, supplement, and neurotransmitter-building approach were abstinent after six months and 74% remained abstinent three and one-half years later. These are outstanding results. To put this in perspective, a review of 617 alcohol-treatment programs showed the average abstinence rate at one year to be only 25%. This is the same rate for people who quit without using any program. In one 1980 study, 922 men in a traditional treatment program were followed for four years. After six months 28% remained abstinent, 21% were abstinent at one year, and at four years only 7% remained abstinent. This is essentially one-tenth as effective as the nutritionally based program.

The results using the nutritional approach are impressive for other drugs as well. One study showed a significant difference in dropout rate for cocaine addicts—from 37.5% to 4.2%—when people were using this neurotransmitter approach only. This is about nine times more effective than non-nutritional approaches. In another study incorporating a control group of addicts, there was a four-times-greater relapse rate among those not treated with the neurotransmitters. By applying the neurotransmitter approach and some nutritional supplementation, one study showed that 50% of ADHD patients received enough relief to stop all medication.

Addictive-Brain Model and Eating Disorders

EATING DISORDERS ARE THE MOST COMPLEX TO UNDERSTAND. Food has many psychospiritual meanings that need to be directly addressed. The general approach is to screen for conditions described in the above discussion of depression and alcoholism, such as hypoglycemia, hypothyroidism, allergies, and candida. My impression is that the general mechanism is approximately the same as depression and alcohol abuse. In one study, histories of people with eating disorders include a history of family obesity in 70% of the females and 56% of the males. In the same study, about 50% of the people had a family history of chemical dependencies. The same type of mechanisms that result in craving alcohol and other drugs secondary to neurotransmitter and opioid neurotransmitter deficits seem to be at play. The main neurotransmitters involved in eating behavior include dopamine, norepinephrine, epinephrine, serotonin, and GABA. There is also an interplay of the pancreatic polypeptides, opioids, and various gut and brain peptides. Norepinephrine, GABA, the opioids, neuropeptide Y and peptide Y, and galanin will stimulate appetite. Dopamine, norepinephrine, serotonin, cholecystokinin-8, neurotensin, calcitonin, glucagon, and corticotrophin-releasing factor are associated with decreasing appetite. Each of these may stimulate or decrease a certain appetite. For example, chronic stimulation of norepinephrine and neuropeptide Y can stimulate carbohydrate craving. If the dopamine receptors are blocked, protein craving is increased. Serotonin suppresses carbohydrate cravings.

My general approach is to individualize the diet according to the principles suggested in Chapter 3, "A Revolutionary Breakthrough in Personalizing Your Diet" and to individually build up the deficient neurotransmitters and opioids. Glutamine, tryptophan, 5-hydroxytryptophan, and DL-phenylalanine are particularly important. Removing all allergic foods from the diet and treating the commonly found hypoglycemia and candida are also important, along with proper bowel cleaning and repair of the digestive system, including treatment of dysbiosis or bacterial imbalance in the bowel. Many people with eating disorders suffer from permeable bowel syndrome in which the bowel is inflamed and foods pass through only partially digested. Often people need digestive enzyme supplementation because they are not digesting the foods they are ingesting. In addition, the best results occur when people begin a live-food diet, exercise, change their lifestyle, and begin to live the lover's electron diet and way of life.

Lover's Electron Diet and Way of Life

THE LOVER'S ELECTRON DIET AND WAY OF LIFE *is a way of living in the world in which one is filled with love for the self others, the living organism of the Earth, and the radiant infinite.* It is a way of being in the world in which our body, mind, and spirit are in a state of inner and outer peace and love. It is a conscious way of living that co-creates optimal health, aliveness, compassion, creative self-expression, and joy. It is a way in which we find our own holy rhythm and live it; a way in which we are free from all addictions and free to explore the path of our hearts. It is a diet and way of life that optimally activates our natural endorphins and opiate receptors, while building, repairing, and maintaining all our neurotransmitters at the highest level.

As you proceed further into this book you will understand the meaning of the electron diet, which is a live-food diet. A high-electron diet is what we get when we consume a minimum of **80%** live food. Eaten in the right amounts and ratios for your dietary type, this can create a feeling of well-being and lightness that helps bring a feeling of love to the body, mind, spirit, and total life. It creates an endorphin-high feeling all day long and increases the experience of the flow of cosmic energy in our lives so we feel it in a palpable and blissful way in every cell of our body.

This way of life includes meditation, regular yoga, breathing exercises, and about one-half hour or more of moderate aerobic exercise like fast walking and joyous dance five to six times per week. All these ways of living enhance the endorphin release and activation in our body-mind complex on a regular basis. I have clients who come with deficient neurotransmitters and opioid levels in their systems who, on the lover's electron diet and way of life alone, are able to create enough endorphin activation that the addictions fade and love returns to their lives. When they add a total neurotransmitter, opioid, and nutrient support program, they are consistently maintained in the experience of well-being and love.

The lover's way of life is a process of opening up to your full beingness. It involves a shift in consciousness about who and what you are and what the world you live in is. It is a waking up to a new level of awareness and joy. It is something both spontaneously achieved and involving a period of training and preparation. It is the cornerstone of my work in conscious eating and living at the Tree of Life Rejuvenation Center.

Preview of Chapter 10

FASTING IS ONE OF THE OLDEST FORMS OF CONSCIOUS EATING. Instead of eating material food, one switches over to the nectar of the Divine energy. Fasting is an integral part of the Judaic-Christian tradition, including the forty-day fasts of Moses, Elijah, and Jesus. It is mentioned seventy-four times in the Bible. In this chapter the reader is introduced to the physiology of fasting as well as its health and spiritual aspects.

I. Spiritual fasting is found in many religious traditions

II. Health aspects

A. Benefits

B. Who should not fast

C. Removing the toxic load in the cells

D. A way to find real dietary needs

III. Safety of fasting

IV. Juice fasting



Fasting Feeds the Spirit

SPIRITUAL FASTING IS CONDUCTIVE TO REST and rejuvenation on every level of mind, body, and spirit. It allows our physical bodies to turn to the assimilation of Divine or cosmic energy rather than biochemical energy.

In *The Essene Gospel of Peace, Book One* (p. 41), Jesus talks about fasting one day a week and makes this point quite beautifully:

On the seventh day eat not any earthly food, but live only on the words of God, and be all the day with the Angels of the Lord in the kingdom of the Heavenly Father ... let the Angels of God build the Kingdom of the heavens in your body ... and let not food trouble the work of the Angels in your body.

Because fasting accelerates purification of the body, it enhances the movement of all levels of energy in the body, including the spiritualizing energy. Through repeated fasting, one becomes a clearer receptacle for the assimilation of God's energy into the system. One spiritualizing effect of the fast is that the more we are in touch with the Divine energy, the easier it is for us to be motivated to live in a way that will continue to enhance spiritual development. According to respected teacher Paramahansa Yoga-nanda:

Fasting is one of the great ways of approaching God: it releases the life force from enslavement to food, showing you that it is God who really sustains the life in your body

When one fasts for spiritual purposes, one goes beyond simply stopping food intake and resting from worldly responsibilities—ideally one withdraws from everything that is toxic to the mind, body, and spirit. After the first few days of a fast, the appetite usually fades and one's attachment to food diminishes. In this larger, biospiritual context, the mind becomes free to merge into higher states of God communion. Fasting is supportive to anyone's spiritual life because until one reaches a certain level of spiritual development, the desires of the body-mind complex are often stronger than the desire for God communion. Because of these and other beneficial effects of spiritual fasting, many of the great spiritual teachers fasted, including Moses, Jesus, Elijah, Plato, Aristotle, Pythagoras, Hippocrates, Zarathustra, Confucius, Leonardo da Vinci, Gandhi, and the Essenes; some were known for doing yearly forty-day fasts. The forty-day fast was also practiced by Plato, Aristotle, and Pythagoras. Pythagoras actually required his disciples to fast for forty days before he would initiate them into the mysteries of his teachings. He felt that only through the power of a forty-day fast could the minds of his disciples be sufficiently purified to understand the profound teaching of the mysteries of life. In more recent history, Mahatma Gandhi told people to fast and purify their bodies, and regardless of their circumstances, they would find peace and joy on Earth. Gandhi is quoted as saying:

Fasting will bring spiritual rebirth ... the light of the world will illuminate you when you fast and purify yourself.

Jesus also advocated fasting for physical, mental, and spiritual transformation. In *The Essene Gospel of Peace, Book One* (p. 14) he teaches:

...the word and power of God will not enter into you, because all manner of abominations have their dwelling in your body and your spirit; for the body is the temple of the spirit, and the spirit is the temple of God. Purify, therefore, the temple that the Lord of the temple may dwell therein and occupy a place that is worthy of him.... Renew yourselves and fast. For I tell you truly that Satan and his plagues may only be cast out by fasting and prayer [also written in Mark 9:29]. Go by yourself and fast alone.... The living God shall see it

and great will be your reward. And fast til Beelzebub and all his evil spirits depart from you, and all the angels of our earthly Mother come and serve you [harmony with nature]. For I tell you truly except you fast, you shall never be free from the power of Satan and all the diseases that come from Satan. Fast and pray fervently, seeking the power of the living God for your healing.

Effect of Fasting on the Vital Force

FASTING HAS A POWERFUL EFFECT ON THE BODY as well as the spirit. It allows the vital force within to rebuild and recharge. Overall mind-body organization is increased with fasting. It is this curative force which throws off the accumulated toxins, clears the dead cells, and rebalances and rejuvenates the body. Hippocrates said:

Everyone has a doctor in him, we just need to help him in his work.

According to American health teacher and author of *The Miracle of Fasting* Paul Bragg, who was a great tower of natural, healthy living in the world:

The greatest discovery by modern man is the power to rejuvenate himself physically, mentally, and spiritually with rational fasting.

Most people can receive benefit from fasting. The exceptions are those people more than ten pounds underweight, those with severe wasting diseases such as neurological degenerative diseases and certain cancers, and pregnant and lactating women. Diabetics should have medical supervision. I generally do not recommend that people with severe hypoglycemia fast until their hypoglycemia has been stabilized, but even hypoglycemics can fast under supervision. Prolonged fasting has completely healed some people with hypoglycemia.

Fasting has been known to alleviate many diseases. It has withstood the test of time for more than 5000 years as the one sure and healthy way to lose weight. My experience with weight loss is that periodic fasting is extremely effective over time when alternated with a progressively lighter raw-food diet or simply fruits and vegetables. Raw food is excellent in helping people lose weight because it gives more utilizable nutrients with less volume of food intake. The high enzyme content of the raw food helps with assimilation, and there are no detrimental heated fats. A single fast is not nearly as effective as repeated fasts because the latter helps the person adjust to a progressively lighter food intake after the fast, as well as helps in becoming accustomed to a new set point in health. The periodicity over time allows the person to gently reprogram the body and mind to a new relationship and experience with food.

The need for supervision is greater when there is a larger toxic load. A person on a typical American diet will have more to detoxify than someone who has been on a raw-food, vegetarian diet. Fasting is an excellent method of helping people overcome addictions to food, cigarettes, and other drugs. Fasting helps because what is sometimes metaphorically called “cell memory craving” for the addictive substance is erased when toxins are removed. It usually takes five to seven days to eliminate these strong cell memory cravings. The elimination of these toxins from the body during the fast makes it increasingly easier for people to overcome their addiction to a poisonous substance. After the fast, it seems to be easier for them to eat foods that are closer to their original biophysiological needs, namely, fruits, vegetables, sprouts, seeds, and grains, et cetera.

With the toxic cell memory diminished or removed by the fasting process, one is able to get in touch with real dietary needs. The end of a fast provides a special opportunity to reorganize one's habits around a higher-quality diet. Fasting helps erase past deleterious habits and serves as an opportunity to begin a dietary program and lifestyle that is more conducive to optimal health. As Paracelsus, the great medieval physician, once said, “Fasting is the greatest remedy.”

Fasting Is Safe

WITH ALL OF ITS GOOD POINTS, one wonders why fasting has not caught on here to the extent that it has in many countries in Europe. In America there seems to be an irrational fear centered on fasting. Perhaps this fear is associated with the overabundance of food in our society. In the United States there are more people suffering from diseases of overeating than from malnutrition. It is estimated that in the US more than 80 million people are overweight. The US Congressional Joint Nutrition Monitoring Committee reported that 28% of Americans (32 million) between ages 25 and 74 were considered overweight. This includes 11.7 million who are considered severely overweight (more than 20% overweight).

Many people have created a variety of ego defenses against experiencing their feelings through their addiction to food. For many the mere mention of fasting becomes a threat. We have become a nation dependent on, and addicted to, excess. Even the natural cycle of seasonal scarcity seems threatening and unnatural to us. But the fact is, one can live healthily a long time on juices or even on water. The great fasting experts such as Airola, and the fasting clinics in Europe, point out that we can go forty days on water and a hundred days on juices without danger. At the major European clinics where hundreds of thousands have fasted, fourteen to twenty-one days are considered therapeutic and seven to ten days completely safe for almost anyone.

The fasting process actually begins after two to three days, when the body goes into autolysis. Autolysis is the process of the body digesting its own cells. In the body's wisdom, it selectively decomposes those cells and tissues which are in excess, diseased, damaged, aged, or dead. World-renowned fasting expert Dr. Buchinger, with whom I personally studied in Germany, describes fasting as "the burning of rubbish." The appropriate time for a fast to stop is when this autolysis process is completed and true hunger returns. Because autolysis is the key mechanism that produces the beneficial effects already mentioned, I define fasting as any process in which the body is encouraged to begin the process of autolysis. This usually also occurs on a juice fast.

Juice and Water Fasting

JUICE FASTING IS A FORM OF FASTING in which living-food juice supplies enzymes that further aid the cleansing process. Although there is some debate about whether juice or water fasting is better, I prefer the overall effect of the juice fast because there tends to be fewer healing crises. Since juices are high in minerals, vitamins, and enzymes which help with the rejuvenating process of the body, the juices are assimilated directly into the body without stimulating digestive enzymes. The alkalinizing properties of the juices help to neutralize the acid condition from which many people suffer, as well as the toxins being released by the body. The alkaline component of the juices helps to reestablish the alkaline reserve needed for rebuilding health in the body. Also, most people have more energy for meditation on juice than on water. The famous Max Bircher-Benner, M.D., whose raw-food clinic is the oldest in Europe, felt that raw juices contain an unidentified factor which stimulates the function of the cells to absorb nutrients and excrete toxins. Paavo Airola, Ph.D., one of the top fasting experts in America and one of my teachers, greatly prefers juice fasts for many of the above-mentioned reasons.

The Buchinger Clinic in Germany has supervised over 250,000 fasts, more than any other clinic in the world. Dr. Buchinger feels strongly that juice fasts are the “safest and give the best recovery.”

Fasting as a Form of Youthing

DURING A FAST, digestive enzymes are relieved from their digestive role and mobilized for the cleansing and rejuvenation of the body. This happens on both water and juice fasts. As mentioned, on the physiological level fasting works by rapidly removing dead and dying cells and toxins. But fasting also stimulates the building of new cells. Aging occurs when we have more cells die than are being built. “Youthing” happens when more new cells are produced than are dying. After fasting, the experience of “youthing” abounds. Senses get sharper, food tastes better, there is more energy, meditation is easier, and the communion with the Divine is enhanced. Paul Bragg describes it several ways:

Fasting clears away the little things which clutter the heart and mind. It cuts through the corrosion, renewing our contact with God.

When you fast you are working with nature. God and nature will not perform a miracle until we are willing to bring our lives and our habits into conformity with nature's laws.

Athenaeus, a Greek physician, once said:

Fasting cures diseases, dries up bodily humors, puts demons to flight, gets rid of impure thoughts, makes the mind clear, the heart purer, and the body sanctified, and raises man to the throne of God.

Rumi, the renowned Sufi poet and mystic, wrote a beautiful poem about fasting in a book called *Open Secret*, which expresses it all:

*There's hidden sweetness in the stomach's emptiness.
We are lutes, no more, no less.
If the sound box is stuffed full of anything, no music.
If the brain and belly are burning clean with fasting,
Every moment a new song comes out of the fire.
The fog clears, and new energy makes you run up the steps in front of you.
Be emptier and cry like reed instruments cry.
Emptier, write secrets with the reed pen.
When you are full of food and drink, Satan sits where your spirit should,
An ugly metal statue instead of the Kaaba [a Muslim holy rock].
When you fast, good habits gather like friends who want to help.
Fasting is Solomon's ring.
Don't give it to some illusion and lose your power,
But even if you have, if you have lost all will and control,
They come back when you fast,
Like soldiers appearing out of the ground, pennants flying above them.
A table descends to your tents, Jesus' table.
Expect to see it, when you fast,
This table spread with other food, better than the broth of cabbages.*

These words of wisdom by Paul Bragg, Athenaeus, and Rumi are clear articulations of my experiences personally and leading spiritual fasting retreats and medically supervised fasts since 1988 in various locations around the world and now at the Tree of Life Rejuvenation Center. Without a doubt, I have observed that our Spiritual Fasting Retreats are the single most powerful, transformative body-mind-spirit experiences that I have ever witnessed to support us living the sacred and joyful truth of who we really are.

“Spiritual fasting is a mystical sacrifice of body and mind that opens the heart to God.”

—Gabriel Cousens, M.D.

Preview of Chapter 11

THIS INFORMATION ABOUT ACID-BASE BALANCE is relatively new for the general health-conscious public. A proper acid-base balance of the system is intimately and critically related to good health. Although for some this may seem like complicated material, I have tried to compensate by illustrating the difficult and important concepts with pictures that capture the main points. In this chapter you will get a practical education on acid-base theory the role of alkaline and acid food balancing, alkaline and acid foods and supplements, symptoms of excess acid and alkalinity, and how to correct these imbalances. If you are not scientifically inclined, then go to the end of the chapter where a simple home approach for measuring and correcting your acid-base balance is offered. Spending time on this chapter so that you do understand is another way of taking responsibility for your health and learning to individualize your diet. Are you ready to assume this part of the responsibility?

- I. Importance of acid-base balance for health
- II. Acid-base research findings
 - A. Vegetarians are not always alkaline
 - B. Meat-eaters are not always acid
- III. Acid- and alkaline-forming foods and supplements
- IV. Symptoms of excess acidity or alkalinity
- V. What is a healthy body pH?
- VI. How to measure your own pH
- VII. How to balance acid or alkaline conditions
- VIII. Summary of three easy steps for achieving acid/alkaline balance



Acid-Base Balance, A Basic Key to Health

THE ACID-BASE BALANCE OF THE BODY is critical to good health. One cannot seriously think about individualizing a diet without considering how the diet affects one's acid-base balance. The key understanding about all acid-base approaches is to remember what I pointed out in Chapter 3, “A Revolutionary Breakthrough in Personalizing Your Diet”—the way our body responds to a protein or fruit or vegetable depends on our dominant constitutional type. If our dominant type is the oxidative system, then fruit and vegetables will move our body toward the acid side, and proteins will make us more alkaline. If we are autonomic nervous system (ANS)-dominant, then protein will make us become more acid, and fruits and vegetables will shift us toward the alkaline. As you read this chapter keep this understanding in mind. The principles in this chapter more appropriately apply to ANS-dominant people than oxidative-dominant people. We are constantly generating acid waste products of metabolism that must be neutralized or excreted in some way if life is to be possible. Humans, therefore, need a continual supply of alkaline food to neutralize this ongoing acid generation. Our very life and health depend on the body's physiological power to maintain the stability of blood pH at approximately 7.4. This process is called homeostasis.

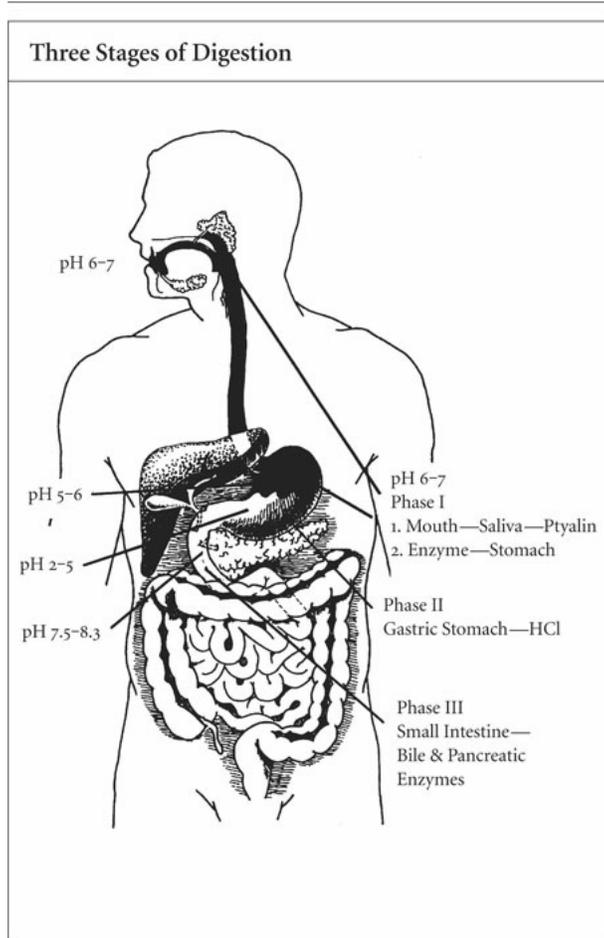
The term pH means the “potential” of “Hydrogen.” It is the amount of hydrogen ions in a particular solution. When there are many hydrogen ions, the pH indicates an acid solution. When the amount of hydrogen ions is small, the pH will indicate an alkaline solution. The pH is measured on a scale from 0.00 to 14.00. Anything above 7.0 is defined as alkaline and anything below 7.0 is considered an acid pH. A pH of 7.0 is defined as neutral. The pH of pure water is 7.0.

The normal pH for all the tissues and fluids in the body, except the stomach, is alkaline. The following diagram shows the approximate pHs in the digestive system. In addition, the digestive secretions from the liver and liver bile range between 7.1 and 8.5. Bile from the gallbladder ranges from 5.0 to 7.7. If any of these pH systems are not at the optimal pH range, the digestive and metabolic enzymes in those areas and organs will function sub-optimally and we will suffer from decreased health. With the exception of the blood, all of these systems have a wide range of pH, in part so they can shift pH to maintain a balance of the blood pH, which must be kept between the narrow range of 7.35 and 7.45.

Because the healthy pH of the blood exists in such a narrow range, the body gives a very high priority to maintaining the homeostasis of the blood pH at 7.4. Although all these tissues and fluids have their optimal enzymatic functioning in the alkaline part of their range, they will shift to less optimal acid range if they need to release alkaline minerals to keep the blood from becoming too acidic. For example, if the system becomes too acidic, the blood will take alkaline-forming elements from the digestive enzyme systems of the small intestine. What may happen then is that the pancreatic and liver digestive enzymes—which are designed to function maximally at the proper alkaline pH of the small intestine—do not have an alkaline pH environment in the small intestine where they are secreted that is strong enough for them to function properly and our digestion suffers. *A balanced blood pH, therefore, is intimately and critically related to good digestion.*

The second priority of the delicate homeostasis system is to maintain the digestion so that nutrients will be assimilated and transported to various parts of the body to maintain the proper acid-base balance of the blood and body in general. Proper digestion supplies the essential electrolyte and other nutrients needed for optimal balance in the fluid surrounding the cells. This important fluid is called the extracellular fluid (ECF). If there are digestive imbalances, there will usually be electrolyte imbalances, particularly of sodium, potassium, magnesium, and calcium ions. These electrolyte imbalances affect the fluid transport system, which can be likened to ECF “inner oceans” that carry nutrients and wastes in and out of the body. Electrolytes and other nutrients are necessary to carry on cellular oxidation and other metabolic functions critical for the life of the cell. The ECF is able to absorb acid and other waste products from the cells. Poetically speaking, this inner ocean of the ECF reflects the outer ocean which once surrounded the single-cell organisms that first lived in the Earth's oceans. Once organisms became multicellular and

more complex, they had to develop an inner ocean to continue to cleanse and supply oxygen and other nutrients to the cells no longer in direct contact with the outer ocean.



BLACKBOARD FACTS

Alkaline Blood

If the blood is too alkaline, the body shifts acid elements from the stomach to the blood to compensate, and digestion in the stomach is compromised.

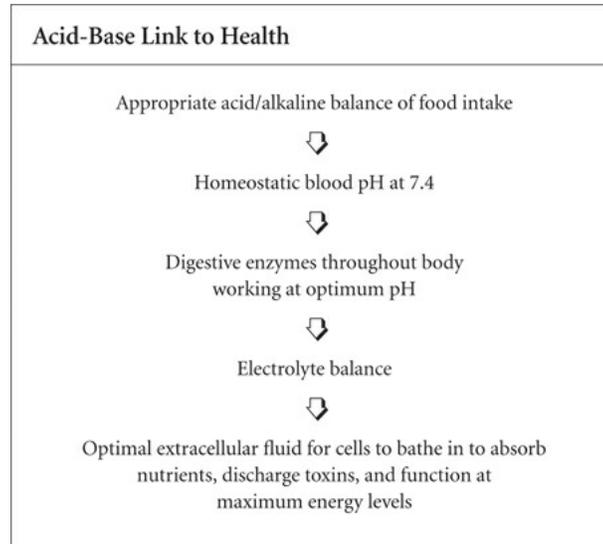
Acid Blood

If the blood is too acid, the body shifts alkaline elements from the small intestine to the blood to compensate, and digestion in the small intestine is compromised.

The total fluid in our bodies is approximately 70% of our body weight, about the same percentage of water to land as planet Earth. The fluid within the cells of our body accounts for 55% of our body weight. The ECF accounts for approximately 15% of the body weight. Five percent of the ECF is blood and 10% is the fluid in the tissues that bathes the cells.

If the fluid transport system or ECF has unbalanced concentrations of minerals, insufficient nutrients, or

insufficient oxygen, then the cells cannot function appropriately and they begin to die. A basic teaching of modern physiology is that for the cells of the body to function properly and to thrive, there is an important requirement: the extracellular fluid that bathes the cells must have its composition controlled exactly throughout the day so that no single important element of the ECF varies by more than a few percentage points. *Maintaining correct acid-base homeostasis in the blood and the extracellular fluid is another key to health.*



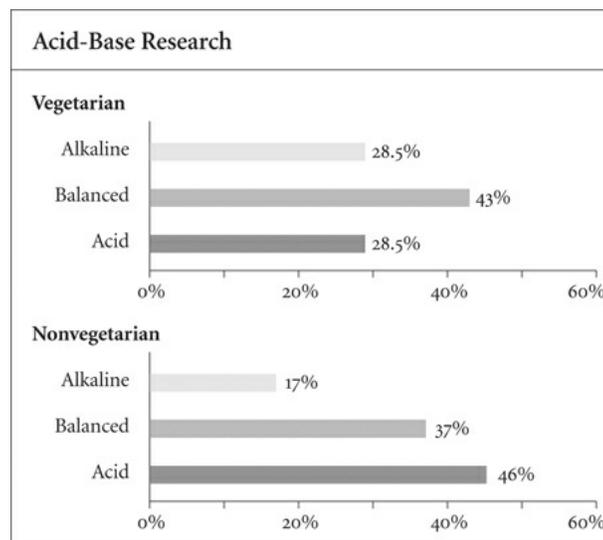
A healthy ECF is supported by properly functioning eliminative organs, such as the kidneys, liver, large intestine, and skin. These organs not only eliminate waste products and toxins, but are a main way the body eliminates excess acid or alkaline elements in its quest to maintain the blood pH and ECF pH in their normal ranges. By studying what is eliminated in the urine, one can see a reflection of the body's electrolyte and acid-base buffering mechanisms. For example, if the system is too acid, the kidney will eliminate acid through the urine in an effort to make the blood more alkaline. In this case, the urine pH is acid. The urine is a preventative health indicator. Its pH may vary from 4.8 to 8.4 on a day-to-day basis. The urine pH values guide us in the direction we need to go to maintain health. Significant blood pH changes are usually an indication of disease.

Importance of Diet for Balancing Acid-Base

THERE IS A LIMITATION TO HOW MUCH THE BODY can compensate for acid-base imbalances if we do not change our diet to balance the acid and alkaline components coming into the system through our food. *Therefore, food intake plays a critical role in acid-base balance of the body.* If the body is not able to adequately compensate for an unbalanced diet, the body's internal environment becomes sub-optimal and eventually reaches a condition in which the cells cannot live. Many diseases are the result of the body's attempt to rebalance this internal environment. Some people think that cancer is a condition that is accelerated by an acid condition of the body fluids. Cancer cells are able to live better than normal cells in an acid and low-oxygen ECF.

There is a variety of causes of acid-base imbalances, but the diet is the major factor in either balancing or unbalancing the pH. Generally, if our dietary intake includes too many acid-forming foods, such as high amounts of flesh foods, grains, pasteurized dairy, most beans, lots of fats, white sugars, and excess proteins in general, we will become acidic if we are ANS-dominant. If we eat too many alkaline foods, such as mostly fruits, vegetables, sea vegetables, and miso, we may become alkaline if we are ANS-dominant. Researchers around the world have suggested that the optimal ratio of alkaline-acid intake of foods is approximately 80% alkaline-producing foods and 20% acid-forming foods. This generalization is misleading in view of the variations of constitutions and my research detailed below, which indicates that each individual must find his or her own proper balance of acid and alkaline intake of food. In other words, *there is no single ratio of acid to alkaline foods which applies to everyone. This is further complicated by the awareness that what is an alkaline food for one person is an acid food for another.*

I used to have the impression that all animal-product eaters were acid, and vegetarians—especially raw-food vegetarians—were alkaline. However, preliminary research I have conducted on one hundred and seventy-two new clients did not support this generalization. It more accurately supports the theory of constitutional dominance, which I explained in Chapter 3. It is not the food which determines if it makes us acid or alkaline. It is how the body responds to the food. Much to my surprise, I found that 28.5% of the vegetarians had acid urines, and 17% of the flesh-food eaters had alkaline urines. Closer to my hypothesis was the finding that 46% of the flesh-food eaters had acid urines, and 28.5% of the vegetarians had alkaline urines. A higher percentage of vegetarians than flesh-food eaters had what is conventionally considered a balanced urine pH between 6.3 and 6.9.



The system of urine pH that I use is the 24-hour urine collection. I use this as the standard for this research and as my reference for discussion of urine pH values in general. This approach has two advantages. The first is that random urine pHs taken through the day are quite variable since the body pH usually cycles over 24 hours. The 24-hour urine gives the total amount of acid or alkaline elements that are eliminated in 24 hours, so it gives an average.

The second advantage is that everyone can do this test on their own urine. The results of the measurement of the pH of these patients' 24-hour urine samples before beginning any treatment are shown on the chart on the facing page. Alkaline was considered 7.0 or above. Acid was considered 6.2 or below. The flesh-food eaters with a pH between 6.3 and 6.9 were often those people who ate meat just one or two times per week rather than daily. It seemed that the pH status of those who ate flesh foods less than one time a week resembled vegetarians more than flesh-food eaters. My impression is that daily flesh-food eaters generally have a higher percentage of acidity than the occasional flesh-food eaters. Due to the way my data were collected, I was not able to sort the actual difference in pH between occasional flesh food eaten and daily ingestion of flesh food.

These results suggest, regardless of the diet, that there are other variables operating. One possible explanation is that some people have a constitutional tendency to be either acid or alkaline in their metabolism regardless of their diet, as I have pointed out in an earlier chapter. Rudolf Wiley, Ph.D., in his book *BioBalance*, has documented the same thing. Wiley's research also suggests, as does my preliminary work, that acid or alkaline levels of a person may vary with the cycle of the day. In women, Wiley reports that acid-alkaline cycles may vary either way during the premenstrual, preovulatory, and menses cycles. Much research needs to be done in this area. This means that females especially need to check their pH values during these three times to understand how to vary their diets to balance their rhythmic pH changes. The idea of a genetic predisposition to become either acid or alkaline is also supported in the Ayurvedic system, which has three physiological body types. The pitta type particularly tends to go into acid imbalance.

I suspect that some of the meat cravings that occasionally are observed when a person makes a transition to a vegetarian diet are a result of the person having an alkaline constitutional tendency, is ANS dominant, and the vegetarian diet accentuating this tendency. The craving for flesh food is the organism's effort to bring the system into balance by acidifying the body. The flesh food supplies the strong acids that bring the pH back to the familiar zone.

The critical point for those committed to a vegetarian diet for health, social, moral, economic, ecological, political, and spiritual reasons is that it is simple to acidify the system with vegetarian foods, apple cider vinegar, or with the specific use of live plant digestive enzymes. One does not have to resort to extreme measures like eating flesh foods to balance out the body. *It is possible on a vegetarian diet to bring the body into the proper acid-alkaline balance no matter what one's constitutional acid-base tendency is.*

The other major explanation for my results is *one cannot assume that complete digestion simply occurs automatically.* For example, if a vegetarian has an acid pH on a diet of alkalinizing foods, it suggests that the person's body is not properly breaking down the complex carbohydrates, so that alkalinizing minerals are not able to be released into the system. If the digestion of the person were normal, these alkaline minerals would be making the system alkaline. An ANS-dominant vegetarian who has poor protein digestion would tend to be more alkaline than another vegetarian who has good protein digestion and who is eating the exact same diet. This is because effective digestion of protein acidifies the system.

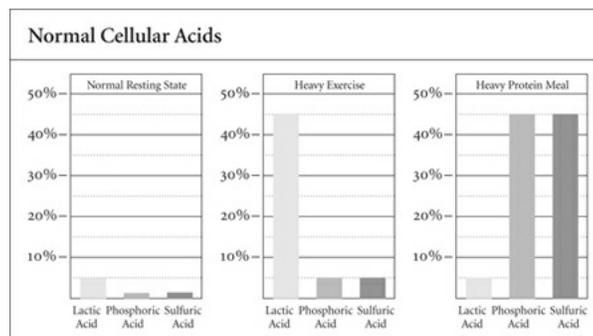
The mental state of the person also plays an important role in the pH observed in the urine. I've noticed vegetarians whose diet would normally make them alkaline, but because of their negative thinking their urine is acid.

All of the above explanations help us understand why we cannot automatically assume that all vegetarians will be alkaline and all flesh-food eaters will be acidic. One's constitutional tendency to be more acid or alkaline can be balanced by paying attention to one's mental state and ability to digest protein or complex carbohydrates. This, of course, cuts through the argument that there are some people who "just need to eat meat." More correctly, they just need to have the right plant enzymes, or take apple cider to stimulate protein digestion and to directly decrease the alkalinity to help them reestablish proper digestion and release of acids from their adequate protein sources originating from a vegetarian diet.

Acid Production is Normal

OUR NORMAL BODY METABOLISM is always producing acids. In the animal kingdom, alkaline is changed to acid and almost all of our waste products are acid. In the plant kingdom, acid is changed to alkaline in that primarily acid soil conditions produce primarily alkaline plants, some of which humans use as food. This symbiotic relationship completes one of nature's most exquisite natural cycles.

The human organism produces lactic acid and carbon dioxide whenever one exercises. In the extracellular fluid, the carbon dioxide released as a waste product from the cells is converted to carbonic acid. The sulphur and the phosphorus in our acid and protein foods are converted by oxidation to sulfuric acid and phosphoric acid. The complete digestion of protein foods makes hydrogen ions available to the system, which makes the body more acidic. The metabolic breakdown of proteins also produces uric acid, which further acidifies the system. Urea is another protein by-product. It increases the fluid excretion of the kidneys in a way that causes the loss of much-needed, alkaline-forming minerals.



Fats as a general class are slightly acid-forming or neutral because fat slows digestion, which makes for more putrefaction and hence more of an acidifying effect. Fat metabolism also produces acetic acid. The incomplete breakdown of fat produces ketones, which also make the body acidic. Diabetic acidosis is an example of a severe form of this type of acidic condition.

Simple carbohydrates, such as white sugar, are slightly acid-forming for those with oxidative dominance because they enter the system too quickly and metabolize too rapidly. This includes both monosaccharides (glucose) and disaccharides such as sucrose (cane sugar), lactose, and maltose. The result of this is the production of lactic, butyric, pyroracemic, and acetic acids. Due to their processing, these refined, simple carbohydrates are devoid of alkaline minerals. This further increases the acidity because the body must use up its alkaline minerals to buffer the slight acidity of the organic acids produced by the fast-burning, simple sugars. The complex carbohydrates, such as the grains, metabolize more slowly and evenly and do not produce these organic acids. Complex carbohydrates with more alkaline minerals than acid minerals create an alkalinizing effect in the ANS-dominant person. Millet and buckwheat are examples of slightly alkalinizing grains for ANS-dominant people.

Definition and Discussion of Acid-and Alkaline-Forming Foods

IT IS IMPORTANT TO UNDERSTAND that one cannot tell which foods are acid or alkaline by the taste. There are several factors that determine whether a specific food renders the body more alkaline or acid. For example, a ripe organic lemon, which is a food that contains high concentrations of organic acids, tastes acidic, and is classified as an acidic fruit, is actually an alkaline-forming food. This is because its high concentration of alkaline minerals has an overall effect of increasing the alkaline reserve of the body, thereby making the body more alkaline. The lemon's mild organic acids act as cleansing agents in the stomach. In the process of digestion these acids are oxidized into carbon dioxide and water, and therefore do not create an acid condition in the system.

Calcium, magnesium, sodium, potassium, and iron are the main alkalinizing minerals. Foods that have high concentrations of these minerals are considered alkaline-forming foods in ANS-dominant people. Foods that are high in sulphur, phosphorus, iodine, and chlorine are acid-forming foods for ANS-dominant people. Most natural foods have both acid- and alkaline-forming minerals in them. If the acid-forming minerals are greater in concentration, then the food is considered acid-forming and vice versa. One major way to determine the degree of the acid- or alkaline-forming power of a food is through chemical analysis in a medical laboratory. To determine the acid- or alkaline-forming potential of a food, it is first burned to its mineral ash and then dissolved in neutral pH water. The pH of this water is then tested to see if it is alkaline or acid. Because we can measure the exact alkalinity or acidity of a solution, we are able to rate just how acid-forming or alkaline-forming a particular food is (see the following chart). Using the above system, scientists have made tables of acid- and alkaline-forming foods.

It is important to be aware that these charts apply primarily to auto-nomic-dominant people since it is how our bodies respond to the food that makes it alkalinizing or acidifying, yet these principles can help us even if they work in reverse for the oxidative-dominant people.

The following acid-alkaline chart was compiled by me and Dr. Harold Krystal, an experienced clinician in this specific area. It applies directly to ANS-dominant people and in reverse to oxidative-dominant individuals. It was developed from a wide variety of sources, including our clinical experience of how food actually affects people. Flesh foods are acid-forming for the autonomic-dominant people. Most grains are acid-forming, except millet and buckwheat. Most dairy products are acid-forming, especially if they are pasteurized and soured such as yogurt. Raw goat, human, and cow milk are slightly alkaline-forming. Hard cheeses are acidic. Butter is neutral to acidic. Most oils are slightly acid-forming or neutral. Most nuts, beans, peas, simple sugars, and vegetarian proteins are acidic to some extent. Soybeans are slightly alkaline, as is tofu. String, lima, and azuki beans are also slightly alkaline-forming. Almonds, Brazil nuts, and sesame seeds are slightly alkaline. Peanuts are strongly acid-forming.

There is considerable confusion about the acidity or alkalinity of fruits. Almost all vegetables and fruits that are *ripe* are alkaline-forming. Fruits and vegetables grown in inorganic, commercially prepared soils are less alkaline-forming because they are grown in mineral-depleted soils. Prunes, plums, and cranberries have benzoic and other acids which make them acid-forming.

Selected Acid- and Alkaline-forming Foods				
Very Acid-forming	Acid-forming	Neutral	Alkaline-forming	Very Alkaline-forming
Unripe cranberries	Unripe fruit		Sweet/sour cherries	Figs
Watermelon seed	Prunes		Ripe fruit	Ripe lemons
Yellow dock herb	Plums		Most vegetables	Chaparral
Walnuts	Yeast		Tomatoes	Carrot/beet juice
Peanuts ⁺⁺⁺	Pasteurized/ raw yogurt		Millet	Vegetable juice
Raw apple cider	Pasteurized milk		Buckwheat	Miso
Vinegar	Cheese		Kelp	Vitamin K
Sauerkraut	Pasteurized butter		Raw cow's milk ⁺⁺	Calcium ascorbate (Vitamin C)
Fermented foods	Animal fat ⁺		Raw goat's milk	
Eggs [*]	White sugar ⁺		Bean sprouts	
Flesh foods ⁺	Most beans		String beans	
Vitamin A	Lentils		Azuki beans	
Ascorbic acid (Vitamin C)	Kidney beans		Soy beans	
	Soy sauce		Lima beans	
	Soft drinks ⁺		Onions	
	Medical drugs ⁺			
	Alcohol ⁺			
	Most cooked grains: (rice, oats, etc.)		Wheatgrass	Wheatgrass juice
	Soaked sprouted grains			
	Soaked sprouted wheat			

(Continued on page 252)

Selected Acid- and Alkaline-forming Foods				
Very Acid-forming	Acid-forming	Neutral	Alkaline-forming	Very Alkaline-forming
	Most nuts: Soaked sprouted nuts		Sprouted almonds	
			Brazil nuts	
	Most seeds: Soaked sprouted seeds			
	Soaked sprouted alfalfa seeds		Alfalfa sprouts	
	Soaked sprouted sunflower seeds		Sunflower sprouts	
	Raw butter [*]			
	Avocado [*]			
	Vegetable oils [*]		Honey ^{**}	

+ Included for completeness but not recommended.

++ There is disagreement whether raw milk products have an acid/alkaline effect on the body. For example, clinical research by Dr. Crowfoot on urine pH after ingestion of raw milk suggests that raw milk has an alkalinizing effect. On the other hand, Dr. Morter contends that the recent increases in protein in the diet of dairy cows has resulted in a higher protein in milk, and therefore a higher acid ash that creates a more acid effect in the body.

+++ Dangerous quantities of pesticide residue on non-organic peanuts makes them the most pesticide-saturated food in the American diet. A mold called aflatoxin, which is carcinogenic, often grows even on organic peanuts. Sundried organic peanuts may prevent aflatoxin growth and are without high toxic residues. Arrowhead Mills has such a peanut product.

* Between neutral and acid.

** Between neutral and alkaline.

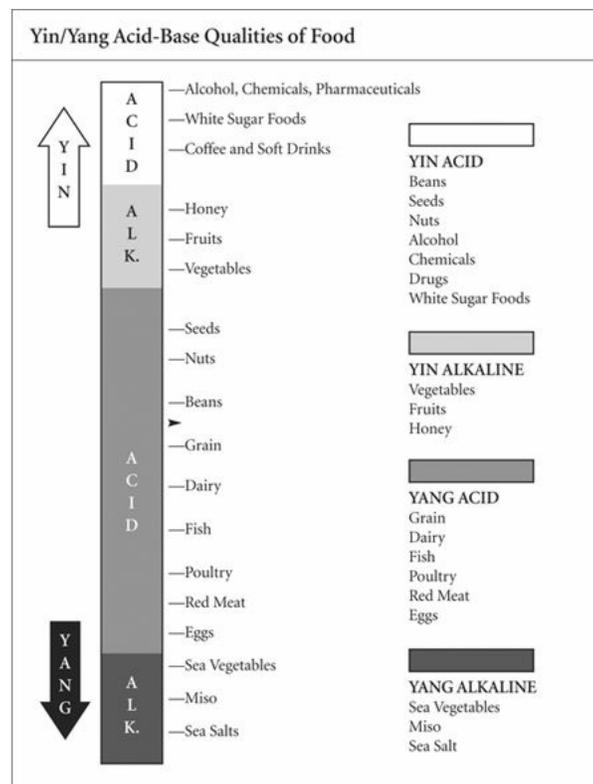
Most fruits which are *not ripe* are acid-forming. One can even test these ripe or unripe fruits or vegetables with a special type of pH meter and see a difference between the two stages of the same fruit. For example, in a freshly

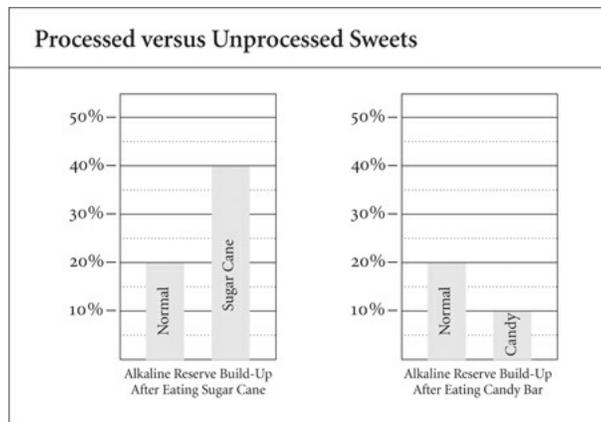
ripened banana with a moderate amount of black spots, the pH was 6.4. On an almost ripe banana with few black spots, the pH was as acid as 5.7. The acidity of cranberries is due largely to the fact that they are typically harvested and prepared in an unripe, sour state. Cranberries that are left to ripen are sweeter and alkaline-producing.

Generally, one can say that fruits and vegetables and certain herbs will be the most alkalizing of all food substances. Proteins, especially flesh foods, are the most acidifying. Fats, which are slightly acidifying, increase their acidifying effect because they clog the arteries and decrease circulation so that cells do not get enough oxygen. Decreased oxygen to the cells causes increased cell toxicity and death. Dead and dying cells further acidify the system.

Generally speaking, the yin acid and yang acid foods create the most acidity. These, unfortunately, reflect the high-protein flesh food, high-fat, high-sugar, low-complex-carbohydrate, all-American diet. Fortunately, the various Congressional reports, such as the McGovern Committee on Diet and Health, brought some awareness regarding the hazards of such a diet. The general tendency in Western cultures is to eat an acidic-producing diet for ANS dominants. This is perhaps becoming true of the affluent classes of other cultures who want to mimic the United States by adopting a high flesh-food diet as a sign of prestige and wealth.

Other foods that have some acidifying effect are the yin acid foods such as white sugar, white flour, synthetic vitamins, saccharin, chemical additives, colorings, preservatives, refined and heavily processed foods, prescription and psychedelic drugs, soft drinks, and other synthetic drugs. These products are acid-forming because they either never contained alkaline-forming minerals or the minerals were leached out during chemical processing and refining. Compounding the acidity is the fact that most of these foods have a slight acidifying effect of their own. The net result is that the alkaline mineral reserves of the body are used up in the remineralizing of these refined foods and chemicals for assimilation. This depletes the body stores of alkaline-forming minerals and thus creates a shift toward acidity in the body.





In order for the body to excrete metabolic acids, such as sulfuric or phosphoric acid, from the system without hurting the kidneys or the bowels, it neutralizes them with the alkaline-forming mineral salts such as calcium, magnesium, sodium, and potassium. When these alkaline reserves are diminished or used up in the system, the body shifts toward becoming more acidic. The body then begins to draw the calcium, magnesium, sodium, and potassium from the nerve cells to help buffer the blood. The result is that the nervous system begins to malfunction. Mental clarity diminishes. The mind slows and eventually coma occurs below an acid blood pH of 6.95. A slow mind and decreased mental clarity are typical of those whose diet is too acidic. This is why it is important to maintain high alkaline mineral salt reserves to neutralize emergency situations in which the body becomes acidic. This is done by eating a diet high in fruits and vegetables.

In my clinical observations on myself and my clients with closely monitored urine pHs, the sprouting of nuts, seeds, beans, and grains turns them closer to a neutral or alkaline pH. Most sprouted seeds and grains eventually become alkaline because they turn into vegetables, which are alkaline. There still is not sufficient data on the effects of sprouting on seeds and nuts to make a definitive statement.

Effects of Supplements and Medicines on Acid-Base Balance

ANOTHER COMMON CAUSE OF ACID-BASE IMBALANCES is the supplements or medicines people take. The same principle applies here: Whether a supplement or medicine is acidifying or alkalinizing depends on a person's constitution. Less research has been done in this area in terms of how the different constitutions respond to medicines. Most synthetic vitamins are acidifying. One of the most acidifying of all is ascorbic acid. Its very name reveals that it is acid by nature. People who are acid and taking ascorbic acid (the synthetic form of vitamin C separated from its natural components) should consider switching to another, more balanced form of vitamin C if their urine pH is less than 6.3. This is because this form of vitamin C will tend to make them even more acidic. Vitamin C in the form of calcium or sodium ascorbates, or in the form of buffered C on the market, are all alkalinizing. Vitamin A, whether synthetic or not, is also acidifying. This does not seem to be true for beta-carotene. If someone needs to become more acid, one could use ascorbic acid C and vitamin A in moderation to achieve this effect. Vitamin K is alkalinizing and helps to keep calcium, one of the main alkalinizing minerals, in its ionizable form in the blood serum. The ionizable form of calcium is the utilizable form in the blood. The intelligent use of supplements requires a thorough understanding of their effects on the acid-base balance of the organism. The point again is one of awareness. My clinical impression is that the principles I have shared in this paragraph apply directly to ANS-dominant people and less clearly to oxidative dominants.

Symptoms of Excess Acidity

MOST AUTHORITIES AGREE that an overacid body is a precondition for the onset of either acute or chronic disease. The world-famous nutritionist Paavo Airola believes that acidosis is one of the basic causes of all disease. An acidic system is fertile ground for disease for several reasons. The more acidic a system becomes, the less the alkaline biochemic buffers are able to maintain the blood's healthy pH of 7.4. One way the system compensates in order to preserve the blood pH is to deposit excess acid substances in the tissues and joints. This is one reason Airola believes that an acid body greatly contributes to the development of arthritis.

As the cytoplasm (protoplasm of a cell surrounding the nucleus of the cell) becomes more acidic due to an acid ECF and acidic blood, there is a decrease in the bioelectric potential that exists between the naturally acidic cell nucleus and the alkaline cytoplasm surrounding it. These two poles serve essentially as a cell battery that maintains the bioelectric potential needed to drive cell function and life force. The degree of bioelectric vitality is a measure of cell vitality. The less bioelectric potential, the less vitality and function. When there is no bioelectric potential left in a cell, cell death occurs. The more acidic we get, the less bioelectric potential there is in the cells and the less life force there is. It is interesting that raw foods seem to be exceptional in their ability to restore the bioelectrical potential to the cells.

There are several contributing factors that make us acidic aside from flesh foods and/or grains, simple sugars, fats, and highly processed and refined foods.

The major consequence of systemic acidosis is a depression of the central nervous system. *An acidic person often experiences dulled mentality, slower thinking processes, headaches, and depression.* Fatigue and muscle stiffness are other major symptoms. Pain in the lower back and generalized muscle stiffness are secondary to a low calcium state. Calcium and other alkalizing minerals are used up in buffering the acidity. The more acidic a person becomes, the more irritable he or she becomes as the calcium, magnesium, potassium, and sodium are lost from the muscle and nerve cells. Tension in neck and shoulders, arthritis, and osteoporosis are also typical problems. Muscle spasm and twitching can occur from the low calcium. There is a general sense of fatigue and weakness from a toxemia that develops because the kidneys are working so hard to excrete the acids that they do not function as well in eliminating other types of systemic toxins that continue to build up in the course of everyday life.

BLACKBOARD FACTS

Effects of Acidity on the Nervous System

In order to preserve the health of the body and keep the pH of the blood from being acidic, the body will take alkaline minerals from the nervous system and put them back into the blood stream.

Lethargy and mental illness result from a mineral- and alkaline-deficient nervous system.

ACIDITY SYMPTOMS

<input type="checkbox"/> Sluggish	<input type="checkbox"/> Headache
<input type="checkbox"/> Lethargic Mind	<input type="checkbox"/> Sinus Problem
<input type="checkbox"/> Muscle Stiffness	<input type="checkbox"/> Irritable
<input type="checkbox"/> Muscle Spasm	

Stomach aches, nausea, vomiting, and chest pain are also common in overly acidic people. Such people may have an irritation in the gastric linings of the small and large intestines. Gastritis and ulcers occur more frequently. Even

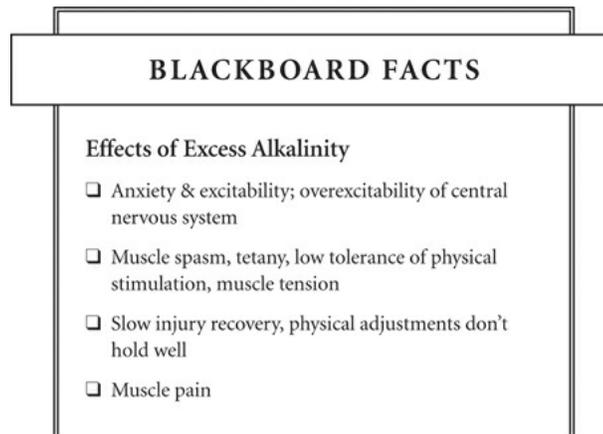
the urethral lining may begin to burn from too much acid irritation. Because of the irritation of the mucous linings, food moves through the digestive system too quickly for the body to fully absorb and assimilate the necessary nutrients. This rapid and incomplete digestion may leave undigested food coating the intestines, which has the effect of impairing assimilation. Minerals are often leached out because of the increased gastric motility. Constipation is another symptom that sometimes occurs. Fat, protein, and carbohydrate digestion are often compromised because the body is not able to maintain the level of alkalinity needed for the pancreatic enzymes to function properly in the small intestine. As mentioned earlier, some researchers think that cancer growth is stimulated by an acid system, since cancer cells, and not normal cells, are able to thrive in an acidic, anoxic ECF.

If the urine pH of a 24-hour urine collection drops below 6.3, the body can be said to be abnormally acidic. It is at this point that the acidity begins to negatively affect the function of the body's enzyme systems.

Symptoms of Excess Alkalinity

THE MAJOR SYMPTOMS OF ALKALOSIS IN VEGETARIANS that I have observed directly is an overexcitability of the nervous system. Usually the peripheral nerves and muscles are affected first. An initial sign of this is muscle twitching, especially in the face or forearm. There is an increased general tendency for muscle spasm and cramps. Although I have never seen it happen, this supposedly can progress to a full-scale spasm of all the muscles, which is called tetany. Some osteopaths and chiropractors report that muscle and joint adjustments do not hold when the body is too alkaline. Central nervous system dysfunction may also manifest as extreme nervousness. Another tendency of excess alkalinity is to become “spacey,” with its accompanying decrease in one's ability to concentrate. One can also become slightly euphoric with a high alkaline pH. Many people enjoy this effect, but for some it may be threatening. In people susceptible to epilepsy, simply overbreathing or hyperventilating can increase their alkalinity and predispose them to convulsions.

One reason for this increased nerve sensitivity is that there is a decrease in ionized calcium. The acid-forming, hydrogen-positive ions from the protein are used to try to buffer the alkaline system. The positive ions of the calcium then are drawn out of their ionic state in the ECF and become protein-bound. In this protein-bound state, calcium is much less available to the nerve and muscle cells. This tendency toward hypersensitivity and a euphoric spaciness are the two symptoms I have seen in vegetarians who become too alkaline. In my clinical experience, these symptoms may happen more often at urine pHs of 7.5 or higher. Fortunately, these symptoms and the excess alkalinity are relatively easy to correct with intelligent dietary changes that take into account acid/alkaline factors.



Slowed intestinal peristalsis and constipation are other symptoms that have been reported. This may occur in both types of alkalinity, but I do not see it commonly in vegetarians who have a urine pH of 7.2 or less. Because of the increased alkalinity, acid is taken away from the stomach's secretions in an attempt to buffer the alkaline blood. This results in a consequent decrease in protein digestion in the stomach because there isn't enough hydrochloric acid (HCl) available for this purpose. If the pH of the urine goes above 8.0, it is possible to have more acute indigestion and an inflamed descending colon because of the incomplete protein digestion and clogging of the colon. (Such symptoms may also occur when the system is too acid and when there is ammonia in the urine.) With a high alkalinity there may also be a decreased assimilation of protein. This contributes to problems with hypoglycemia because, normally when there is adequate digestion of protein, 56% of all digested protein is slowly metabolized to glucose in a way that helps balance the blood sugar. Decreased protein assimilation has also been associated with bleeding gums and pyorrhea.

A lack of hydrochloric acid may also compromise part of the immune system because there is not enough HCl in the stomach to digest parasites and bacteria. As in acid conditions, there is an increase in colds and flus with excessive alkalinity. My very consistent clinical observation is that people on a high percentage of raw food in their diets become strongly resistant to colds and flus if their urine pH stays equal to, or less than, 7.2.

What is a Healthy 24-Hour Urine pH?

IT SEEMS POSSIBLE THAT VEGANS AND RAW-FOOD VEGETARIANS whose diets tend to make them more alkaline may undergo a slight physiological shift in what constitutes normal pH values as compared with a mixed sample of flesh-food eaters. I believe, based on preliminary research on clients, that vegans and raw fooders may undergo a physiological shift of .1 to .2 urine pH points toward more alkalinity and still have normal physiological functioning and good health. This hypothesis is suggested because those who have stabilized on a primarily raw-food, vegetarian diet are usually in excellent health, without any symptoms of excess alkalinity even though their urine pH may be 7.2. This is a hypothesis based on my own self-observation and clinical monitoring of some of my clients who fit into this category of nondairy vegetarian and raw-fooders. My general observation is that many 80-95% raw-food vegetarians feel, and are, healthy at a pH of 7.2.

Dr. Morter, another researcher in this field and author of *Correlative Urinalysis and Your Health, Your Choice*, in a personal communication with me stated that the average urine pH range compatible with optimal health is approximately between 6.8 and 7.2. He has even seen people be quite healthy at pHs of 7.8. He does not feel it is possible for people to have too much alkaline reserve. This is because the body is always producing acid, which balances the excess alkaline reserve built up from a vegetarian diet. The body, on the other hand, does not produce alkalinity. Alkaline mineral reserve comes from a dietary intake of alkaline foods. Dr. Loomis, who has much clinical experience in this area, in a personal communication supported the idea that between 6.3 and 6.8 for non-vegetarians or lactovegetarians seemed within normal range, and that around 7.0 was safe for vegetarians eating mostly fruits, vegetables, or raw foods.

One of my long-term, 90% raw-food clients who keeps close watch of her urine pH has noticed becoming spacey and suffering from a lack of concentration at a urine pH of 7.5–7.8. Just taking some acid food for her ANS-dominant system, like a piece of bread, is enough to bring her closer to a urine pH of 7.2–7.3, where she feels healthy and strong. At a 24-hour urine pH of 7.2–7.3 she is feeling healthier and more vital than she has in years. The fact that she feels excellent at a urine pH of 7.3 raises the question as to how alkaline can one become and remain healthy. I had another patient who had been chronically ill, weak, and mentally confused for more than five years. Her initial 24-hour urine was acidic. When her pH reached 7.1 in the treatment program, all her symptoms went away and she felt filled with her old energy. Some vegetarians, especially raw-food vegetarians, feel excellent at pHs as high as 7.2. Above 7.2 seems to be the area in which the pH starts to become too high for optimal health. *It's pivotal then, to find the 24-hour urine pH that makes one feel the best, and then to determine the correct ratio of protein, carbohydrate, and fat foods to keep it at the right pH for you.*

I believe that it is possible for some people to become too alkaline and to develop symptoms at urine pH levels of 7.5 and above. Urine pHs of 6.8 to 7.2 seem to be quite healthy, particularly after the person has spent a period of time on a vegetarian diet in which the body has slowly shifted its physiology toward a more optimal state of health. The final determination is how one feels and whether there are any symptoms of “alkalosis” after an extended period of time at a particular alkaline pH.

A 24-hour urine pH below 6.3 is generally considered acidotic by most researchers using the 24-hour urine system.

How to Measure Your Own Acid-Base Balance

MEASURING THE ACID-BASE BALANCE OF THE BODY at your own home is done most easily by collecting all urine produced in 24 hours— usually the second urine of the morning through the first urine of the next day. Then shake the total collection a few times and dip in some pH paper and read it. *Don't be shy, get to know yourself—test your urine; it's sterile!* The least expensive and most accurate pH paper I've found for my clients is pHydrion paper by Micro Essential Laboratory Inc., in Brooklyn, NY (phone 718-338-3618; fax: 718-692-4491). The range is from 5.5 to 8.0.

For nonvegetarians and lactovegetarians (vegetarians who eat dairy), a generally good pH range is 6.3 to 6.9. For vegetarians who do not eat dairy and for raw-food vegetarians, 6.3 to 7.2 is within a safe range.

In addition to the urine pH, I also like to have a saliva pH. It is thought that the saliva pH is an indicator of alkaline reserve in the body and the condition of the pH of the cells. *A normal saliva pH taken before eating in the morning and before meals is 6.8 to 7.2.* It should become more alkaline after meals, up to a pH of 7.2. Dr. Mörter's clinical research indicates that if the morning saliva pH is below 6.2, it suggests an acid system with an inadequate amount of alkaline minerals, but with some alkaline reserve. If the saliva pH is between 5.5 and 5.8 with no rise in pH after a meal, it means the body is extremely acid and there are no alkaline reserves left.

Although more research needs to be done on this question of optimal body pH for vegetarians, and especially raw-food vegetarians, there are guidelines that go beyond laboratory results. Perhaps the best way to ascertain whether one is functioning at an optimal pH for oneself is by the following characteristics.

Optimal pH Function Indicators

1. Good energy.
2. A calm nervous and muscle system.
3. Bowels are moving regularly and the digestion is effective.

BLACKBOARD FACTS

URINE may not be pleasant to smell or look at, but checking your urine to learn about your own acid/alkaline chemistry helps you understand yourself. It gives information about your healthy ratio of acid- and alkaline-forming foods and how your acid/alkaline balance shifts with your monthly cycle or stress.

4. Doesn't catch colds and flus.
5. General feeling of physical, mental, and spiritual vitality and clarity.

How to Balance pH

OUR BODIES ARE SIMULTANEOUSLY BOTH ALKALINE AND ACID. These two tendencies become one in a dynamic equilibrium. Striving to give the body the optimal percentage of acid- or alkaline-forming foods helps to maintain this balance. One can check the pH of one's 24-hour urine. Based on the results, one can begin to organize one's diet toward an alkaline-acid balance of foods that brings the pH to normal. At the same time, I suggest that there are some individual variations. I also try to explore whether the pH changes before, during, and after menses, as well as pre-ovulatory. Men may have monthly cycles with their pH, but the times to check are not so obvious. If the body tends to shift toward more alkaline or acid on certain days, then the appropriate approach is to adjust one's acid-alkaline food intake on those days to compensate for the body's own shifting. For example, if during premenstrual time one becomes acidic, then it's appropriate to eat more alkalinizing foods during this time, depending on your constitution.

At the normal range of pH, all the enzymes and electrolytes of the different digestive systems, organ systems, and glandular systems function optimally. When the enzymes and electrolytes are optimally functioning, the cells of all the glands and organs also begin to work at maximum function. Consequently, the body begins to reorganize back into a stable, healthy homeostasis. I am not saying this is a cure for all diseases. Bringing the urine pH back into the normal range is a preventative measure. It is an attempt to reestablish homeostasis. When the body has become so deranged that the blood pH is no longer at 7.4, usually deeper structural levels of pathology have been reached that take a lot more skill in reversing. The urine pH imbalances tell more about the body on a preventative level. Blood pH abnormalities reflect body pathology.

There are two primary and complementary approaches to balancing the pH. One is eating foods and herbs that keep one healthy and help one reestablish a correct acid-base balance. This, of course, assumes that one is digesting the foods one is eating. The second major approach is to use live plant digestive enzymes to help digest the foods that are not being digested. For example, if one is too alkaline and is ANS dominant, it is beneficial to eat more protein because when protein is fully digested, it brings acid elements into the system. This only works when one is able to properly digest protein. Without full digestion there is not an acidifying effect from eating the protein. Plant protein digestive enzymes are indicated for solving this problem. The same issue exists if one is too acid and unable to fully digest complex carbohydrates. The appropriate plant enzymes are needed to activate full complex-carbohydrate digestion so that the alkalinizing minerals of these foods can be released fully into the system to build up the alkaline reserve and alkalinize the system.

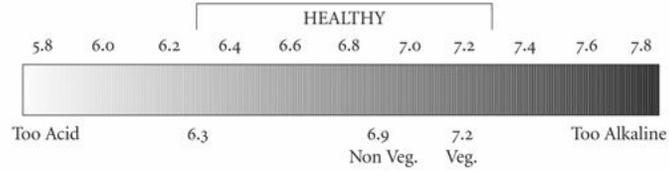
Incomplete digestion of fats tends to release acid by-products, such as ketones, into the system. Enzymes are needed that will give us a complete digestion of fat so there will not be a metabolic acid build-up.

There are other factors which tend to make the body system acidic. One is poor breathing habits. The deeper and better one breathes, the easier it is to remove acid from the system by blowing off carbon dioxide and thus decreasing the carbonic acid in the blood. One reason most people are slightly acidic in the morning is that during sleep our breathing decreases in depth and rate. This results in the retention of carbon dioxide and hence the buildup of carbonic acid in the blood. Heavy exercise without proper breathing or ventilation builds up both lactic acid and carbon dioxide. Poor oxygenation of the cells creates poor cellular oxidative metabolism and eventually cellular death. Ninety percent of our oxidative metabolism is supplied by the oxygen we breathe. Deep breathing exercises in the morning, throughout the day and before and after exercise will reduce acid build-up. Repressed emotions, excessive anger, "acid" thoughts, and other emotions can also increase acidity. I've documented that people with normally balanced pHs become acidic after negative "acidic" thoughts. In the Ayurvedic system, the pitta constitutional type tends to be acid. They become particularly acid with anger. The stress of an excessive lifestyle also contributes to acidity.

The converse can happen as well. For instance, in one case, when a client of mine let go of her "acid" negativities without any dietary change, her urine pH, which previously had been acid, became balanced. One patient, after a major psychological breakthrough from negativity, had her acid urine go to an alkaline pH of 7.5.

Summary of Practical Steps for Acid-Alkaline Balance

1. Take 24-hour urine at appropriate times during the month.
2. Shift the balance of acid/alkaline-forming foods to make the 24-hour urine reach 6.3-7.2 if vegetarian and 6.3-6.9 if a flesh-food eater.
3. If more approaches are needed, refer to acid or alkaline charts.



Ways to Alkalinize the System for the Autonomic-Dominant Person

1. Decrease or stop the intake of flesh food if you are ANS-dominant.
2. Decrease protein intake in general if you are ANS-dominant, and increase protein if you are oxidative-dominant.
3. Decrease the intake of fat.
4. Decrease intake of pasteurized dairy.
5. Minimize yin acid foods such as white sugar.
6. Eat more raw fruits and vegetables and their juices if you are ANS dominant.
7. Eat more raw, biogenic foods, such as sprouted greens, grasses, and certain alkaline-forming nuts, seeds, and grains. All sprouted nuts, seeds, beans, and grains shift from their acidic-forming tendencies to either neutral or slightly alkaline-forming. Protein taken in this sprouted form is an excellent way to fulfill one's dietary requirements without making the system excessively acidic.
8. Take specific alkalinizing foods and herbs that have been proven clinically to alkalinize the body, which are: juice of fresh lemon at least two times per day, chaparral tea or herbal extract, apricots, and vitamin K foods. The outer leaf of cabbage is high in vitamin K. Wheat-grass juice is an excellent alkalinizer.
9. Use vegetarian digestive enzymes to improve poor digestion of complex carbohydrates. The most concentrated sources of these are high in amylase and extracted from vegetarian sources.
10. Use plant enzymes to improve poor fat digestion and therefore prevent the production of extra acids from incomplete metabolic breakdown.
11. Keep emotionally balanced and avoid creating acid emotions.
12. Live a balanced, low-stress lifestyle.
13. Detox and heal the kidneys, liver, and bowel.
14. Breathe deeply all day long.
15. Avoid heavy, prolonged, and strenuous exercise.

Ways to Acidify the System for the Autonomic-Dominant Person

1. My first choice in balancing the tendency to become alkaline is the use of raw, organic, apple cider vinegar. In addition to its pH-balancing effect, I agree with Dr. Paul Bragg, who espoused the use of vinegar many years ago as a great tonic. Use only apple cider vinegar that is organic and has not been pasteurized or filtered. It is a real food “with a mother lode” still in it. If the apple cider is clear, it is probably acetic acid, synthetically produced from coal tar, or distilled apple cider vinegar. This type should not be used. The truly “living” apple cider vinegar comes directly from the juice of fermented apples. It has many enzymes in it and is extremely high in potassium, as well as phosphorus, chlorine, natural organic sodium, magnesium, sulphur, iron, copper, silicon, and other minerals. It also contains the organic acid called malic acid which is helpful in dissolving body toxins. Paul Bragg has found that apple cider vinegar is beneficial for “softening the arteries,” clearing crystal deposits out of the muscle tissue, supplying much-needed potassium to the body, and helping to heal a variety of ailments, such as sore throats, bladder infections, and prostate disorders. Apple cider vinegar stimulates digestion if taken five minutes before meals. If held in the mouth for thirty seconds, it stimulates ptyalin secretion for starch digestion as well as stimulates gastric enzyme secretion. The amount may vary from a few drops in water before meals to two tablespoons with meals or in salad dressings. Although often recommended to be taken with honey in a ratio of two teaspoons of apple cider vinegar with one of honey in a glass of water before meals, according to Patricia Bragg, and in my own experience, using honey is not necessary to produce the beneficial effects.
2. Improve protein digestion with plant enzymes.
3. For ANS-dominant people, increase protein intake with nuts, seeds, and grains; walnuts are particularly acidifying, as is corn. I have one client who is able to regulate her acid-alkaline balance by eating varying quantities of walnuts and adjusting the percentage of the soaked nuts and seeds she takes in.
4. The herb yellow dock is another excellent acidifier.
5. Watermelon seeds also have an enzyme that is very acidifying.
6. Fermented foods, such as sauerkraut, which is high in lactic acid, support the growth of healthy intestinal flora and are also good acidifiers.
7. Cranberry juice is also good. Onions and garlic have been cited as acidifying as well.
8. Minimize excessive deep breathing exercises.
9. Take ascorbic acid.
10. Exercise strenuously.

I want to emphasize that the above-mentioned foods and herbs really work in actual practice. If we know how to use Mother Nature's gifts, she will serve us well.

The ultimate balancing of the acid and base requires knowing one's dominant constitutional type and having the ability to integrate duality in our diet as well as in our lives. In this way we do not polarize out of fear in a senseless acid-versus-alkaline diet debate. Cultivating this sort of attitude toward dietary oneness helps lead to a larger sense of spiritual wholeness rather than the fear and separation created by duality. In this basic way we take “the acid” out of our lives.

Preview of Chapter 12

IN ORDER FOR ME TO RELATE THE SUBTLETIES of the human organism and the subtleties of our food to the wonderment of spiritual life, I had to develop a new theory of nutrition which included God as the ultimate source of all nutrition. This theoretical chapter gives the reader a framework for understanding the physical and nonphysical meaning of the word “nutrition.” It allows us to understand certain spiritual phenomena and recent nutritional research that the old model of nutrition cannot even begin to adequately explain. It is a conceptual model that helps us become more conscious about what we eat and how it affects us. Are you ready to take this additional step of awareness in your conscious eating program?

- I. Spiritualization of the body
- II. Foundations of a new nutritional theory
 - A. God is the ultimate source of nutrition on every level
 - B. Subtle organizing energy fields (SOEFs)
 - C. Why the material-mechanistic theory of nutrition is not complete
- III. SOEFs in food
 - A. Processed food depletes SOEFs
 - B. Fresh, raw, live food most energizes our SOEFs



A New Paradigm of Nutrition

PERHAPS THE MOST IMPORTANT WAY TO UNDERSTAND and to commune with Mother Nature is to develop a nurturing relationship with her. Without the nutrients she supplies us we could not survive. In a basic way, what we eat and how we care for ourselves affects how we relate to the ecology issues of the planet. Ecological reform starts with ourselves. How can we possibly come into a meaningful harmony with the rest of nature if we pollute ourselves? If we do not take care of our own inner rivers and streams (circulatory system), our own inner atmosphere (lungs), and our own soil (skin and tissues) in a way that brings us into harmony with ourselves as a glorious manifestation of nature, how can we believe that we can take care of the planet? As we change our attitudes about our own bodily ecology, we will begin to change our attitudes about the larger ecology of the planet. Our own insensitivity to our inner nature begets insensitivity to the outer world of nature. Conscious eating doesn't exist separately from the planet.

Our spiritual development is also linked to the quality of our nutrition. Presently we are part of what I perceive as a rising spiral of planetary consciousness that is bringing about an ever-increasing amount of spiritual awareness among the people of the world. In this process of awakening, if the body is not able to raise its vibration rate to keep up with the rest of the spiritualization process, it is possible to slip into a state of imbalance. There needs to be a corresponding spiritualization of the body that keeps us in harmony with our expanding mental and spiritual awareness.

By consciously building the type of physical body that is able to be sensitive to, attract, conduct, nurture, and hold the higher spiritualizing energies, we become more capable of holding the full power of God's Light. This approach is what I refer to as "full body enlightenment," in which we experience ourselves as the body rather than simply in the body. In this context, the body is not separate from spirit but is the manifestation of spirit. Spiritual development is an essential building block of the foundation with which to attain a full nutritional understanding.

Perspectives on Nutrition

ALL COMES FROM GOD AND IS NOURISHED BY GOD. The energetic power of God is the ultimate source of all nutrition.

... that He might make thee know that man doth not live by bread only, but by everything that proceedeth out of the mouth of the Lord doth man live. (Deuteronomy 8:3)

In the beginning was the Word, and the Word was with God, and the Word was God. (John 1:1)

This Divine cosmic force, manifesting at various levels of density, is the most basic and primary nutrient on which our organism can nourish itself. From the perspective of these two biblical quotes, we can consider all levels of energy available to us as nutrients. This includes the pure, nonmaterial, cosmic force—or virtual energy, as some quantum physicists call it. Sunlight is also a major nutrient, as well as radiation from the other stars (stellar) and moon (lunar energies), oxygen, electromagnetic radiation from the Earth, and the densest and most tasty condensation of energy, our material food from the vegetable kingdom. The expansion of our understanding to include the wide spectrum of nutrients that nature gives us broadens our knowledge of what, in fact, qualifies as a nutrient. The aspect of this “new” nutritional paradigm that food is not only material but also energy is fully acknowledged in the Chinese, Tibetan, and Indian Ayurvedic systems of health. In our Judaic-Christian heritage there is also such a tradition that energy is the original, essential nutrient. In *The Forgotten Books of Eden*, in the section called “Secrets of Enoch,” Enoch is said to have ascended alive for thirty-three days and then returned to share his teachings with his children. He said:

Hear, child, from the time when the Lord anointed me with the ointment of his glory, there has been no food in me [material food], and my soul remembers not earthly enjoyment, neither do I want anything earthly

Two famous examples of living on the direct, nonmaterial, nutritive energies of the divine are that of Moses, who spent a total of eighty days on Mt. Sinai without food or water, and Jesus, who spent forty days and nights in the desert without food or water. In John 4:31, when Jesus’ disciples said, “Rabbi, eat,” he said to them, “I have food to eat which you do not know....” Two major inferences from these examples can be made. One is that these great ones reached a height of spiritual transformation on a cellular level which allowed them to assimilate enough of the cosmic energy of the Divine directly into their bodies that they could survive solely on the energetic “manna from heaven.” The other implication is that there is a relationship between the energetic density of our nutrition and our spiritual transformation. As we transmute on the physical, mental, and spiritual planes, we are more and more able to partake of the feast of God’s Divine sustenance on the primary level of the cosmic energy.

A nutrient, in this context, is what we absorb into our overall body-mind-spirit from the different density levels that have precipitated from the cosmic force. Material food is the densest, sunlight is the least dense on the material plane, and pure cosmic energy is the most subtle nutrient.

Subtle Organizing Energy Fields

NOW THAT WE UNDERSTAND that a nutrient can be energy as well as material, we are ready to take the next step in developing a functional hypothesis for learning how to work with our nutrition in a way that brings us into harmony with Mother Earth. A key concept for understanding health and nutrition is what I call the Subtle Organizing Energy Fields (SOEFs), a concept that is developed extensively in *Spiritual Nutrition and The Rainbow Diet*.

The SOEF concept is built on a synthesis of both intuitive and scientific knowledge, yet rooted in cultural, historical, and spiritual traditions. The existence of SOEFs is based on the idea that all living systems are surrounded and permeated by an energy pattern that determines the functioning of that system on every level.

The book *The Secret Life of Plants* has helped to popularize the idea that plants have distinct energy fields that possess specific patterns. The work by Rupert Sheldrake on morphogenic fields of living organisms, *A New Science of Life*, also helps to support the thesis of the SOEFs. These morphogenic fields correspond to the potential structure of a developing system that is present before it materializes into its physical form. They are the template for the form. The SOEFs are similar to the architect's plans that determine the form and function of a building. They can be correspondingly understood as the thought before the words which culminate in the physical action.

The state of the SOEFs reveals the state of our functioning on all levels. SOEFs are reflected in the strength of our cellular emanation in the subtle force field that surrounds the body, called the aura, and the even more subtle force field called the mind, which exists prior to the physical seat of the mind called the brain. The SOEFs exist prior to the physical levels of our existence and are reflected in the subtle vibrations of our physical, mental, and spiritual selves.

The hypothesis of the existence of the SOEFs fundamentally differs from the current 200-year-old theory of nutrition which I call the material-mechanistic theory, which from now on we'll call the M & M theory. It proposes that food is material only, composed of proteins, carbohydrates, fats, vitamins, minerals, and other material factors. In the M & M theory, a food's usefulness is measured on the basis of the amount of protein, carbohydrate, or fat it contains and the food's caloric value. The energy content of food in this old way of thinking is measured only in calories. A major limitation of this theory is that it does not account for the fact that humans are multi-leveled organisms that operate on mind-body-spiritual planes, and that we take in a variety of subtle energies that support life function. The M & M theory does not acknowledge that our physical food has an energy field associated with the living plant.

According to the M & M theory, it would have been impossible for Jesus, Moses, and Enoch to have gone without water or food for forty days or more. The SOEF theory uses these examples to make the point that when our organism has been sufficiently spiritualized it is able to be nourished directly from God's Divine energy. If a theory cannot account for all unusual phenomena associated with it, it needs to be challenged and changed. The SOEF theory does not throw out the material-mechanistic theory, but incorporates it in its overall body-mind-spirit approach.

What is important to understand about the SOEFs is that they exist prior to the incarnation of physical form and are the blueprints or templates for biological forms and structures. This means they do not emanate from the physical form of an organism like the magnetic lines of a bar magnet might. In the SOEF theory, the physical form, function, and energy are the result of a preexisting energetic form or SOEF. Some recent evidence for the existence of SOEFs has been supplied by the late Marcel Vogel, one of the world's top crystal experts. Vogel was able to take video photographs of the crystallization of cholesterol esters. He observed that just prior to the appearance of the physical crystal, a blue energy form revealed itself a fraction of a second before the unstructured liquid cholesterol melt entered a structured crystalline phase.

SOEFs exist as the maintaining template for all living organisms. The dynamic interaction of the SOEFs of the plants, which we take in as food, with the SOEFs of our human organism is an important aspect in understanding this new paradigm of human nutrition.

The SOEF theory also relates to what some physicists feel is the general theory of how material existence comes into being. Such great thinkers as Einstein and Nikola Tesla, an electrical engineering genius and inventor who made alternating current practical, theorized that matter is the concrete condensation out of the vibrating universal subtle energy. This vibrating universal energy has been given names such as virtual energy, vacuum state, or zero point

energy. These are all names for what scientists call a perfectly orderly, unmanifest state out of which comes the manifestation of the physical universe. Spiritual terms used to describe this state of energy are cosmic energy, pure consciousness, or cosmic prana. The SOEF theory is an attempt to describe how this precipitation from God's subtle, faster-than-the-speed-of-light, zero point energy manifests as material form. The term I will be using for this potential energy that fills the universe is zero point energy. Through a personal interview with Adam Trombley astrophysicist and expert in zero point technology it was explained to me that the energy used for the materialization of an object from one cubic centimeter represents one quadrillionth (1×10^{15} , which is 1000 times greater than a trillion) of the energy available in that volume of space. In other words, there is essentially an unlimited amount of potential energy available at the zero point level. All we need to do is learn how to tap into it. Dr. Trombley estimates that in one cubic centimeter there is energy available equal to a million, million tons of uranium.

Bob Toben, in his book *Space, Time, and Beyond*, points out how Einstein, in his unified field theory, repeatedly stressed the view that the energy field precedes and creates the form. The SOEFs originate out of the zero point energy and serve as organizing templates for every level of a living organism's structure, from the RNA/DNA structure to the cellular and organ system levels, and to the overall shape and energy of the totality of a living system. A key understanding is that the SOEFs resonate with the zero point energy and help transduce this energy down into the fields of the human body. The SOEFs resonate with, and energize, the body-mind-spirit complex. The body in this paradigm is a form stabilized by the SOEFs.

One important aspect of the SOEFs is that the zero point or cosmic energy is omnipresent and we are always resonating with it to some extent through the SOEFs. At certain times in our spiritual evolution we become more in tune with the SOEFs and consequently, the zero point energy. These positions of greater awareness of and attunement to the cosmic force or zero point energy may first be experienced in special moments of meditation, prayer, or even in those peak experiences that occur in sports or wilderness activities. The more we are transformed spiritually, the more we become resonant with the zero point and Divine energy, and the more the mind begins to merge with, and identify with, this unchanging truth of who we are. The more we exist in this Divine resonance, the more it becomes part of the conscious awareness of our everyday existence. Eventually we become transformed by the continual experience of this energy flowing through us so that we become one in awareness with this energy. This is known as cosmic consciousness. This is conscious nutrition at its most sublime level. Experiencing the continual flow of the cosmic energy through the physical vehicle, no matter where we are, even when taking our children to an amusement park and riding upside down in a roller coaster, is extraordinarily supportive to the maintenance of an unbroken state of Divine awareness. *The awareness of the cosmic energy flowing through our bodies links us with the heavens and the earth. We become like the Tree of Life, with our branches reaching to the heavens and drinking in the heavenly energies, and our roots experiencing the energies of the earth.*

These SOEFs have form and can gain, retain, or lose energy. Because of this, they differ from Rupert Sheldrake's brilliant description of organic forms or morphogenic fields, which are concerned only with form and are neither a type of matter nor energy. Once the body has materialized, it becomes a focal point for the SOEFs in the realm of time and space.

An important understanding in this new nutritional way of thinking is that when the SOEFs are energized they become more structured and a clearer template for our total organism. This in turn enhances the form and function of the organism on the physical plane. Practically speaking, this means an improved functioning of the RNA/DNA system, better protein synthesis, enzyme function, and cellular function and division, as well as an improved glandular, organ, and total system functioning of the organism. In short, when the SOEFs are energized, there is better form and structure on every level of an organism, and the total health of the living organism is improved. When the energy of the SOEFs is dissipated, just the opposite occurs and the total health of the organism degenerates.

SOEFs in Food

ALL LIVING MEMBERS OF THE VEGETABLE KINGDOM HAVE SOEFs. The food we eat is a specific way that SOEF energy from nature is transferred to us humans to build the energy of our SOEFs. Food with more structured SOEF energy transfers more of this energy into our own SOEFs and consequently enhances our form and function. Whenever food is cooked or processed in any way, it loses the strength of its SOEFs. *Fresh, raw, live, or unprocessed food most enhances our SOEFs and therefore is the healthiest for us.*

The concept of the importance of structure in food is supported in research by Professor Israel Brekhman of the Far East Scientific Centre Academy of Sciences in Vladivostok, Russia. He found that the structural integrity of a food affects the overall energy of the food in a way that goes beyond the simplistic concept of calories as the only measure of the energy a food carries. He developed a measurement called Significant Units of Action (SUA). SUAs measure how long an animal can carry out a certain amount of physical work when fed a specific food. He discovered that live, unprocessed foods have significantly more SUAs than the same foods that had their structural integrity compromised by cooking or other forms of food processing. The animals could work longer when fed the “highly structured” raw foods in spite of the fact that the cooked or processed foods had the same number of calories. Cooked foods have less structure because the application of heat disrupts the physical structure and ultimately, their SOEFs. This finding challenges the traditional M & M theory of nutrition, which assumes that foods, whether cooked or raw, carry the same amount of energy. It supports the SOEF paradigm because it suggests there are additional levels of energy associated with a food. If the structure of these fields is disrupted, the energy and quality of health the food transmits to the organism are also diminished.

We see the energy-depleting effect of processed food (versus live-food) working on several levels in the nutritional spectrum. For example, chromium, which normally comes in whole, unaltered wheat, is processed out in the making of white bread. Nature puts the chromium in wheat because we need it to metabolize the carbohydrates in the wheat. In order to compensate for this lack of chromium in the white bread, our bodies use up our own chromium stores. Eventually our bodies become depleted in chromium.

Another example of this depletion phenomenon can be understood with enzymes. Live foods come with their own enzymes, which aid digestion when we ingest them. If the food is cooked, then these enzymes are inactivated. In order to compensate, our bodies must use more of our enzyme stores to digest the incoming food. The result is an accelerated enzyme depletion. This will be explained further in the chapter on enzymes. The point of these two examples is to show that cooked and processed foods actually take energy from our bodies in order to properly assimilate them. Theoretically at the SOEF level, this same type of depletion of energy also happens. Cooking or otherwise processing foods disrupts the SOEFs. Our body then needs to use some of its SOEF energy to reorganize the SOEFs of the incoming food. The result is a subtle depletion of energy and structure on every level. This is a theoretical, energetic explanation for Dr. Brekhman's findings that animals on live foods have more endurance and energy, and for the energetic depletion that may be happening in general when cooked or other forms of processed foods are taken into the system for an extended period of time. In Chapters 26 and 27 a further discussion of live foods will help to deepen understanding of this point.

The ability to energize the SOEFs enables us to reverse the aging process to some degree. This occurs because the body becomes more organized in its functioning. Aging is the progressive disruption of the functioning of the living organism. Aging is an increase in entropy or level of disorganization. Energizing the SOEFs reverses the entropic process of aging. As a physician I see this reversal of aging all the time in clients who have come to me to improve their level of health. Those who change their eating habits and lifestyles toward more harmonious and SOEF-energizing ones seem to get younger.

These natural laws are no mystery. They are described in many spiritually based healing systems such as Ayurveda and the Essene “Tree of Life” tradition. When natural law is followed, people have a tendency to feel more flexible and energetic, mentally clear, and to experience improvement in all their overall bodily functioning. To clarify this point, there was a study reported at the American Geriatric Association convention in 1979 involving 47 participants whose average age was 52.5 years. It found that people who had been meditating more than seven years were approximately twelve years younger physiologically than those of the same chronological age who were not meditating. Meditating is a very powerful way to increase the energy of the SOEFs.

A simple physical experiment with a glass of brown sugar in water can help to metaphorically illustrate how

energy and order are complementary. If the water in the glass is not stirred, the brown sugar lies in a lump on the bottom. When the water is stirred, which adds energy to the system, a vortex swirl of water is formed which is analogous to adding energy to the SOEFs. Into this vortex the brown sugar is also swept and takes a well-defined physical shape corresponding to a well-organized body function. However, when we take the spoon out, the vortex swirl of water immediately starts to become diffuse because energy is no longer being added to the system. Corresponding to this fall in energy, the brown sugar loses the clarity of its form. This is similar to what happens when we live in ways that deplete the SOEFs, with the result that we create by our lifestyles a disorganization in the body and mind.

Although this new nutritional way of thinking, like the old M & M theory, has not been conclusively proven by rigorous scientific standards and may not be until the necessary scientific instrumentation is developed, the SOEF model provides a useful way to understand the processes of health, disease, and aging. It gives us a new and more complete way to experience and think about how we take in our nutrition from nature.

BLACKBOARD FOOD FOR THOUGHT

The wonderful thing about this new paradigm is that we do not have to be a physicist to put it into practice.

*We just have to accept God's gifts of nature
in their original form.*

It is no accident that fresh, raw, live, or unprocessed food most enhances our SOEFs and therefore is the healthiest for us.



The Choice of Vegetarianism

IN MAKING THE CHOICE TO BECOME A VEGETARIAN, many subtle personal resistances and cultural and religious doubts often arise. There is also a great deal of pseudo-scientific rumor and fear that has been created in the public mind about vegetarianism. This section is specifically designed to address those questions. Contrary to current mainstream thinking, vegetarianism cannot be conveniently labelled and discounted as a health food or New Age fad. It is part of a spiritual and cultural tradition that goes back thousands of years.

The Judaic-Christian tradition and many of the oldest religions and spiritual paths of the world have strong histories of vegetarianism: Hinduism, Jainism, Zoroastrianism, Buddhism, the Yoga tradition, Pythagoreans, and the Essenes are but a few. Currently, it appears that the Judaic-Christian tradition does not support vegetarianism, but there is ample evidence that in the original purity and simplicity of the Judaic-Christian tradition, there is strong support for vegetarianism. The point of this section is to help people let go of what they perceive as religious traditions that do not support vegetarianism so they can feel comfortable in their particular tradition and with their vegetarianism. Once given this information, people are in a position to make a more educated choice.

Preview of Chapter 13

IN THIS CHAPTER WE WILL EXPLORE some basic guidelines for a healthy diet. The most healthy gift of life, according to the scientific evidence, is food in its organic, whole, natural form just as God has given us, and the healing power of the sun, water, and earth from which we draw sustenance. In short, if it is not broken, don't try to fix it. Are we ready to accept God's gifts as they are presented to us?

- I. Criteria for judging dietary recommendations
- II. General guidelines to healthy eating
 - A. Eat natural foods
 - B. Eat whole foods
 - C. Eat organic foods
 - D. Eat primarily fresh, live foods
 - E. Eat a high-complex-carbohydrate, low-protein, and low-fat diet
- III. Sunlight and health
- IV. Breathe, bathe, and work the earth
- V. Quality of thoughts affects nutrition



General Guidelines for a Healthy Diet

A CONSCIOUS EATING APPROACH TO A HEALTHY DIET includes going beyond our personal biochemistry to understanding diet as a way of consciously relating to the world. I call this the harmony of wholeness. It is understanding diet from the perspective of its impact on the top-soil, water supplies, air, animal population, human population, and its effect on peace in the world. Unfortunately, it now must also include the new art of learning how to live in a polluted, radioactive environment and in a society that is estranged from nature. The more artfully we can adapt ourselves, despite the nonsupportive culture we live in, the more we will be able to enhance our communion with the Divine. The fruits of our efforts will be increased harmony with our own evolution and the world.

The general diet that best fits with the harmony of conscious eating is vegetarian. A vegetarian diet allows us to follow all the general health guidelines that I will be discussing in this chapter, especially suggestions one through five. This recommendation does not contradict the concept of individualizing one's diet because within the realm of vegetarianism it is completely possible to individualize a diet that accounts for constitutional type, acid-base balance, heating or cooling, yin or yang balance, the seasonal changes, work, meditation, prayer and other spiritual needs, digestive power, state of health, and all other factors associated with developing an individualized diet. Although there will always be exceptions to this suggestion of vegetarianism, just remember that I am asking you to explore the question with me from many different aspects.

In presenting the dietary recommendations contained in this book, I subjected information to three basic criteria. The first is: Does it fit with economically and politically unbiased research conducted to date? For this research I look to such organizations as the International Society for Research on Nutrition and Diseases of Civilization (ISRND). Founded by Albert Schweitzer, M.D., the ISRND is comprised of several hundred top researchers, physicians, natural healers, and scientists from more than seventy-five countries. The organization is not supported by any industry, profession, or vested economic interests.

I also have looked to the documented experience of authoritative teachers and natural healers of great integrity, such as Paavo Airola, Ph.D., Dr. Bircher-Benner, Dr. Max Gerson, and Dr. Edmond Bordeaux Szekely. In the case of Dr. Szekely, over a thirty-year period at Rancho La Puerta, Mexico, he had greater than a 90% recovery rate with more than 123,000 patients with all types of health problems, including cancer, using an essentially 80-100% live-food, vegetarian diet. If people were very ill they would be put on a 100% live-food diet and then go back to a maintenance 80% live-food diet.

The second criterion for considering dietary recommendations is: Are my health recommendations in accordance with the historical evidence of thousands of years of actual practice in various cultural settings?

For example, nowadays vegetarianism is considered by some a novel and extreme way of eating; but vegetarianism is not a new idea nor is it farfetched. Vegetarianism is recommended in the ancient Persian *Zend Avesta* of Zoroaster, which predates the Bible by thousands of years. The Essenes, who were reported by several historians to have had an average life span of 120 years, followed vegetarianism and the principles espoused in this book. My general recommendations are also consistent with what I believe to be the diet recommended by the Greek spiritual teacher and mathematician, Pythagoras.

Studies of some of the healthiest cultures in the world, such as the Hunzas, Vilcabamban Indians, Mayans, and various other groups with a high number of centenarians, found that they all followed diets similar to the vegetarian diet which I suggest you explore in your process of conscious eating. Of course, not all these cultures ate exactly the same diet. For example, in South America, the primary grain is corn. In Hunzaland, the primary grain is wheat, et cetera. Most were completely vegetarian, although some, such as the Hunzas, ate a trace of flesh food on a monthly basis or for celebrations.

The third criterion for considering dietary recommendations is: Do my recommendations fit with my own personal and clinical experience as a physician working with clients since the early 1970s? Consistently, I have observed that the basic vegetarian pattern of diet and lifestyle recommended in this book has worked to bring health,

joy, and spiritual inspiration for thousands of clients I have seen since 1973.

The points I make for a general program of good health and conscious eating are essentially those made by the International Society for Research on Nutrition and the Diseases of Civilization. The following is a list of these suggestions.

1. Eat natural foods.

THESE ARE FOODS GROWN UNDER NATURAL CONDITIONS on organic and fertile soil. These foods are consumed in unprocessed form in their natural state. Food is not natural if it is grown in depleted, chemically treated soil. These unnatural products of unnatural soil are sprayed with herbicides or pesticides. They often are picked prematurely and processed by heat or irradiation. This unnatural produce is sometimes genetically altered so that it can withstand long shipping distances and still look good cosmetically. Commercial methods of growing foods have significantly altered the natural growing process. Commercially grown foods may sometimes look better than organically grown products, but the quality and nutritive value of these synthetically grown fruits, vegetables, nuts, seeds, grains, and legumes have been greatly reduced. The nutritive value of organically grown foods is usually significantly superior to those foods grown commercially in the same local soil. One major study at Rutgers University found that organic produce had an average of 83% more nutrients in it. Of course, even the nutritive value of organic foods will vary from soil to soil. Because of this, I recommend eating a variety of vegetables, fruits, nuts, seeds, legumes, and grains so that one is assured of getting the full spectrum of nutrients. In other words, rotate and vary plant intake, and if possible, buy foods from a variety of organic sources.

The entire world food supply depends on the quality of the soil. According to *Topsoil and Civilization*, every great nation has risen and fallen according to the quality of its topsoil. The sustenance of all animal life comes primarily from the vegetable life that is grown on this soil. The health of humanity depends on the health of the soil. Nutrition begins with the top-soil.

This crucial understanding has not been significantly appreciated by the commercial food producers or by most dietetic schools. We can no longer speak about a beet or a carrot as if they had a static nutritional content. The nutritional content of a food can vary tremendously, depending on the quality of the soil and the growing methods.

There are several other major problems with commercial growing. The use of synthetic fertilizers in the short term might produce what appears to be abundant growth and large-sized produce, but in the course of this process commercial growers add chemicals that upset the soil's ecological balance and thus the natural harmony between the plants and the soil. The plants become overstimulated and hurried in their growth when forced to mature too rapidly. The natural rhythm of their metabolism is disrupted so that they fail to fully transform their starches and acids into their normal plant sugars. They also fail to absorb valuable minerals. This problem is compounded by the common commercial practice of picking the fruits and vegetables before they are ripe so they can be shipped with minimal loss of produce. Because of this, most commercial fruits and vegetables are not ripe when they reach our kitchen tables. Not only does the produce have less taste, but some of the produce tends to be acid- rather than alkaline-producing in the body. These foods usually are deficient in nutrients, and their resistance to disease is decreased. When humans eat these less vital plants, we also become less vital and more prone to disease.

Not only does synthetic, commercially grown produce give less nutritive value, but it requires the use of pesticides and herbicides to eliminate insects and fungal growth on these less resistant plants. Many of these herbicides, fungicides, and pesticides are also very poisonous to humans. These poisons seep into the interior flesh of the plant from both the surface and through the roots. No matter how much plants are washed, they still contain these poisons because they have been absorbed on a systemic, cellular level. These human-made poisons also kill the normal soil bacteria and the earthworms that help form the humus which is so important for the plant's optimal growth. Unfortunately, even when some of the more toxic sprays are banned in this country, they are used in other countries whose produce we import, so that they come back to us in a roundabout way. In my own organic garden, I did not even spray with organic pesticides. I let the insects take their share and there was always plenty left for my family.

Unless we pay attention to our harmony with the topsoil, we humans, who are created out of the dust of earth, will return much sooner to personally re-fertilize it. The overall quality of our nutrition begins with the topsoil and continues through the normal development and harvesting of the plant. When these factors are considered, a healthy diet is more likely to be created, with its corresponding health dividends for us.

The best way to ensure maximal nutrition is to either grow your own organic produce or buy only organic produce to supply your needs. A nice way to buy organic produce is to locate a farmers' market where organic produce is sold. These markets can be found in many cities as well as the country. Introduce yourself directly to the farmers and find out about their farming methods. By doing this, your food and the person who grows it are no longer

anonymous. In this way you become part of the food cycle.

Health and longevity exist in a direct relationship to the degree of naturalness of the foods you eat. Dr. Airola points out in *Are You Confused?* that nutritional researchers such as Dr. Weston A. Price, Vilhjamur Steffansson, Dr. McCarrison, and Arnold DeVries all studied the dietary habits of many “primitive” cultures and found that when their diets were comprised of natural, unprocessed, locally grown foods, the people had “no disease or tooth decay.” When these same cultures began to use denatured, processed foods such as white flour and white sugar, canned foods, and insufficient amounts of uncooked foods, these researchers found that the “primitive” populations began to suffer from dental decay and the degenerative diseases of modern civilization.

Arnold DeVries studied the historical records of the North and South American Indians; Eskimos; Asian, African, and Australian aboriginals; and New Zealand Maoris. He found that all of them enjoyed excellent health, fertility, no tooth decay, fast and relatively painless childbirth, and minimal degenerative disease at comparable ages to those in our culture. As soon as processed foods of any sort were introduced into their culture, general health began to decline, childbirth became painful, and tooth decay became prevalent.

2. Eat whole foods.

WHOLE FOODS ARE THOSE that have not been fragmented or adulterated in any way. Whole foods contain all their original nutrients. They have been neither refined nor enriched. Every time a chemical or nutrient is added or subtracted from a food, the natural balance is disrupted. As described earlier, the yin/yang balance of the food and the proper synergy of all five elements are disrupted. After thousands of years of eating natural and whole foods, our bodies have become biologically programmed to utilize them in their natural state. When the composition of the foods is altered with additives, preservatives, dyes, microwaves, irradiation, or even cooking, the body is only partially able to readjust. The eventual result is an early onset of chronic degenerative diseases, as suggested by the cultural studies and the evidence all around us.

Recent history provides an example of the importance of eating whole foods. During World War I, Denmark suffered serious food shortages. In order to compensate, the government increased whole grain production and consumption, in addition to limiting livestock production and putting quotas on the sale of meat. Grain processing was stopped and only whole grain products were allowed to be sold. Farmers were directed to produce more grain, green vegetables, fruit, and dairy products instead of meat. After one year of this program the death rate dropped 40%. According to Paavo Airola, diseases that affected other European countries, including an influenza epidemic, only minimally affected Denmark. Denmark became the healthiest nation in Europe.

There is so much we do not understand about the subtleties of nutrition that we are essentially shooting in the dark when we start to alter and process our foods. Whole foods contain not only whole nutrition, but the enzymes and other factors needed to digest and assimilate these foods. They also contain a specific balance of natural forces that are programmed to affect the body in a particular way. Plant foods have a wholeness and integrity that is more than just the collection of proteins, minerals, and vitamins found within them.

We have yet to improve on what Mother Nature has given us to eat. Plant foods simply cannot be artificially duplicated in the science laboratory. *What are touted as improvements so one can prepare food and eat it more quickly, or so commercial growers and processors can make more money, can hardly be considered an improvement in terms of health and longevity.* As with everything else in life, when one “sacrifices the eternal for that which dieth in an hour,” one’s well-being is often sacrificed in the process. When it comes to food, it is not worth it to make cheap compromises with our health by selecting sub-standard building materials with which to nourish our bodies, minds, and spirits. *There is no necessity to sell out our health and shorten our life so that someone else can profit from marketing so-called “longer shelf-life, convenience foods.”*

The use of fresh juices is one exception to the concept of eating only whole foods. See the end of this chapter for more details on the benefits of juice. Minimal processing by juicing is only marginally disruptive because all of the live factors are left intact. Raw juices contain all the elements of live food, such as the enzymes, minerals, and vitamins, in a concentrated form that is more readily assimilated into the cellular system with less digestive energy required. The primary part of the whole food that is missing is the fiber. The energy saved by not having to process the fiber goes toward the healing and repairing of the body.

3. Eat primarily living foods.

NTURAL AND WHOLE FOODS ARE, by definition, living. “Living” or “raw” food means it has not been processed in any way, including cooking. As a result, none of the heat-sensitive micronutrients have been destroyed and the full life force and energetic pattern of the living plant are best preserved so that it can transfer the highest amount of its life force to us. Its SOEFs can most fully transfer their energy to our SOEFs so that we may live more vibrantly and in greater health for a longer time. A further discussion of live foods is given in the Stage Four presentation in Chapter 24. The minimum percentage of living foods one must eat to get the full benefits is approximately 50% (if they are eaten at the beginning of the meal).

4. Eat only organic, poison-free foods.

ASIDE FROM RADIATION, the poisons on and in our foods from the thousands of herbicides, pesticides, fungicides, et cetera, constitute one of the greatest dangers to health today. According to Paavo Airola, there are more than one thousand chemicals used in the food processing industry. Even if the food is organically grown, it is good to wash off the surface parts of the plant because of incidental radiation fallout, migrated aerial sprays, lead from automobiles, and other industrial pollution in our air. One exception to the thorough washing off of organic produce is root vegetables, which are somewhat protected from incidental airborne pollution because they grow underground. Another reason that one might not want to thoroughly scrub root vegetables such as carrots, beets, turnips, et cetera, is because B12-growing organisms are often plentiful on the surfaces of these vegetables. Simply rinsing off the soil from root vegetables is sufficient. However, in the case of commercial vegetables and fruits, the oil-soluble sprays and waxes applied to produce require that some vegetable cleaning soap be used with the wash water.

5. To maximize your nutritional assimilation, be conscious of the various subtle sources of energy.

A BROADER DEFINITION OF A NUTRIENT is anything that enhances the SOEFs. In this context, it is useful to include the cosmic energy we bring into our system from prayer and meditation, as well as the nutritive energies we bring in from natural sources like the sun, air, water, and earth. In addition to absorbing these forces into our organism through our food, absorbing each of them directly is important.

6. Obtain adequate sunlight.

THE SUN'S RAYS (CONTRARY TO RECENT BAD PRESS) are not necessarily a deadly enemy that automatically causes skin cancer. Without the sun, all life would die. The UV rays of the sunlight on the skin react with ergosterol (a pre-vitamin D substance) to form much-needed, natural vitamin D. The sun also balances the biorhythmic hormonal cycles of the body. Research done on people with vision-blocking cataracts shows many hormonal irregularities. Most, if not all, of these hormonal imbalances disappear when the cataracts that block the flow of sunlight into the eyes are removed. The Egyptians, Romans, and Greeks made significant medical uses of light. Herodotus, the father of heliotherapy (sun therapy), felt that sunlight was indispensable for people whose health needed restoring. Dr. Hufeland, in his 1796 book *Macrobiotics*, wrote:

Even the human being becomes pale, flabby, and apathetic as a result of being deprived of light, finally losing all his vital energy ...

Medical doctors have begun to recognize a problem called seasonal affective disorder (SAD) which occurs when people do not absorb enough sunlight into their eyes. Jacob Liberman, O.D., Ph.D., points out in his book *Light: Medicine of the Future*,

The medicine of the future is light—we are healing ourselves with that which is our essence.

Although our airborne pollution has burned holes in the protective ozone layer of the atmosphere and thus upset our natural harmony with the sunlight, recoiling in fear from the sun only further confuses the issues. We still need a certain amount of light on the bare skin and through our eyes to be healthy. According to Dr. Ott, the foremost light expert in the world, as well as Dr. Liberman, daily light exposure should be between thirty and sixty minutes per day of direct or indirect light. Neither recommends extensive outdoor time in the noon hours during the summer. One important way to get light into the system is not to wear anything but full-spectrum glasses or contacts. Wearing regular contacts, glasses, or sunglasses when one is outside blocks our reception of the full spectrum of sunlight. Full-spectrum light is so essential to proper hormonal function that Dr. Ott cites four cases of women previously unable to get pregnant who became pregnant when they stopped wearing sunglasses.

Excessive ultraviolet light may create a problem, but a certain amount seems to be needed for health. Both Drs. Ott and Liberman cite research suggesting that completely blocking UV light may actually suppress the immune system. Research in Dr. Liberman's book indicates that UV light increases the cardiac output in a high percentage of people, improves EKG readings and blood profiles of individuals with atherosclerosis, reduces cholesterol, helps with weight loss, and is helpful for treating psoriasis and tuberculosis and destroying infectious bacteria. Light therapy is used by Russians and Germans to treat black lung disease. Adequate exposure to natural light increases the level of the sex hormones and activates the skin hormone called solitrol. Solitrol is believed to be a form of vitamin D3 which works with melatonin to generate changes in mood and circadian rhythms.

There are hundreds of studies confirming the health-promoting effects of UV light. *Light Therapy*, published in 1933 by Dr. Krudsen, cites 165 different diseases treated by UV light. In Australia, some interesting research by Helen Shaw published in the British journal *Lancet* found that people working outdoors, and even at high altitudes (which increases exposure to the sun), had one-half the skin melanoma compared to those working indoors under fluorescent lights. Perhaps we would do well to look at all the factors associated with skin cancer rather than just myopically focusing on the dangers of UV light.

The key point regarding sunlight and its UV radiation is "moderation." It is true that an imbalance has been created by our poking holes in the ozone layer. This does not mean, however, that we have to compound this imbalance by completely avoiding the sun, the very source of life on this planet. This fearful relationship to the sun illustrates how much our society is out of touch with the natural harmony of nature that has sustained life on the planet for millions of years. Sunlight is the nutrient of life. The sun is an outer manifestation of our inner light. Although the destruction of the environment alters the natural and normal balance, we should use intelligent moderation when it comes to exposing our bodies to the sun's rays. We must cultivate a healthy balance with the sunlight and not hide fearfully in darkness.

7. Breathe, Bathe, and Work the Earth.

LESS CONTROVERSIAL HEALTH-ENHANCING PRACTICES include deep breathing, therapeutic use of water (using various baths), and working with the earth.

Deep breathing brings in the healing forces of oxygen to help cleanse our system of carbon dioxide waste. The oxygen we take in supplies 90% of the fuel for our metabolism, whereas food only supplies 10%. Vitamin O, or oxygen, is the most important nutrient there is. Without it we would be physically dead within just a few minutes. Presently, many people have so little oxygen in their system that dark field analysis of the blood often demonstrates that within a high percentage of people there is red cell clumping. Often the cause of this condition is inadequate oxygen, a situation which is alleviated when deep breathing exercises and the habit of deep breathing are cultivated.

Air bathing, which is the practice of exposing one's skin to the air and sun with a minimum of clothing on, is another way that toxic waste in the form of gases leaves the skin.

According to Dr. Szekely, a daily water bath has powerful healing and cleansing effects. Daily bathing is considered by yogis to be beneficial for health and spirit.

Spending time in contact with the earth, such as gardening and taking long walks in nature, helps us absorb the health-promoting magnetic radiations of the earth. This is a little-known practice that seems to bring many health benefits. This is particularly important if one is spending a full work day in a high-rise city setting where earth contact is very limited.

Sunning, breathing, bathing, and earth time are all forms of more subtle, but nonetheless important, sources of nutrition that Mother Nature offers us. Being in harmony with these natural forces of sun, air, earth, and water provides a subtle nutrition that is essential to true health. This type of health is not simply the absence of disease that typically passes as health nowadays.

One additional aspect of our nutritional intake is the quality of our thoughts. If our thoughts are in harmony with the natural and spiritual laws, then we will be more able to live and eat in a healthy harmonious way. Although the types of foods we eat affect our thoughts, eating a totally "pure" diet does not necessarily mean our thoughts will be harmonious and pure. Because of this, it is important to limit our exposure to negative or violent inputs that come from some types of TV programs, movies, and "negative thinking" people. It is important to spend as much time as possible in an uplifting environment with people who are generating positive and uplifting thoughts. *The key to being able to generate positive thoughts is to start every thought with love. This means to feel, or try to feel, love in your heart with every act in life. The food of love is the most powerful nutrient we can eat.*

Additional Considerations on Whole Foods

The Benefits of Juice

REFERRING BACK TO GUIDELINES #2 AND #5 and the mention of fresh juices, I'd like to elaborate on this important exception to the wholefood recommendation. Dr. Walker, who lived to age 116 on raw juices and primarily raw food, states in his book *Raw Vegetable Juices* that raw food is the nourishment intended for human beings. He qualifies this by pointing out that the transition to raw foods is a big switch, and the raw juices taken as part of the transition give a person many of the advantages of the raw-food diet without necessarily being on the 80% or more raw-food diet. Juices furnish the body with the live enzymes and bioactive vitamins, minerals, trace minerals, and other unknown factors that are destroyed when food is cooked. The juices bring an alkaline force into the body that helps to neutralize the toxic acidity from which most people suffer. These alkalizing minerals help to restore the alkaline and mineral balance in the cells. They speed the recovery from disease by supporting the body's own healing activity and cell regeneration. Airola points out that raw juices contain an unidentified factor which improves the micro-electrical tension in the tissues and improves the cells' ability to absorb nutrients and excrete metabolic wastes. The use of raw juices has been a major part of many healing programs. For example, they are a major part of Dr. Gerson's therapeutic approach to cancer, a program which has been very successful over the last thirty or more years. Almost all European biological clinics that I am familiar with use raw juices as part of their rejuvenative program.

It was Dr. Walker's belief that when a food is juiced and the fiber is separated out, most of the toxins are eliminated with the fiber. If this is true, then this is another advantage of live juices. The combination of the live fiber in the whole food and the high concentration of enzymes, vitamins, and minerals of the live juices makes an excellent dietary program. Even though live juices are not totally whole in the strictest sense, because they are so high in live enzymes, I classify them as biogenic (high life force), rejuvenating foods. Paavo Airola calls them the "internal baths of health and youth."

Many questions arise about the quality of different juicers. The Nor-walk juicer and other types of hydraulic press juicers are considered the best available. This is primarily because they break up the cellulose walls more effectively and make available more minerals and vitamins to be pressed out into the juice. The hydraulic press juicers are also substantially more expensive.

Other juicers, such as the Champion, are also excellent. Centrifugal juicers, which are usually round in shape, are equal to the Champion in efficiency and pressing ability, but they are less versatile in that one can use the Champion to make other types of food preparations. Regardless of what juicer one uses, as Dr. Walker points out, the most important thing is to drink juices fresh and on a daily basis, regardless of the manner in which they have been extracted.

The freshness of one's juice is vitally important. Some recent research by the Flanagans, as reported in their book, *Elixir of the Ageless*, suggests that the bioelectric, colloidal potential of most juices diminishes significantly overnight and is usually gone within twenty-four hours after they are juiced. Other health practitioners estimate that the enzymes in the juices are destroyed within a few minutes up to an hour or so.

Similar to herbs, vegetables and fruits have specific healing properties that are beneficial for specific organs. The principle of food relating to certain disease conditions is a well-established clinical finding in Western naturopathic systems, as well as in both the Chinese and Ayurvedic systems. In the Western natural healing tradition, Dr. Walker's book *Raw Vegetable Juices* elaborates how specific juices are good for certain health conditions and organ systems.

Since each juice has its own particular properties and is rejuvenative for different parts of the body, I try to vary my juice intake, especially during fasts. Some of the main juices that I use are carrot, beet, kale, wheatgrass, alfalfa,

sunflower and buckwheat sprouts, celery, parsley, spinach, apple, watermelon, orange, and zucchini. It should be briefly mentioned that for certain people with autoimmune diseases, such as rheumatoid arthritis and lupus, the consumption of copious amounts of alfalfa sprouts in juice or in their whole form has been associated with the worsening of these conditions. This information came from only one informal study, and further research must be conducted to confirm this finding and to ascertain what in alfalfa sprouts may be responsible for making certain autoimmune diseases worse.

Food Irradiation and Genetic Engineering of Food

Two emerging government/private industry trends are becoming threats to the ability of the general public to obtain whole food. These practices are food irradiation and the genetic engineering of food. The once publicly defeated issue of food irradiation has re-emerged after Hudson Foods' recall of 25 million pounds of beef due to *E. coli* contamination. For reasons that are typical of American corporate thinking, the press came out with some pro-food-irradiation articles. The thinking basically goes like this: Since the food supply is contaminated, food irradiation is a quick and easy way to fix the problem. They have failed to address the deeper issues. How did the food supply become so contaminated? What are the ramifications of building hundreds of nuclear irradiation plants? What are the damaging effects of nuclear irradiation on the food and the people who end up eating it?

The food supply has become contaminated because of inhumane, hygienically filthy, and fecally contaminated animal processing facilities. The focus on slaughtering rates in many facilities of up to three hundred cows per hour almost guarantees filth and contamination by pathogen-containing fecal matter, especially in beef and chicken. Cheap industrial food has the least chance of being safe or humane (in my world, killing animals for food could never be humane), but mass-produced animals for slaughter remains vastly different from the respect and prayer a Native American would go through before killing a buffalo. Food irradiation does not solve the problem, it only gives the illusion of helping. It actually makes the situation worse because it makes possible the conditions for lowering the hygiene standards even further. Food inspectors are already down in numbers from 20,000 to 7,000. They sometimes have to inspect nine birds per minute and three hundred cattle per hour.

Who are we kidding? Food irradiation is not 100% effective. It is already known that food irradiation does not eliminate all the *E. coli*. Studies show that 1-10% of the *E. coli* are left to multiply during storage. Researchers have discovered radiation-resistant *E. coli* and salmonella. In other words, food irradiation has already become a source of mutant bacteria and perhaps viruses that are radiation-resistant. It is the old antibiotic-resistant story with a new twist. Also, the radiation does not destroy the pathogenic toxins in the meat which are produced by the pathogenic bacteria. Many of these toxins can cause illness by themselves.

Food Irradiation Plants Are Unsafe

Radioactive accidents have already happened at the few food-irradiation plants that exist in this country and worldwide. Since 1974, the Nuclear Regulatory Commission has recorded 54 accidents at 132 irradiation facilities around the world. In New Jersey, which has the highest concentration of irradiation plants, almost every plant has a record of environmental contamination, worker over-exposure, or regulatory failures.

Accidents can be extremely dangerous to surrounding communities and to workers at the plant. In 1991, a worker in Maryland suffered critical injuries when exposed to ionizing irradiation from an electron beam accelerator. In 1988, Radiation Sterilizers, Inc., in Decatur, Georgia, had a leak of cesium-137 capsules into the water, which endangered the workers and contaminated the facility. It is unclear how much got into the community, but clean-up costs were greater than \$30 million. In 1986, Radiation Technology in New Jersey had its license revoked for thirty-two worker safety violations and for throwing radioactive garbage out with the trash. In 1974, Isomedix in New Jersey flushed radioactive water down toilets and contaminated pipes leading to sewers. To irradiate all the flesh

food alone, hundreds of facilities would be needed. The only radioactive isotope available for this level of usage is cesium-137, which is not only deadly today but remains dangerous for approximately six hundred years.

There is no solid evidence to show that eating irradiated food is safe, but there is some evidence to show that it has specific dangers. Food is irradiated with gamma rays. The gamma rays break up the molecular structure of the food and create free radicals. The free radicals react with the food to form new chemical substances called "radiolytic products." Some of these include formaldehyde, benzene, formic acid, and quinones, which are known to be harmful to human health. In one experiment, for example, benzene, a known carcinogen, was seven times higher in the irradiated beef than in the non-irradiated beef. Some of these radiolytic products are unique to the irradiation process and have not been adequately identified or tested for toxicity.

Irradiating the food destroys somewhere between 20 and 80% of the vitamins including A, B2, B3, B6, B12, folic acid, C, E, and K. Amino acids and essential fatty acids are also destroyed. Enzymes, of course, are destroyed as are the bio-photons.

A significant number of studies have shown some dangers of eating irradiated food for animals and humans. Raltech Scientific Services, Inc., after a series of twelve studies on feeding irradiated chicken to different animal species, found the possibility of chromosome damage, immunotoxicity, greater incidence of kidney disease, cardiac thrombus, and fibroplasia. According to *Food & Water Journal*, from which I received much of this information, USDA researcher Donald Thayer concluded, "A collective assessment of study results argues against a definitive conclusion that the gamma irradiated test material (irradiated chicken) was free of toxic properties." Rats who received irradiated food showed a statistically significant increase in testicular tumors and possible kidney and testicular damage. One study in India found that with four out of five children who were fed irradiated wheat, there was the development of polyploidy, an abnormality that is a good indication of potential cancer. When they stopped feeding the children the irradiated wheat, the polyploidy disappeared.

In attempting to determine what to do about food irradiation, the FDA reviewed 441 toxicity studies. The chairperson in charge of new food additives at the FDA, Dr. Marcia van Gemert, testified that all 441 of the studies were flawed. The FDA, however, determined that at least five studies were acceptable under 1980 toxicological standards. The Department of Preventative Medicine and Community Health of the New Jersey Medical School found that two of these studies were methodologically flawed. In one of the five studies, animals eating a diet of irradiated food experienced weight loss and increased miscarriages, possibly due to radiation-induced vitamin E deficiency. The remaining two of the five studies used irradiated food at levels below the FDA-approved 100,000 rads and thus can't be used to scientifically justify food irradiation at the level the FDA approved. Nevertheless, with none of the five studies supporting the use of food irradiation, the FDA approved the use of food irradiation in our food supply. This includes vegetables and fruits as well as spices, and a variety of flesh foods.

Fortunately, according to a CBS poll in August 1997, 73% of US citizens oppose food irradiation, and 77% said they would not eat irradiated food. The wisdom of the public has prevailed up to this moment, and irradiated food has to have a label with the "radura" emblem on it. However, there is new legislation proposed that would not require the radura anymore, and food manufacturers would be allowed to obscure the irradiation disclosure information in tiny print.

Genetically engineered food raises some similar issues in that it is not a well-understood technology and there have been few clear studies of the effects. One soybean that used a Brazil nut for genetic material caused a significant incidence of allergies. Currently there are no FDA regulations on genetically engineered food. Genetically engineered milk products, corn, potatoes, soybeans, squash, cotton, tomatoes, and canola on the market do not seem to require labels indicating that they are genetically engineered. There are genetically engineered foods in infant formula, pizza, chips, and many other aspects of the general American diet. There is no guarantee that our children or grandchildren will not get cancer from it or that it will not weaken the germ plasm. Do we know if these foods are safe for pregnant women?

The environmental implications may be even more impactful. Many scientists believe that this genetic engineering may threaten wildlife and create imbalances in the ecosystem which may have uncontrollable environmental effects. No one knows. This is why it is so important that we stick with organic foods. Not paying attention to the natural laws of the universe usually makes a mess. The ecology and the people of this planet may pay a big price for this experimentation. The only ones who will profit from this in the short run are the food corporations. A shift in consciousness is needed to help all of us begin to act in harmony with nature in a respectful and healing way that is good for us and the planet.

If we follow the guideline to eat only whole foods, the irresponsible tampering with our food supply will have little effect on us personally. If these issues pain your heart and conscience, then there are many positive steps to take such as checking where you buy groceries to make sure the buyers are committed to not marketing irradiated or genetically engineered food. The most active organization on these issues is called Food & Water, Inc. They are

located at 389 Vermont Route 215, Walden, Vermont, 05873, and can be reached by phone at 802-563-3300.

There is no short cut to health and happiness except by following the natural laws of life to the best of one's ability and present knowledge. Humanity and all sentient beings are sustained by the same radiating light of the universe within and without us. If we are to be in harmony with this light as it comes to us through the natural interplay of earth, water, air, and fire via the vegetable kingdom, then it is essential to choose to eat organic agricultural products that are grown in the fullness of this light. We should be very cautious when we attempt to tamper with nature.

When it comes to nature and live foods, "if it's not broken, don't try to fix it." This is especially true since so few of us, if any, are even close to fully understanding the subtle energetics, biophysics, and biochemistry of Mother Nature's offerings to us.

Preview of Chapter 14

THE PRACTICE OF EATING FLESH FOOD is not only inhumane but directly detrimental to our physical health. This chapter dispels the high-protein myth created by the early protein-need research carried out by the livestock and dairy industries that has scared people into a high flesh-food diet. Current research indicates that not only do we get more than sufficient protein on a vegetarian diet, but a vegetarian diet is generally healthier, increases longevity, and increases physical endurance. It is even a prime preventer of osteoporosis to the extent that vegetarian women have less osteoporosis than meat-eating men. A vegetarian diet is a way of loving yourself. Are you ready to let go of your fear of not getting enough protein when shown the evidence that a low-protein diet is better for your health? Are you ready to start loving yourself by eating healthy food?

- I. Problems of eating flesh food
 - A. Cruelty to animals
 - B. Danger to your health
- II. Difference between plant and animal nutrition
- III. Myth of the need for a high-protein diet
 - A. High protein need based on fear not science
 - B. Vegetarian diets have twice the required protein
 - C. Overconsumption of protein contributes to diseases such as osteoporosis
 - D. High protein may accelerate the aging process
- IV. Vegetarian diet increases endurance
 - A. Endurance increased 2-3 times
 - B. Many world-class athletes are vegetarian rather than nonvegetarian
- V. Longer life span and better health with a vegetarian diet



Vegetarianism, A Step Toward Health and Harmony

THE LATE PAUL BRAGG, A GREAT ADVOCATE of healthy natural living and vegetarianism, used to go to the meat market before certain press conferences and get a freshly killed chicken. He was a master at dramatically and cleverly confronting people with the reality of eating dead flesh. He would bring the dead chicken to the conference, and as he held it up in front of the reporters he would describe the horrible living conditions of the chicken; or he would describe how it was filled with antibiotics, arsenic, and a variety of other dangerous substances, e.g., often being infected with salmonella, tuberculosis, or cancer. Then he would point out that if humans were naturally carnivorous, we would act like carnivorous animals and eat the chicken by biting into it raw. And if we were truly carnivorous, we would bite into the guts as carnivorous animals do to their prey. Then he would swing the chicken around his head, throw it into the crowd, and laugh as the people scattered. It is not surprising that no one would pick up this free chicken.

The word “flesh,” in the context of the Bragg story, has a certain dramatic connotation, but in its general usage it best defines the meaning of vegetarianism. A vegetarian is one who does not eat any red meat, fowl, or fish. Often people define themselves as vegetarian if they do not eat “meat” because meat for them is defined as red meat, and not fish or fowl. People who eat fish or fowl are not classically defined as vegetarian. The word “flesh” is not meant to shock the reader as much as to help us operate from a common definition of vegetarianism. Secondly, it does serve to cut through the subtle denial system that is created when euphemistic terms are used, such as “meat” or “red meat” (for cows, oxen, goats, lambs, and other such animals), “broilers” (for fowl), and “sea vegetables” (for fish).

Many things are done to keep us from being aware that we have participated in the killing of Mother Nature's animals to satisfy our appetites. Rather than letting the public be numbed out and anesthetized, Bragg boldly challenged his audiences with such demonstrations. He tried to awaken people from the lulling effects of background Muzak at the supermarket where they bought dead animals for food, or to awaken them from the quiet sophistication of a fancy restaurant, with Mother Nature's flowers artfully placed on a candlelit table where flesh foods are further disguised under delightful sauces.

In today's world, even more so than in Bragg's day, we have escalated the level of abuse that we subject animals to on a daily basis. Animals are routinely and systematically treated as “things;” as simply raw materials of the agribusiness; as stock in the market like gold and silver coins or computer microchips; or as “livestock” rather than living creatures that have a spark of God in them. The outstanding book *Diet for A New America*, by John Robbins, discusses these issues in detail. For example, we do not even call chickens by their names any more. They are called “broilers” if they are going to be eaten or “layers” if their industrial purpose is to lay eggs. The living conditions for chickens are so inhumane, according to Dr. Virginia Livingston-Wheeler, a top cancer researcher, that a great many chickens develop microscopic or identifiable cancer before they are one year old. She says in her book, *The Conquest of Cancer*:

I consider the potential for cancer in chickens to be almost one hundred percent. That is, most of the chickens on the dining tables and barbecue grills of America today have the pathological form of the PC (Progenitor Cryptocides) microbe, which I contend is transmissible to human beings.

She reports that:

Many of the chickens processed for human consumption already display tumors both visible and invisible to the human eye but because of hurried processing techniques have sped by inspectors on the production lines.

Dr. Rous, Nobel Prize winner and long-time researcher at the Rockefeller Institute for Medical Research, states that 95% of the chickens for sale in New York City are cancerous. He also concurs with other researchers in stating

that the chicken cancer is transmissible. I have to note that the transmissibility of these chicken cancer viruses to humans has not been conclusively proven, but as consumer advocate Ralph Nader points out on this issue, there is no proof to show that the cancer is *not* transmitted.

Rarely do these chickens live a normal life span of 15-20 years. The health conditions of the chickens by the time they are used for food are so horrible that a leading poultry worker union official told me in a private communication that he would never eat chicken knowing what he has seen. Flesh eating, particularly as it is practiced today, rather than returning us to harmony with Mother Nature, increases our alienation from nature.

The Difference Between Plant and Animal Nutrition

PLANT NUTRITION, WHICH WE HAVE ALREADY UNDERSTOOD as condensed sunlight in various rainbow forms, is distinctly different from animal nutrition. Without plant nutrition we could not even have a “Rainbow Diet.”

Plants have two “mouths” through which they gather energy and nutrients to share with us. In their leaves, they store and give us the energy of the sun in a direct transfer of light energy that both stimulates our inner light and brings sunlight-activated electron energy to our whole system. A tree is a good model for us because the branches move in every upward direction to gather in the light. The plant or tree stands between the earth and the sun as it gathers in the sunlight. Without the tree, the earth would not be able to draw sustenance from the sun. The plant kingdom also connects us to the unrevealed cosmic forces that rain upon the plant and soil day and night.

The plant burrows with its other “mouth” in the form of a root into the soil of Mother Earth to bring us nutrition directly from the earth. The roots keep growing into the unknown depths of the earth to gather nutrients. Alfalfa, which is exceptionally rich in minerals, may send its roots deeper than sixty feet into the mysterious force field of the earth. The food we take in from the plant is permeated with a synthesis of earth, sunlight, rainwater, and cosmic forces from the stars and planets. This is entirely different than what we can get from animal nutrition. The stellar and other cosmic forces taken in by the plants stimulate our harmony with the universe and accelerate our spiritual development.

According to Rudolf Steiner, plants supply us with their store of the outer light of the sun, which stimulates our inner light during the process of assimilation. In the system of anthroposophical medicine, the light released by the plant world helps to stimulate, form, and maintain our nervous system. In an exquisite, divine way, the taking in of plant food makes a cyclic connection of our inner light with the outer light of the solar system and plant world. One benefit of eating vegetarian food is that the light of plants is directly released into our bodies in a way that stimulates the inner light and the nervous system. This benefit is lost when we eat a primarily animal diet. When we take in animals as food rather than plants, we have to work harder to overcome the energy of the animals’ considerably developed and individualized nervous systems. Because of this, the anthroposophical system of medicine suggests that those with nervous system disorders will do better with vegetarian foods. Dr. Swank, an eminent multiple sclerosis physician, has observed that his patients do better by avoiding flesh foods, particularly from four-legged animals.

To digest vegetarian food requires more inner spiritual light and digestive power than does meat digestion. Just as we lose our muscle tone and endurance when we do not exercise much, by eating animal products we indirectly weaken our ability to take in plant food. This is one reason why a transition to vegetarianism often needs to be gradual. Some of us need to overcome generations of heavy meat-eating behavior in which we have lost some of our subtle digestive power, and so we may initially have difficulty assimilating the living plant forces of a vegetarian diet. One person told me it took him ten years to stabilize into a vegetarian diet and feel healthy. Most people are able to make the transition comfortably within one or two years.

Our relationship with plants also reveals a natural harmony with nature in that we have a reciprocal exchange of gases with the plant kingdom. The animal kingdom, of which we are a part, takes in oxygen from the plants and breathes out carbon dioxide as a waste product. Our plant friends metabolize the carbon dioxide, and with the help of sunlight, convert it to complex carbohydrates and give off oxygen. Plants also supply basic alka-linizing nutrients when we eat them—nutrients we need to balance an acid-generating metabolism. In return, when our acid bodies return to the soil, they nourish plants.

A vegetarian diet avoids the disharmony connected with the poor treatment and killing of animals. This is particularly important because of the inhumane way animals are treated today. In what amount to animal concentration camps created primarily to maximize profits, euphemistically called “livestock farming,” we have turned animals into victims. When an animal is about to be killed, there is a release of adrenaline into the tissues. This fear-released adrenaline is then absorbed by the eater of the dead animal. *Since animals are victims, when we eat animals, we also partake in their victim consciousness. When we eat animal flesh, we take on their fear and pain of death, which permeates every cell.*

An additional perspective on the harmonious animal kingdom–plant kingdom cycle is that the plant kingdom (according to the Old Testament) was given to us for food. The consuming of plant life for food is in harmony with nature in that the fruits and vegetables we eat are harvested in their seasonal cycles in synchrony with their own life

and death cycles.

Each plant, as a form of condensed sunlight, releases specific energies into our systems which help balance our various subtle energy centers as well as our glands and organs. Bircher-Benner, a world-famous European physician who made prominent use of raw foods, wrote that the closer our food is to the natural sun energy, the higher it is on all levels of nutritional value for the human organism. In this context, plant food is at the top of the nutritional scale and animal food is at the bottom. Rudolf Steiner asserted the belief that nothing clouds the nervous system when nourishment comes from the plant realm, and that on a vegetarian diet humanity can more easily delve into the cosmic interrelationships which take people beyond the constricted limitation of the mundane personality.

The Myth of a High-Protein Need

THE “NEED” FOR HIGH PROTEIN IS CENTERED ON FEAR rather than fact. The initial research on which this myth is based was done in Germany around the turn of the century. It was financed, for the most part, by the meat and dairy industries. They decided that 120 grams of protein per day was needed. Today, modern research from around the world shows that a more accurate protein need is between 20 and 35 grams for men or non-pregnant women. The *Journal of Clinical Nutrition* states that we need approximately 2.5% of our total calories to be protein. This is approximately 18 grams of protein per day. The World Health Organization suggests 4.5% of our calories, or about 32 grams per day. Mother's milk has about 5% of its calories as protein.

In 1981, Frances Lappé stated in her revised edition of *Diet for a Small Planet* that as long as one is getting enough healthy calories in the diet, one will automatically get enough protein in a vegetarian diet. In her *original* edition of *Diet for a Small Planet*, she popularized the idea of combining protein foods as a way to maximize protein intake. In doing so, she indirectly perpetuated fears concerning not getting enough “complete” protein. In her *new* edition, she skillfully corrected the inadvertent scare she had created when, after further research, she found out that protein complementarity at each meal is unnecessary. In addition, as physiologists have known all along, humans are able to store protein, so that just as long as there is some semblance of a variety of foods in the diet, there is really no need to worry about protein food-combining in the first place.

According to the American Dietetic Association, pure vegetarian diets in America usually contain twice the required protein for one's daily need. Harvard researchers have found that it is difficult to have a vegetarian diet that produces a protein deficiency unless there is an excess of vegetarian junk foods and sweets. The well-known British medical journal *Lancet* said that vegetarian protein is no longer considered second-class. In fact, if the vegetarian protein is consumed in its live state, even less protein intake is needed because research shows that one-half of the assimilable protein is destroyed by cooking. The Max Planck Institute has found that the complete vegetarian proteins, those with all eight essential amino acids, are superior to, or at least equal to, animal proteins. They showed that these complete proteins were available in various concentrations from almonds, sesame seeds, pumpkin seeds, sunflower seeds, soybeans, buckwheat, peanuts, potatoes, all leafy greens, and most fruits. Many fruits have been found to have the same percentage of complete protein as mother's milk. Paavo Airola stated:

It is virtually impossible not to get enough protein, provided you have enough to eat of natural, unrefined foods.

High-Protein versus Low-Protein Intake

PAAVO AIROLA POINTS OUT that the overconsumption of protein contributes to the development of many of our most common and serious diseases, such as arthritis, pyorrhea, schizophrenia, atherosclerosis, heart disease, cancer, and kidney damage. Airola's research shows that a "high-protein diet causes premature aging." Other researchers have linked high meat consumption with tissue, organ, and cell degeneration and the consequent premature aging that follows. A high-protein intake creates amyloid deposits (a by-product of protein metabolism), which are deposited in the connective tissues and cells and cause tissue and organ degeneration. Dr. Schwartz, a professor of pathology at Frankfurt University and one of the leading experts on amyloid, feels that amyloid build-up could be one of the most important contributors to the aging process.

The metabolic combustion of excessive protein is associated with creating an overly acid system because of the accumulation of toxic protein metabolic wastes such as uric acid, purines, and ammonia by-products. This results in what I call autotoxemia. Along with the excess protein in the system is a putrefaction process of the partially digested protein that results in the stimulation of unhealthy bacterial growth in the colon. These bacteria give off toxins that are absorbed into the blood through the colon. Ammonia, which is a breakdown product of a high-flesh-food diet, is directly toxic to the system. It has been found to create free radical damage and cross-linking (a process associated with skin wrinkles and aging), as well as depletes the body's energy. I have seen alcoholics with liver disease be admitted to the hospital after ingesting a steak because they went into ammonia toxicity. Their damaged liver was not able to detoxify the excess ammonia and they became so ill they needed to be hooked up to life-support machines.

An excess-protein diet has been shown by the US Army to cause a deficiency of B6 and B3. Protein has also been found to leach out calcium, iron, zinc, and magnesium from the system.

Over the past thirty years, a family of research physicians, the Wendts, has developed evidence to show that those who ingest too much protein actually develop a generalized protein storage disease. The Wendts showed, through the use of electron microscope photography, that excess protein results in clogging the basement membranes. Basement membranes are those through which nutrients and oxygen are filtered into the cells from the capillaries and through which the waste products of the cells are filtered out into the blood to be eliminated. The more excess protein there is in the diet, the more protein there is stored in the basement membrane. Eventually the basement membrane becomes so clogged that nutrients and oxygen are not able to pass into the cells and waste products are not able to be eliminated. Contrary to the clogged and thickened membrane of an excess-protein eater, a baby's basement membrane has wide-open pores through which nutrients easily pass.

This clogged membrane results in cellular anoxia (decreased oxygen in the cell) and cell malnutrition. In the Wendts' observations, the protein builds up in such a way that it contributes to hypertension, atherosclerosis, cardiovascular disease, and adult-onset diabetes. The Wendts coined the term "capillogenic tissue degeneration," meaning degeneration at the capillary level of circulation. By recommending fasting and a low-protein diet, they were able to reverse this process of basement membrane clogging, cellular stagnation, malnutrition, and anoxia. Excess protein in the system, which is almost always the case with a high-flesh-food diet, results in a protein storage disease that slowly chokes off the cellular system. This clogging of the basement membrane is reversed and prevented by a low-protein, vegetarian diet. As our diets get progressively lighter, our basement membranes become more porous, like a baby's, and our cellular assimilation improves.

Another Danger of the High-Protein Myth

WE HAVE A DIETARY EPIDEMIC OF OSTEOPOROSIS (loss of calcium from the bones) in the US. Approximately one out of three women will sufficiently demineralize her bones to cause at least one fracture in her lifetime. These fractures are significant because more women die from osteoporosis-related fractures than from cancer of the breast, cervix, and uterus combined. The toll due to these fractures is about 200,000 deaths per year. One to two million fractures occur per year. *The evidence is overwhelming that the most important single dietary change one can make to prevent osteoporosis is to decrease the amount of protein in the diet.* The clinical evidence from several major studies shows that *vegetarians have significantly less bone loss than those who have a flesh-centered diet.* The *Journal of Clinical Nutrition* in 1983 reported in the largest study of its kind that by the age of 65:

- Female nonvegetarians had an average measurable bone loss of 35% as compared to only a 7% bone loss in female vegetarians. In other words, female vegetarians had five times less bone loss by the age of 65 than those on a flesh-centered diet.
- Male vegetarians had a 3% bone loss as compared to males on a flesh-food diet with 18% bone loss.

These statistics showed that *female vegetarians had 2.6 times less bone loss than nonvegetarian men and five times less bone loss than nonvegetarian women.*

In 1984, the *Medical Tribune* reported that vegetarians had significantly stronger bones. A study in 1988 of 1600 women, reported in the *American Journal of Clinical Nutrition*, showed that by the age of 80, those who had been vegetarians for at least 20 years had 18% bone loss as compared to a 35% bone loss of women on a flesh-centered diet. Note the following information:

Reasons Vegetarians May Be Protected from Osteoporosis

1. A vegetarian diet brings us into more general harmony with nature and closer to the way our physiologies are meant to function.
2. Vegetarians consume less protein. The result is that vegetarians tend to be slightly alkaline rather than acidic, as are many meat-eaters. One way the body compensates to buffer against acidity is to pull calcium out of the bones to make alkaline salts in the blood, which act as a buffer against the acidity. Research shows that a protein intake of greater than 75 mg per day results in a negative calcium balance in which calcium is lost from the bones.
3. Flesh foods are considerably higher in phosphorus as compared to plant foods. The high phosphorus draws the calcium out of the bones. This produces a loss in bone density.
4. A high-flesh-food diet causes more osteoporosis in that it is high in fat. This fat blocks the calcium uptake by actually forming biochemical soaps with the calcium, which are then excreted by the system. Poor digestion is also a possible cause of low calcium. Low stomach acid is associated with poor calcium absorption.

The research also shows that high calcium supplementation does not seem to make a significant difference in the prevention or treatment of osteoporosis. For example, members of the Bantus, an African tribe, get about 350 mg of

calcium per day, almost one-fourth of the National Dairy Council recommendation of 1200 mg. The Bantu women, however, do not suffer from osteoporosis and rarely suffer from bone fractures. Although there may be some genetic component helping the Bantus, it is significant that the genetic relatives of the Bantus in the US, who are eating the standard American diet, have bone loss percentages that are about the same as the Caucasian population. Eskimos who have a calcium intake of 2000 mg per day, but a high protein intake of 250-400 grams per day, have a high rate of osteoporosis. The Eskimo diet again points to the fact that a high-protein diet is a more powerful force in causing osteoporosis than a high-calcium diet is in preventing it. A two-year study of postmenopausal women reported in the *British Medical Journal* in 1984 showed that 2000 mg of calcium in the diet, as compared to a diet with 500 mg per day, showed no difference in the demineralization process. A study in the *New England Journal of Medicine* also demonstrated that calcium supplementation has no effect on the rate of osteoporosis as compared to women who took no supplementation. Not only does a high calcium intake not help prevent osteoporosis, but a world expert on vitamin D, Hector DeLuca, Ph.D., has pointed out that large amounts of calcium in the diet tend to turn off the body's production of vitamin D hormone and thus stop the bone rebuilding process. Excess calcium also seems to reduce copper and zinc absorption in the bone. These are minerals essential for proper bone formation.

Certain vitamins and minerals are important in the biochemistry of bone formation. One of the most important is **vitamin D**, which in its hormonal form facilitates calcium absorption into the system and the bone. By staying in the sun for at least 20 minutes we get enough vitamin D to meet all our calcium metabolism needs. Unfortunately, perhaps because of sedentary lifestyles of older house-bound people, the average vitamin D level in older subjects is 47% lower than in younger subjects.

Vitamin C, which is found in higher concentrations in a vegetarian diet than in a meat-centered diet, is another important vitamin for bone development and reformation. **Folic acid** and **pyridoxine (B6)** are also important.

One of the most important minerals is **silicon**. It stimulates the growth and formation of bone and teeth. Silicon increases much-needed collagen in the bone. Silicon is found in mother's milk, in the fiber fraction of brown rice, in leafy greens and bell peppers, and in the herb called horsetail. These are primarily vegetarian sources. I have found that horsetail is extremely high in silicon and very good for bone repair, regenerating fingernails, and improving hair strength and vitality in my patients. Only organic silicon helps to do this. The inorganic form doesn't seem to have this effect.

Magnesium, although comprising 0.1% of bone as compared to calcium being 20.2%, plays an important role in fixing calcium into the bone and also converting vitamin D to its active hormonal form. Magnesium is found in high concentrations in leafy greens, whole grains, legumes, seeds, almonds, black-eyed peas, curry, mustard powder, alfalfa sprouts, avocados, apples, bee pollen, beets, dates, dulse, figs, garlic, lentils, most green vegetables, grapefruit, kelp, eggs, and liver. Vegetarians get more than enough magnesium in their diet.

Manganese, copper, potassium, strontium, and zinc are other minerals that are important in bone and cartilage formation. Plants that contain magnesium also contain these minerals.

Boron, a little-known mineral, is needed in small amounts for proper bone metabolism. It could be one of the most important minerals in the prevention of osteoporosis. Boron has been found to be essential for the production of the active form of vitamin D. A study done in 1986 on post-menopausal women found that adding 3 mg per day of boron reduced the urinary loss of calcium by 44% and significantly increased the serum concentrations of natural estrogenic hormones. The boron increased the blood 17 β -estradiol levels (the most biologically active estrogen in humans) to concentrations equal to those found in women on estrogen replacement therapy. This increase in estrogen also helps prevent bone loss. This boron stimulation of natural estrogen levels is important because of the controversy around the use of estrogen supplementation.

As pointed out by the National Institute of Health Consensus Development Conference on Osteoporosis in 1984, the risk of endometrial cancer increases with the use of estrogen therapy. The April 1991 issue of the *Journal of the American Medical Association* contained an article showing there was a direct linear relationship between the duration of use of menopausal estrogens and the risk of breast cancer. This article reviewed the major studies on the subject and is considered by some as one of the most thorough epidemiological studies analyzing the relationship between menopausal estrogens and breast cancer. Combining results from all the studies, regardless of the quality of the study, the statistics showed that if estrogens were used for 15 years, a woman had a 30% excess risk of breast cancer. If used for 25 years, there was a 50% increased risk of breast cancer. If only the five studies with the highest scientific quality were used, an increase of 60% incidence of breast cancer was found in the 15-year estrogen use group and 100% percent increase in breast cancer incidence in the 25-year use group.

Another piece of this osteoporosis controversy is a recent 14-year study reported in the *Journal of the American Medical Association* in 1984, which showed there was no significant difference of hip fractures between women who did or did not have estrogen replacement therapy. These researchers found no association between fracture risk and hormone replacement therapy.

Boron may make a significant difference in our thinking about osteoporosis for its effect on estrogen alone, as well as its role in improving the metabolism of calcium, phosphorus, and magnesium and decreasing the calcium, magnesium, and estrogen losses. The two best sources of boron are kelp and alfalfa. Kelp is also high in silicon. Spinach, snap peas, cabbage, lettuce, apples, leafy greens, and legumes are also good sources of boron. Since boron is found primarily in vegetarian foods, this may be an additional reason why vegetarians have less osteoporosis. If you are growing your own garden, you may want to put borax in the soil to increase the boron concentration in your fruits and vegetables. The studies show a large margin of safety with boron. Dogs and rats were safe on more than 35 times the 3-milligram dosage. There are areas in the world where people naturally take in 13 times the required amount of boron in their food without any apparent side effects.

One can see that the prevention of osteoporosis is greatly enhanced by a low-protein, vegetarian diet. Such a diet provides an adequate-to-high source of calcium, boron, and other essential minerals and vitamins needed for optimal bone function. The low protein of a well-balanced vegetarian diet does not leach calcium from the bones. One study found that vegetarian women even stop having bone loss after the age of seventy. In addition, leading an active, balanced life with emphasis on regular communion with the angels of exercise and moderate sunshine helps prevent osteoporosis. One study showed that women in their seventies who exercised moderately increased their bone mass by 1% per month as compared to the controls who did not exercise and continued to have bone loss. An optimal level of exercise for the maintenance of bone mass is essentially similar to the activity of a young adult. The best exercises are antigravity ones in order to create healthy bone stress and stimulation. Walking is one of the best antigravity exercises, but there should also be some exercise for the upper shoulder girdle and arms. Hatha yoga is an excellent activity for the upper body, as are mild to moderate traditional exercises like push-ups, et cetera. Betty Kamen, Ph.D., who has written an excellent booklet on osteoporosis, points out that we need to stand about three hours a day in order to prevent osteoporosis or do antigravity exercises continuously for at least 20 minutes five days per week. A life in balance brings a calcium balance.

Vegetarian Diet Increases Endurance

IT HAS BEEN A WELL-KEPT SECRET that a vegetarian diet increases endurance. Modern athletes are just beginning to discover what Dr. Irving Fisher first reported in the *Yale Medical Journal* in 1917, and what at least four more recent studies have shown: *A vegetarian diet helps the body function at an endurance rate that is approximately twice that of a flesh-centered diet.* He found that even sedentary vegetarians had more endurance than meat-eating athletes. In a study confirming this finding, Dr. Joteyko of the Academy of Medicine in Paris compared vegetarians and nonvegetarians from all walks of life and found that vegetarians had 2-3 times the endurance and took one-fifth the time to recover. In a Danish study in 1968, the performance of the same people on three different diets showed that on a strictly vegetarian diet they averaged 167 minutes on a bicycle endurance test as compared to 57 minutes on a high-meat and -dairy diet. In Belgian research comparing handgrip strength, vegetarians averaged 69 squeezes as compared to a weaker 38 squeezes for nonvegetarians. They also found that vegetarians had a faster recovery time. Dr. Chittenden, another researcher in this area, and Dr. Fisher surmised that one of the reasons meat-eaters had less strength and endurance is that the protein breakdown products such as uric acid, urea, and purines poison and interfere with muscle and nerve function. This immediate factor, plus all the other factors we have been discussing, make a difference when one is interested in endurance.

There are many world-class athletes who were vegetarian at the time they won their world records and performed their greatest athletic accomplishments. Dave Scott was a lactovegetarian when he won the Hawaii Iron Man Triathlon an incredible six times! He won it three times in a row, while no one else has ever won it twice in a row. Vegetarian Edwin Moses was an Olympic Gold Medalist and top performer for eight years in the 400-meter hurdles without losing a race. Murray Rose, who as a teenager became one of the world's greatest swimmers and later starred as Tarzan, was a vegetarian. Paavo Nurmi was another vegetarian. The "Flying Finn," who set twenty world running records and won nine Olympic gold medals, found a vegetarian diet the best for endurance. Gayle Olinekova, a premier women's long-distance runner and longtime vegetarian, told me that she ran the Boston Marathon after a seven-day water fast and had one of her best times. Vegetarians have been able to develop strong bodies as well as endurance. For example, there is Andreas Cahling, a raw-food vegetarian who won the Mr. International award in 1980. Roy Hilligan won Mr. America. Stan Price, another vegetarian, set a world record in the bench press.

Population Studies Validate the Health and Longevity Effects of Vegetarianism

OF 154 CENTENARIANS INTERVIEWED IN BULGARIA, only five ate meat regularly. It is a well-established fact that the longest-lived people throughout the world, such as the Hunza Kuts, Bulgarians, East Indian Todas, Russian Caucasians, and Yucatan Indians, are either complete vegetarians or eat meat infrequently. They eat between one-third to one-half the protein that we eat in the US.

In a study of Seventh-Day Adventists, the largest single group of vegetarians in the US, it was found that their colon cancer rate was 1.0 as compared to 2.7 for those on a flesh-centered diet. They were also found to have 40% less coronary disease than those who ate flesh. In a comparison study of strict Seventh-Day Adventists versus those of the same religion who ate meat three times per week, they found the strict vegetarians had one-half the mortality from breast cancer. The general mortality rate of Seventh-Day Adventists was 50-70% less than the US population at large.

The *Journal of the American Medical Association* in 1961 estimated that 97% of heart disease could be prevented by a vegetarian diet. Research statistics show that a high-flesh-food diet causes ten times more heart attacks in the 45- to 65-year-old population than a diet of fresh vegetables, fruits, nuts, seeds, and grains. Twenty-six percent of people who eat meat have hypertension as compared to 2% of vegetarians. Flesh-eaters have 2.3 times more colon cancer, 4 times more breast cancer, 3.6 times more cancer of the prostate, and 10 times more cancer of the lungs than do vegetarians.

Because the animals whose flesh is eaten are higher on the ecological chain, there is a higher concentration of radioactive materials from fallout as well as higher amounts of pesticides, fungicides, and many other environmental toxins. This undoubtedly adds to a decrease in vitality and quality of health. Vegetarian women have been found to have between one-third to one-half the pesticides in their tissues as compared to meat-eaters. There are approximately fourteen times more pesticides in flesh foods than in vegetarian produce. Flesh-eaters have to face the threat of the disease toxo-plasmosis in pigs and cattle and trichinosis in pigs, as well as the threat of salmonella poisoning, especially from chickens. It is estimated that approximately one-third of commercial chickens carry salmonella. Most of the one million cases of food poisoning reported yearly are salmonella.

The social costs of these self-induced, dietary-related illnesses are enormous. The National Heart, Lung, and Blood Institutes estimate that the cost of heart attacks alone in 1983 was sixty billion dollars in medical bills, lost wages, and productivity. Mordecai Ben-Porat once introduced a bill in the Israeli parliament to outlaw flesh-eating because it was estimated it would save 4,266 billion British pounds from the improved health that would result from a vegetarian diet. The bill did not pass, however.

Wartime epidemiological population studies of vegetarian diets have brought some fascinating results. In 1917-1918, when little meat was available in Denmark due to the war, the death rate of civilians dropped 34% as compared to the yearly average for the previous 18 years. In the same sort of wartime situation during World War II in Norway, with little meat available, the death rate from circulatory disease dropped significantly. The effect of the nonflesh diet was confirmed when, after the war, the meat consumption rose and the death rate also rose correspondingly. In Great Britain, where there was also a decrease in flesh food in the diet, infant and postnatal deaths dropped to their lowest rates ever. Dental health improved in children. The amount of anemia decreased as did the rate of cardiovascular diseases. In general, overall quality-of-health statistics improved in England with less meat in the diet.

A Cornell-China-Oxford Project on Nutrition, Health, and Environment, which began in 1983 to track the health of 6,500 Chinese in sixty-five provinces throughout China, has provided some interesting preliminary results. This study offers some particularly potent epidemiological evidence of the superior health benefits of a primarily vegetarian diet. According to Nathaniel Mead of the *East-West Journal*, some scientists are calling this study the "Grand Prix of epidemiology." Although this study may go on for decades, a preliminary release of data available in 1990 has already made several important points.

Preliminary Data

Cornell-China-Oxford Project on Nutrition, Health, and Environment

- ⌘ Diets for children that are high in protein, fats, calcium, and calories promote early growth, but higher breast cancer rates among women.
- ⌘ A vegetable-based diet is more healthy than an animal-based diet.
- ⌘ The healthiest percentage of fat intake is 15-20%, which is easy to achieve on a vegetarian diet.
- ⌘ The body gets adequate amounts of calcium from plant sources and does not need dairy to prevent osteoporosis.
- ⌘ A vegetarian diet reduces the risk of nutritionally related diseases.
- ⌘ The study suggests that if flesh-centered societies were to switch to a vegetable-centered diet, it might be a greater factor in improving world health than all the doctors, health insurance programs, and pharmaceuticals that are present approaches to improving world health.

There is an overwhelming amount of evidence, from the microcosmic cellular level to the macrocosmic global cultural level of research, that makes a single point: *a vegetarian diet is superior for one's health in almost every way as compared to a flesh-centered diet. A vegetarian diet is a way of loving yourself and your body*

BLACKBOARD FACTS

In 1983, 60 billion dollars were lost on medical bills, lost wages, and productivity due to heart attacks in the US.

Compared to flesh-food eaters who are 45-65 years old, lactovegetarians have three times less heart attacks. Vegetarians have ten times less heart attacks.

Flesh-eaters stab themselves in the heart with their forks.

Is this a way to love yourself?

The Need for B12 Supplementation

NEW INFORMATION HAS ARISEN SINCE the first edition of *Conscious Eating*, based on recent studies and techniques that call for a new assessment of the role of B12 in the vegetarian diet.

The progressive medical community no longer considers serum B12 levels the most accurate measurement of healthy B12 levels. In other words, a normal serum B12 may not mean that B12 levels are healthy. It is now agreed that we need a urinary assay of methyl malonic acid (MMA) to most accurately determine healthy B12 levels. When I first wrote about B12 in *Conscious Eating*, the establishment of the methyl malonic acid assay as the “gold standard” had not yet taken place. Some of my statements at that time were based on the world research which was using serum B12. A serum B12 of 200 pg. or less was considered a deficiency. As a result of the new gold standard and what we know about MMA and homocysteine, the B12 serum levels should be around 340–405 pg. Therefore, serum B12 levels less than 340–405 pg, and in some cases less than 450 pg. may be considered as indicating a B12 deficiency.

Using the methyl malonic acid test as the gold standard, elevated MMA was found in subjects with a B12 up to 486 pg. Up until this time, most of the studies in world health basically say that 200 pg. and above is not considered deficient. That was somewhat why my earlier edition of *Conscious Eating* suggested that B12 in many vegans and live-food practitioners was low normal, but still within normal. Using the gold standard methyl malonic acid test, studies show that without B12 supplementation vegans have higher homocysteine levels than lacto-ovo vegetarians and non-vegetarians, which means they are deficient in B12. High homocysteine levels are connected with the potential for heart disease, arterial destruction, neurological pathologies, Alzheimer's, age-related hearing loss, neural tube defects, recurrent loss of pregnancy, and increased mortality.

Consistent research over the last decade has shown that vegans and live-food practitioners of all ages and sexes have a much higher risk of becoming B12 deficient. There are more than fifteen studies on vegans and an additional three studies on live-food vegans that have substantiated this point. The most dramatic was a study done by Dong and Scott on eighty-three subjects at a Natural Hygiene Society conference. Ninety-two percent of the non-B12 supplementing, primarily live-food vegans were B12 deficient. This seemed to increase with the amount of time as a vegan. *There are no studies that show that vegans do not get Bu deficient over time.*

The conclusion from the present research is that: it is a reasonably safe bet that about 80% of the vegan and live-food population, within six to ten years, runs the risk of a subclinical or clinical B12 deficiency and increased homocysteine levels. Perhaps over a thirty- to fifty-year span it may reach 100%. An even higher percentage of newborns run this risk, as they have a B12 reserve of 25 ng versus 2000–3000 ng for an adult. There are a variety of symptoms of B12 deficiency. The first is low energy. This could be a reason why some people just don't feel well on these diets, besides not getting the right protein/carbohydrate/fat mix for their constitutional type.

Out of concern for all of my clients, for my fellow live-food practitioners, vegans, and their children, I strongly advise supplementation with an actual B12 human active supplement, especially during pregnancy and while breast feeding. My general recommendation is that if you already have symptoms of B12 deficiency, you can start with a 1,000 pg. injection, or according to the recent research, an oral administration of 1,000 pg. per day for two to four weeks. The safest and healthiest approach to B12 supplementation is a food concentrate or extracted B12 supplement. The Tree of Life carries a liquid B complex extracted from yeast that gives a minimum of 12 ng of B12 per one-half teaspoon, which is easy for babies, children, and adults to take. My opinion is that it is best to take B12 on a daily basis at 10–100 ng per day to prevent a potential B12 deficiency. More research is necessary to be sure of the exact minimal amount.



Do Vegetarians Get Enough Vitamin B12?

THE OFTEN-HEARD HEALTH QUESTION raised by nonvegetarians and vegetarians alike is whether vegetarians get enough B12. The answer is an important one because B12 deficiency can cause nerve degeneration and even death. I will speak more about the symptoms of B12 deficiency later. The B12 question is not one that can be answered merely by a simple recounting of the results of one or two laboratory studies or theoretical discussions. In order to answer this question to my own satisfaction I had to look at my clinical experience and review a lot of the clinical studies on lactovegetarians and vegans. Vegans are those who do not consume any animal products, including dairy.

As pointed out by Dr. Alan Immerman in his review of vitamin B12 status on a vegetarian diet, many studies of vegans have appeared in the literature in the last 35 years. Of those studies suggesting an apparent B12 deficiency in vegans, none fulfilled the full scientific criteria for a legitimate B12 deficiency diagnosis. According to Dr. Immerman, all of the scientifically complete studies on vegans showed no evidence of B12 deficiency. Such studies include: 1. Harding and Stare in 1954, who examined 26 vegans and found no B12 deficiencies and general good health; 2. Ellis and Montegriffo, who also studied 26 vegans and found no evidence of B12 deficiency—four of the vegans had been on the diet for more than 13 years with no supplements and had normal B12 levels; and 3. A study by Sanders in 1978 on 34 vegans, all of whom had normal blood and physical exams. Sanders divided the subjects into two groups: one group who had been taking some sort of B12 supplement (six people were taking regular B12 supplements) and one group who had absolutely no supplements. The average B12 serum level was higher in vegans who were taking some sort of food or vitamin B12 supplements. Their serum level was 421 picograms/cc (pg/ml) as compared to 253 pg/ml for the vegans not taking any supplements. No subject had a serum B12 less than the 80 pg/ml defined as indicative of deficiency by the World Health Organization in 1968. Some private laboratories now use 115 pg/ml as the indicator of deficiency. *These major studies, plus other studies, suggest that dietary B12 deficiency is rare among healthy vegans and all other types of vegetarians, whether they be lactovegetarians or lacto-ovo vegetarians.*

Like the “high protein” myth, the B12 scare aimed at vegetarians also dissolves in the face of scientific studies of population subgroups. In studies of villagers in southern India who are vegetarian, B12 deficiency was also found to be a rare occurrence. Dr. Baker, who studied some populations in southern India, found people with serum levels below 140 pg/ml who were what he considered healthy subjects with no clinical evidence of B12 deficiency. This suggests that a low serum level, without neurological, hema-tological, or any other clinical evidence of B12 deficiency, is not necessarily an accurate way to diagnose B12 deficiency. If serum B12 were used as the sole criteria, it would be necessary to categorize much of the population of India and other developing countries as deficient in B12.

My observation, however, is that the serum B12 level in vegetarians and in vegans in particular is lower than that of people on a flesh-centered diet. Instead of thinking of these levels as inadequate, it seems more accurate to broaden the range of acceptable normals based primarily on serum levels of nonvegetarians to include averages for vegetarians, which do run lower.

In general, I have begun to find that the physiological profiles for vegetarians, and particularly vegans, are different than those of nonvegetarians. For example, vegans will have lower cholesterols and triglycerides than flesh-eaters. If we used vegan physiology as the standard, more flesh-eaters would be considered to have high cholesterols rather than just high normal cholesterols. Broadening the range of normals for B12 levels to include healthy vegans gives us a much clearer framework from which to assess health. It also forces us to look at our cultural biases.

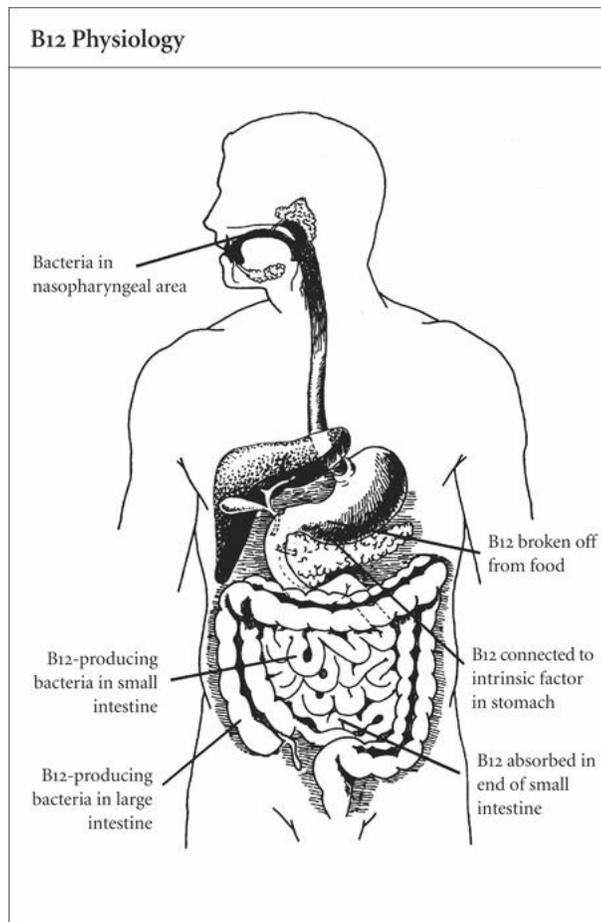
Live-food vegetarians exhibit different baseline normals of nutrient levels compared with other dietary subgroups, including cooked-food vegetarians. Raw-food people will have less enzymes in their digestive secretions because their bodies have adjusted to the high enzyme concentrations that come in the raw foods. If large amounts of cooked food were added to their diets, we could expect that within a week the enzyme contents of their secretions

would shift back to that of the regular cooked-food population. I have also observed that as the health of a person improves and their diet includes more live food and less protein, they seem to need less food and have more vitality. This positive physiological shift is a fairly consistent observation. This may also explain why the cultural studies of those primarily vegetarian populations which abound in good health and longevity find that the subjects are able to live healthily on between one-third to one-half the protein and calorie intake.

The question that needs to be asked is: “Why do healthy vegans routinely not suffer from B12 deficiency, despite fears, mythologies, and some ‘scientific’ prognostications to the contrary?” To answer this, it is helpful to understand a little about the physiology of B12.

Physiology of B12

1. B12 is only available from bacterial production. B12 is not made by plants or animals. All B12 found in plants and animals is from bacteria growing in or on them. Animals are a better source of B12 than plants because they have more bacteria growing in them. Not all the B12 produced by bacteria are the same. Some are very useful to humans and others are called analogs, which are similar to B12 in chemical structure but are not utilizable by human vitamin metabolism. Some theorize that these analogs may even block the utilizable B12 uptake by occupying some of a limited number of B12 uptake sites. For example, in a human's stool there are approximately 100 micrograms of B12; 95% are analogs, which are not utilizable, and 5% are the true B12 that is active for humans.
2. Humans have B12-producing bacteria throughout the body. It is estimated by Doctors Thrash and Thrash that the microorganisms between the teeth and gums, around the tonsils, in the tissue at the base of the tongue, and in the nasopharyngeal passages produce about .5 microgram per day. Dr. Baker and his associates have shown that there are bacteria in the small intestine which produce utilizable B12 which is assimilated into the system through the lower end of the small intestine (the ileum). Colon bacteria also produce 5 micrograms of utilizable B12 daily, but B12 doesn't seem to be absorbed from the colon.



3. B12 absorption begins in the stomach, where gastric secretions of proteases and hydrochloric acid split off the B12 from the peptide bonds that attach it to the food. Proteases from the pancreas later disconnect from the food whatever B12 has not yet been separated out. A healthy pancreas, as well as strong gastric secretions, are needed for maximal B12 absorption. Once the B12 is disconnected from the food, it binds to the intrinsic factor. It then goes to specific receptor sites in the ileum part of the small intestine, where it is absorbed into the system. About one percent of the B12 absorption is directly through the ileum via the basic diffusion process. It is this one percent which is probably the basis for the use of the extremely high B12 tablets we see in the health food stores.
4. An additional mechanism for maintaining a high B12 level in the system is the high quantities secreted by the liver into the bile. Dr. Herbert, a national expert on B12, estimates that anywhere between 1 to 10 micrograms of B12 are secreted into the bile, and therefore into the small intestine, each day. Normally we absorb much of the human-active B12 back into our system through the ileum. In this process unwanted analogs are excreted. Dr. Herbert feels that vegetarians may be getting more B12 from the reabsorption of the bile B12 than from the foods they eat. Since

humans need less than 0.5 micrograms per day, this bile secretion is indeed significant.

5. Louis Sullivan, a researcher at Harvard, showed that only 0.1 micro-gram of B12 is needed to get a physiological response in B12-deficient people. Dr. Herbert estimates that between 0.2 and 0.25 micrograms per day is probably adequate for any individual. Dr. Herbert claims there is no objective published data that show any larger amounts of B12 have any additional value for greater health or longevity. Other leading experts state that 0.5 microgram per day is sufficient. Dr. Baker reports that the daily B12 intake of healthy South Indian vegetarian villagers, who had no signs of B12 deficiency fell in the range of 0.3 to 0.5 microgram per day. This estimate did not factor in B12 loss from cooking their food. This range of .25-5 microgram per day as the minimum needed for adequate B12 is approximately 250 to 500 times less than the 50- to 100-microgram tablets offered in health food stores for daily doses. It is estimated that about 1-3% of these B12 tablet megadoses will cross the intestinal barrier directly; the rest will not be utilized.

Vegetarians have also been shown to have better absorption rates than meat-eaters. Meat-eaters, who might ingest 10 micrograms of B12 per day, are estimated to absorb 16%, while vegans, who may be ingesting 1 microgram per day from their food, are estimated to absorb up to 70%. This is another example of how the adaptive physiology of the human organism changes as a function of the quality of the diet. Dr. Thrash suggests that those on low-fat and low-protein vegetarian diets with good health habits may need only 0.05 microgram of B12 per day, and that nonsmoking vegans may not need any external source of B12 in their diets or through supplements because their own friendly bacteria living in the nasopharynx, teeth, gums, and small intestine would produce enough B12.

6. Vitamin B12 is heat-sensitive but not entirely destroyed by cooking. Research shows that between 23.7% and 96.4% of B12 is destroyed by boiling or baking, depending on the food type and the length of heat processing. Boiling milk for two to five minutes decreases the active B12 amount by 30%. Another study of longer boiling time showed a 50% loss. Sterilization of milk in sealed containers for 13 minutes caused a 77% loss. Milk pasteurization has been reported to have as low a loss as 10%. In condensed milk, the B12 loss is between 40% and 90%.

7. B12, when isolated as a single factor, is highly mutable. When it is put in a multivitamin, for example, B12 often mutates into an analog state and is no longer utilizable for body consumption. Because B12 breaks down to analogs when in a multivitamin, it is advisable that if one is to take a B12 supplement, it should be taken as a single, separate supplement rather than in a multivitamin.

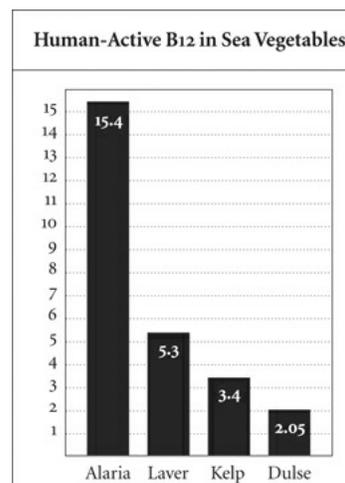
Why Vegetarians Do Not Become B12-Deficient

Now that we understand some of the B12 physiology, the reasons why vegetarians, and particularly vegans, do not normally develop B12 deficiencies give some insight into the subtleties of the B12 question. There is enough B12 in dairy products alone to supply adequate B12 for lac-tovegetarians, so they are considered less at risk for B12 deficiency.

One of the major sources of B12 for vegans is their own bacteria. As mentioned above, bacteria growing in the nasopharyngeal areas, as well as the teeth and gums, supplies .5 microgram of B12 a day, alone covering one's daily needs. There is also some absorption from the bacterial production in the small intestine, as well as reabsorption from bile. Additional research has found that there is actually more B12 produced by the bacteria in the small intestine of a vegetarian than in that of a meat-eater. This fits perfectly with the aforesaid principle that different dietary and lifestyle patterns produce different physiologies, which reveal different normal baseline readings. A study of South Indian immigrants who had no B12 deficiencies in India, but who developed some deficiencies when they migrated away from India, sheds some additional insight into the importance of small-intestinal bacteria. Researchers found that the bacteria in the stomach of the South Indians while in India had higher amounts of B12-producing bacteria than that of Britishers. It was hypothesized that the move to England changed the types of bacteria colonizing the small intestine. This new and less dense strain of bacteria did not produce sufficient B12 to meet the B12 needs of the emigrating South Indians. Some studies of the well water of these same South Indians also showed that in India there was considerably more B12-producing bacteria in the water, thus meeting more of their B12 needs.

The B12 bacteria growing in water and found on vegetables that we eat are another way vegetarians get B12. One unusual study focused on a vegetarian community that grew their food with fertilizing methods used in the Orient for thousands of years, namely using fertilizer that has composted human feces mixed in. It was found that the foods had an ample quantity of B12 because of this. The point is that the B12 is not in the food, but on the food. It is produced by the local bacteria, and those bacteria are commonly abundant in our environment and on our food. B12 intake can come from multiple sources.

B12 is found more often in root vegetables because of their contact with the soil bacteria. This means that if we are too scrupulous in washing off our food we may actually be washing away part of our B12 intake. Researchers have found high concentrations of B12 in and on mung beans, bean sprouts, comfrey leaves, fermented soybeans, peas, peanuts, lettuce, alfalfa, rice pol-ishings, turnip greens, legume root nodules, and whole wheat. Each harvest seems to have variable amounts of B12 so that sometimes the same food may not have any B12 on it.



Research in the late '80s financed by the Maine Coast Sea Vegetables company at my suggestion has found that kelp, alaria (like wakambe), dulse, and laver (like nori) all have high amounts of human- utilizable B12. Their sea

vegetables were sent to an independent lab that tests for human-active B12. Alaria had 15.4 micrograms (μg) of B12 per 100 grams. Laver had 5.3 μg of B12 per 100 grams. Kelp had 3.4 μg of B12 per 100 grams. Dulse had 2.05 μg of human-active B12 per 100 grams. What this means is that one-half ounce of alaria, which is a large single portion, will supply ten times the daily amount needed. One-half ounce of dulse, which has the lowest amount of human-active B12 of the sea vegetables, will also meet the daily requirement.

A Vegan Diet Supplies Enough B12

BLOOD AND TISSUE LEVELS OF B12 are lower but adequate in healthy vegans. In lactovegetarians and flesh-eaters the B12 level is higher. There is some speculation that after 20 years on a vegan diet one might run into B12 deficiencies because of a very slow and gradual B12 depletion. Unfortunately almost no research is available on vegans of more than 20 years who have never taken any B12 tablets or food supplements containing B12. Sanders' research, for example, included only three vegans of greater than 20 years' duration, but two were taking food supplements—food concentrates such as spirulina which are high in B12—and one was taking a B12 tablet. The longer-than-20-year vegan who has never taken a food supplement of B12 may be a rare find. It is only theoretical speculation as to whether they might, in fact, be B12-deficient. The practical reality is that many vegans, either thoughtfully or inadvertently, have taken some B12-containing food supplement. My own serum B12, after more than 20 years vegetarian and 8 years on primarily live foods, was a surprisingly high 500 micrograms. This 500-microgram value is about double what most vegans have and equal to or greater than that of most meat-eaters. Most vegans, however, do not eat primarily live foods, a dietary approach which conserves the B12 in the food because there is no loss from cooking. During this time I was not taking any B12 supplements but I was regularly taking a blue-green algae from Klamath Lake, called *Aphanizomenon flos-aquae*, which I discovered through an independent laboratory analysis to be high in human-active B12. The laboratory report showed that one gram of the blue-green algae powder contained .279 microgram of active B12. This is equal to approximately the daily dose needed of active B12. Although I did not take the algae from Klamath Lake for this reason, it has obviously been a perfect vegetarian source of B12 for me. This high human-active B12 algae may not be the same as green or other blue-green algae which have been noted to have high concentrations of the inactive B12 analogs.

I have also observed in my clinical practice that there is a certain percentage of both meat-eaters and vegetarians who seem to need B12 supplements. One patient who was a meat-eater came to me with a history of becoming ill after contracting hepatitis, and for 20 years he needed B12 shots on alternate days in order not to feel sick or become constipated. As I worked with him to move his diet in the direction of vegetarianism, his overall health got stronger and he then only needed to get a B12 shot once every two to six months. I have observed other patients who, under mental or physical stress, become B12-depleted and are helped considerably by a B12 shot. In my earlier work as an orthomolecular psychiatrist (use of vitamins and minerals to improve mental imbalances), I observed certain patients with psychosis or borderline mental states whose minds became normal after a B12 shot and who were able to be maintained on regular B12 shots. There is a lot we do not understand about B12 and human function. Even the editorial of the June 1988 edition of the *New England Journal of Medicine* by William Beck, a prominent B12 researcher at the Massachusetts General Hospital, suggested that newer research may ultimately justify previously judged "indiscriminate" use of B12 injections. This comment applied mostly to particular subpopulations of people who are not primarily vegetarians and yet still need B12 because of certain pathological conditions. Dr. John Dommisse, a prominent orthomolecular psychiatrist from Virginia, uses B12 for post-traumatic stress disorders with great success. So, whether vegetarian or not, there are groups of people who need B12 supplementation.

Causes of B12 Deficiency

THE MAIN CAUSES OF A B12 DEFICIENCY are poor absorption, not enough B12 intake, or physical or mental stress. It is my experience that the following causes are far more responsible for B12 deficiencies than general type of diet:

1. A disruption of the normal B12 mechanism of absorption may be caused by such things as: low hydrochloric acid in the stomach, insufficient pancreatic digestive secretions, inadequate intrinsic factor production in the body, and disrupted small intestine function. Some of these things happen with a lowered quality of health and vitality, such as in older people who are not making efforts to maximize their vitality with good health habits. Some of the chief causes of poor absorption are: intestinal parasites, such as fish-tapeworm; malaria; liver disease; chronic pancreatic disease; chronic infections, such as systemic mucocutaneous candidiasis; cancer; specific diseases of the gastrointestinal tract, such as regional ileitis, chronic atrophic gastritis, tropical sprue, and celiac disease; and poor digestion in general. Putrefaction in the small intestine from a high-protein diet or contaminated meat, chicken, or fish may stimulate the overgrowth of pathogenic bacteria that may also block the B12 uptake.
2. Surgery can compromise intrinsic-factor secretions of the small intestine or even remove the B12-absorbing segments of the small intestine.
3. Excess fat or protein may increase B12 needs.
4. Cooking our foods rather than eating them live depletes available active B12.
5. Drug intake—such as alcohol, tobacco, coffee, para-amino salicylic acid, colchicine, birth control pills, and antibiotics—increases the body needs for B12.
6. Megadoses of vitamin C seem to lower serum B12 levels. Studies show that people who take two or more grams per day create a depletion in the B12. Some have estimated that a high vitamin C intake increases the B12 needs tenfold. Others feel that anyone taking more than 500 mg of vitamin C per day for a long time should check their B12 status.
7. Foods with a high amount of B12 analogs, such as multiple vitamins, might cause a depletion because the analogs and active B12 compete for B12 receptor sites. I believe further research is needed to confirm this.
8. Low B6 and iron may also cause B12 depletion.
9. Raw soy products increase the excretion of B12 from the system.
10. Thyroid disease has been implicated in B12 depletion.
11. One of the most important causes of B12 depletion is pregnancy and lactation. Pregnancy causes an increased requirement of B12 due to the fetal drain on the maternal stores. The fetus requires about 50 micrograms of B12 per day. Under normal conditions, including that of healthy vegan mothers, there is enough stored B12 to meet the needs of both the mother and the fetus. One Indian researcher concluded that vegetarians have lived for ages giving birth to healthy children and having healthy mothers who have never eaten flesh foods. This researcher felt there was no evidence to suggest that a vegetarian population consuming adequate lactovegetarian food is at any more risk than nonvegetarian mothers and babies.

While this may be true, there is one relatively small study of 17 macrobiotic babies and mothers reported in the *American Journal of Clinical Nutrition* which is of concern to me. It indicated that 56% of the macrobiotic mothers had a lower B12 than the study's nonvegetarian control group. Their infants also had a lower B12 level. According to what we know, this lower serum B12 would be expected. It is significant that none of the mothers showed any clinical signs of a B12 deficiency. My concern was that at least one of the 17 macrobiotic babies had mild symptoms suggestive of a B12 deficiency which went away when the mother was given B12 supplementation in the form of food sources which contained active B12. One out of 17 in such a small study is not a highly significant finding or even suggestive that a macrobiotic diet is B12-deficient in the actual B12 taken into the body. One possibility for these findings is that there is something detrimental in the macrobiotic diet that leads to B12 deficiencies from poor assimilation or poor health that it creates.

There are other individual reports, as well as a Dutch study of macrobiotic mothers and infants reported in the *East-West Journal* May 1988 issue, showing infants of mothers on a macrobiotic diet who have developed B12 deficiencies, with some macrobiotic children actually developing blood changes and physical symptoms that were

reversed with B12 supplementation. This tendency may also be true for mothers and infants on fruitarian diets. Again, a possible explanation for these results is that the health of these mothers and infants was compromised in a way that led to poor B12 assimilation or retention.

I have observed in my practice that a variety of women who have come to me, both vegetarian and meat-eaters, have become B12-deficient during pregnancy and lactation. *My impression is that B12 deficiency with symptoms, not simply a lower serum B12 as compared to nonvegetarians, is due more to poor health resulting in poor assimilation of B₁₂ or accelerated loss of B12 from the system rather than not enough B12 in the diet. It is possible that this may happen more easily on a macrobiotic or fruitarian diet than for other types of vegetarian diets. Cooking the food also contributes to the problem because it may destroy up to 90% of the B12.*

My recommendations for preventing B12 deficiencies stemming from certain diets and pregnancy are: follow Dr. Paavo Airolas suggestion of three tablespoons daily of brewer's yeast or yeast that has been grown on a B12-supplemented medium; eat sea vegetables; and take one gram (approximately four capsules or one-half teaspoon) of algae from Klamath Lake. This approach has been most helpful in preventing this problem, as well as meeting the increased need for protein during pregnancy. I have often found that one B12 injection for a chronically depleted, postpartum woman brings tremendous relief almost immediately. Oral B12 supplementation often works, but not as well. Because of the general compromised health level of our total population, both vegetarians and flesh-food-eating mothers would do well to pay careful attention to their B12 levels during pregnancy and lactation. For more information on nutrition during pregnancy, see Chapter 30.

Signs of B12 Deficiency

A B₁₂ DEFICIENCY MAY INITIALLY BE SUGGESTED by symptoms of general fatigue and tiredness. Symptoms may manifest first through the blood system with anemia-caused fatigue and other blood cell changes. B₁₂ is important in DNA synthesis, which affects the ability of all cells to reproduce and function properly. Over time, all the cells may be affected. The nerve cells are one of the primary targets. Onset of symptoms of nerve degeneration is suggested by loss of feeling in one's fingers and toes and loss of feeling in the spine. Other symptoms may be a progressively poor sense of balance, clumsiness, loss of the sense of joint position orientation, cutaneous pain upon light touching, and decreased reflexes.

Another set of symptoms that might first manifest is mental in origin. Increased irritability is often the first symptom. There may also be memory loss, inability to concentrate, depression, and other subtle symptoms that may mirror senile dementia. There may be personality changes or even hallucinations. These neuropsychiatric changes in certain people, according to Lindenbaum's studies at Columbia Presbyterian Medical Center, may occur without accompanying changes in the blood picture in about 30% of people. Deficiency symptoms in infants manifest as lethargy, loss of appetite, speech impairment, and other signs of slow physical and mental development.

The basic test for B₁₂ is a serum B₁₂ which tests for active B₁₂ in the blood. We normally have about 40% of the B₁₂ in the blood as analogs. The O malhamensis bacteria (which will only grow on human-active B₁₂) test shows only the active B₁₂ and is probably the most accurate. A generally safe range is between 150 and 200 micrograms per cc. In one study on students put on a vegan diet without B₁₂ supplements, it was noted that within one to two years most of the students' serum B₁₂ dropped and then leveled off slightly above 200 micrograms/cc. A basic blood test for B₁₂ deficiency is the one for anemia associated with enlarged red blood cells. There are some new tests which measure homocysteine and methymalonic acid in the urine (the secretion of these two metabolites is increased when the B₁₂ levels are lowered). This test is particularly good for screening for subtle neurological changes when the blood lab tests are normal. It is good for children and infants as well.

Because of the relativity of the serum B₁₂ levels and the urine metabolite levels, a B₁₂ deficiency should be diagnosed by evidence of clinical symptoms plus these tests being low. A low B₁₂ level can be used as encouragement to take more B₁₂-containing foods, such as yeast, sea vegetables, or the algae from Klamath Lake. A good time to do a screening for B₁₂ is about two years after becoming vegetarian to see where one's B₁₂ has leveled off. Afterwards, one should check every three to five years since it takes that long to run out of B₁₂ if there is a malabsorption problem. My belief is that any vegetarian whose health has been compromised in some manner and who chooses not to take any high-B₁₂-containing foods would be wise to screen once a year for a possible low B₁₂ level. Although there is little reason for a healthy vegan to be concerned, everyone who has gone 20 years as a vegan would be wise to check their B₁₂ levels. The results would be important data to share.

Summary of B12 Discussion

HEALTHY VEGETARIANS (LACTOVEGETARIANS AND VEGANS), as a matter of practical reality do not have to worry about B12 deficiency problems and do not have to take any B12 supplementation, except during pregnancy, when yeast, sea vegetables, and/or algae from Klamath Lake are advisable as a preventative measure. Synthetic B12 supplementation and flesh foods are not really needed. For people eating 80% or more live food, even less whole-food supplementation is needed. On the other hand, vegans should be aware that although the B12 is sufficient when they are healthy, they do seem to have lower B12 serum levels than people on a flesh-centered diet. Because of this they run a higher risk of developing a B12 deficiency under a variety of stressors, as mentioned above. The slight risk of a B12 deficiency for a vegetarian under stress may be well worth it as compared to the major risks to health taken by those on a flesh-food diet in terms of heart diseases, cancer, decreased endurance, and the general inferior health of a flesh-centered diet as compared to a vegetarian diet. By regularly including high-B12 foods, even this risk is minimized.

The healthiest and best prevention for lactovegetarians and vegans against B12 deficiency is to honor Mother Nature and our bodies with optimal health habits and a live-food diet in which no B12 is destroyed by cooking. I was not able to find any studies of B12 levels in live-food vegans, but my observation of the few raw-food vegans who have been on such a diet for more than 20 years without any supplementation of B12 is that they are the healthiest group of people I have ever seen in our Western culture. The health and vitality of some of these people in their 70s and 80s is heart-warmingly astounding.

If you regularly use alcohol, coffee, birth control pills, antibiotics, more than 500 mg of vitamin C a day, aspirin, or have chronic digestive or colon problems, you are in danger of becoming B12-deficient, especially if you are a vegetarian who cooks your food.

Cooking food destroys 30-90% of the B12—protect yourself by giving up these habits and/or taking brewer's yeast, bee pollen, sea vegetables, or algae from Klamath Lake.

A healthy vegetarian with a healthy lifestyle does not need to worry about B12 deficiency, especially if 80% of the food eaten is uncooked.

Preview of Chapter 16

IN THIS CHAPTER WE DIRECTLY SHOW, with the use of population studies and other forms of discussion, that ideas held in the West and in Traditional Chinese Medicine (TCM) about the “dangers” of a vegetarian diet are primarily myths. Although there may appear to be a shade of truth to some of these ideas in the short run, when the whole process of the skillful transition to vegetarianism is considered over time, these shades of truth become significantly less relevant. Are you ready to learn more information about the safety of a vegetarian diet?

I. Cultural bias of TCM against vegetarianism

A. Myth of spleen yang deficiency

B. Vegetarian diet superior to meat-centered in prevention of chronic disease and creation of health, vitality, endurance

II. Why vegetarians have less anemia

III. Why vegetarians in Alaska are not cold

IV. Doctors' issues with vegetarianism

V. Vegetarian women have normal menses



Doubts About a Vegetarian Diet

NOW THAT WE HAVE CONSIDERED some of the health issues, it is time to address some of the cultural doubts arising about vegetarianism. I have already answered some of the usual questions that arise in our Western culture; now I will include some of the questions raised by the system of medicine known as Traditional Chinese Medicine (TCM). More and more people in the West are using this system. TCM is a time-honored medical system that has a unique way of conceptualizing health and disease. The main approaches used in TCM are acupuncture, herbs, and dietary advice. This system has its primary roots in China, which is still its major advocate; however, variations of TCM have been created in Japan and Korea, and interest is growing in the West.

Within the ancient system of TCM there is a widespread belief that a vegetarian diet, and especially a live-food diet, will create a “spleen yang deficiency.” A spleen yang deficiency is usually associated with anemia, less endurance, decreased digestive power, excess water, excess phlegm (mucus), edema, internal coldness, a weakened immune system, paleness, cyclic imbalances (including the cessation or imbalance of the menstrual cycle), and general poor health. These ideas need to be critically addressed.

Not all TCM practitioners believe these symptoms automatically happen on a vegetarian diet. For example, one of the world's most respected leaders in classical acupuncture, Englishman Jack Worsley, N.D., C.A., director of the Worsley Institute of Classical Acupuncture, does not hold this unqualified negative attitude on the merits of vegetarian diets. Other Western-trained acupuncturists are also moving in this direction of accepting the health benefits of vegetarianism. Like Westerners who are trained in Ayurvedic medicine who do not share certain Indian cultural beliefs about vata and live foods, these Western acupuncturists are not blindly holding onto the ancient Chinese cultural beliefs about vegetarianism. With some noteworthy exceptions, such as the vegetarian Shaolin priests, throughout history and to this day the Chinese culture has attached a higher social status to including flesh in the diet. Being a pure vegetarian in China is, to some degree, associated with poverty and lack of social standing. This bias is reflected in the Chinese medical establishment, which in turn influences medically endorsed dietary advice. Fortunately, most modern research shows that these myths are not substantiated either epidemiologically or on the individual dynamic level.

In all fairness, I must point out that although China does not embrace vegetarianism as its main dietary system, it is not as heavy a meat-eating country as the US. According to the China Health Project, a major study I mentioned in a previous chapter that was initiated in 1983 by scientists from the Chinese Academies of Preventative Medicine, Cornell University, and University of Oxford, only 7% of the protein in the Chinese diet comes from animal sources as compared to 70% in the American diet. In the Chinese dietary pattern, eating a whole steak as the main part of a meal is considered to be unbalanced and excessive. In China, a flesh-eater may have only three to four ounces of meat per day, whereas a typical heavy flesh-eater in the US consumes much more. The prestigious researchers of the China Health Project concluded that the Chinese eating patterns were considerably healthier because so much less flesh food was eaten. In essence, the Chinese traditional diet is closer in content to a Western vegetarian diet than the typical Western, meat-centered diet.

With almost every bias, however, there is also some shade of truth that is expanded upon, and in this case exaggerated into somewhat of a myth regarding the dangers of a vegetarian diet. It is inevitable and unavoidable that with any kind of diet, vegetarian or otherwise, there will always be some individuals who will become unbalanced due to their own health problems and psychophysiological constitutions they bring to the situation. These exceptions may become yang-deficient and/or imbalanced on a poorly chosen vegetarian diet if they do not have appropriate guidance in the type of vegetarian diet they need. It may also be possible that a flesh-food diet more quickly improves a person who is yang-deficient. However, it does not mean that it is healthier in the long term than a vegetarian diet.

Another category which I call the transition phase to vegetarianism, can also temporarily support the myths. As the body adjusts to vegetarianism and/or live foods, it is common that there be some internal and external sensitivity

to coldness for a while. When the transition is carefully, patiently, and intelligently made, one eventually passes through this coldness and begins to feel warmer. For example, during fasting, one may feel cold and weak as the detoxification process unfolds. If one happened to be seen by a TCM doctor in the middle of this detoxification phase, one might receive a yang-deficient diagnosis and be advised to eat meat for strength and heat. But what is actually happening is that the vital force is healing and strengthening at a deeper inner level so that by the end of the fast the person emerges stronger and more vital than when he or she began. In other words, looking at the total process gives a radically different understanding than simply looking at the apparent, observable symptoms at one point in the process. I believe this misunderstanding of the significance of the transition process is how some of the bias and confusion has manifested into a belief system.

In intelligently handling the detoxification stage of the transition to vegetarianism and dealing with the “internal process” of shifting the body's physiology, the true remedy is not flesh food but the highest-quality vegetarian foods, herbs, and enzymes that enhance and balance the transition process so the person glides to a higher level of health. Although flesh foods may temporarily balance someone, by patiently travelling through the vegetarian transition phase, one becomes grounded on a deeper level of health.

In fact, the epidemiological statistics show that in the long run flesh foods speed the aging process and lower vitality so that one becomes permanently grounded (six feet underground?) sooner. If we look at health patterns in different nations and cultures with a high incidence of longevity, more people over 100 years old are vegetarians or primarily vegetarians than meat eaters, or they may eat meat on a monthly frequency only. As previously mentioned, only 5 of 154 Bulgarians over 100 were not vegetarians. The research I've already cited shows that vegetarians have between two and three times the endurance and, at least in one study, recover from physical activity at least two times faster.

The general health data indicate that vegetarians have a lower incidence of chronic disease and cancer in all categories and superior health, vitality, and endurance. Because of this, one can deduce that their immune systems would also be stronger. Live-food vegetarians, in addition, do not suffer from the chronic overstimulation of the immune system caused by the effects of cooked food. Although I do not know of any studies comparing the immune system strengths of live-food vegetarians to flesh-food eaters, theoretically the immune system of a live-food eater should be stronger. I have observed in my clinical practice that live-food vegetarians seem to have the most resistance to disease. This stronger immune system is contrary to what would be associated with a spleen yang-deficient pattern as theoretically predicted by the TCM system.

The Chinese are not alone in their cultural myths. If we were to believe the culturally biased propaganda of the beef industry, a juicy steak dripping with blood is supposedly loaded with the high-quality iron that one cannot get anywhere else. Nowadays it is easy to be scared into believing the mythology that vegetarians will become anemic and therefore spleen yang-deficient. The research, however, shows this is just another cultural myth disseminated through the flesh-centered Chinese or American medical establishments. One of the most startling historical events to repudiate this myth is evidenced by the British statistics during World War II. When the meat supply was seriously curtailed due to scarcity and the diversion of meat to the fighting soldiers, the population in England had significantly less flesh foods in the diet. *The rate of anemia significantly decreased in the total civilian population during the time of the least flesh food consumption.*

Why do vegetarians have less anemia? The answer, I believe, lies in the leafy greens, which often have a higher concentration of iron than flesh foods. For example, according to the *U.S.D.A. Handbook no. 456*, gram for gram, kale has fourteen times more iron than red meat. Spinach—Popeye's comic strip power food—has approximately eleven times the iron of ground beef. Strawberries, cabbage, bell peppers, and even cucumbers have more iron per weight than ground beef or sirloin steak. Researchers have also found that vitamin C, which is high in fruits and vegetables, significantly enhances the body's ability to assimilate iron.

In the *American Journal of Clinical Nutrition*, 1984, research by Hallberg and Rossander showed that nonheme iron (iron found in vegetarian food as compared to the heme iron of flesh food) was absorbed four times better if there were enough accompanying fruits and vegetables to provide 65 mg of vitamin C. There is at least that much vitamin C in one-half green pepper. Vegetables such as kale, spinach, broccoli, and mustard greens are high in both vitamin C and iron. Beans and peas are also high in iron. Cooking in iron pots is another indirect source of iron. According to White, in *Let's Talk About Food*, the iron in food can be increased by 100 to 400% by being prepared in iron pots. The clinical evidence as reported in such science journals as the *Journal of Human Nutrition*, *American Journal of Clinical Nutrition*, and *Journal of the American Dietetic Association* clearly shows that in vegetarians, iron assimilation is as high as, or higher than, that of flesh-food eaters. Anderson, Gibson, and Sabry, in the *American Journal of Clinical Nutrition*, report that the hemoglobin and iron levels in vegetarian women who were regularly menstruating were higher than that of women of comparable age in the general population. The iron in the vegetarian diets of these women was also higher than in the diets of the general population.

Research cited by Rudolph Ballentine, M.D., in his book *Transition to Vegetarianism* indicates that moderate amounts of oxalates and fiber found in a vegetarian diet do not block iron uptake. This may also be true for phytates as well. This is significant because of myths that fiber and oxalates may block uptake of iron. Dr. Ballentine points out there is some speculation by scientists that long-term vegetarians assimilate the iron from vegetables more efficiently, and perhaps differently, than meat-eaters.

Two major foods that decrease iron uptake are excessive dairy products and black tea with meals. It is common that in the transition to vegetarianism people increase their dairy product consumption as a protein substitute in order to assuage their illusory fear stemming from the “inadequate protein” myth. The problem is that dairy foods are very low in iron. To equal the amount of iron in a bowl of spinach, one would have to drink approximately fifty gallons of milk. In addition, dairy products are thought to have inhibitors to iron absorption which have not yet been specifically identified. Narins, in *Biochemistry of Non-heme Iron*, points out that breast-fed babies have a higher rate of iron absorption than babies given cow's milk, even if their formulas are enriched with iron. This is a significant consideration because the populations at high risk for iron deficiency are pregnant women and children. The fetus depends on iron for a normal development, and in infants iron is also specifically needed for mental development.

Eating a lot of milk products, such as milk, cheese, yogurt, butter, and ice cream, contributes to an iron deficiency. A high-dairy-product intake not only blocks iron uptake, but because it is filling, it diminishes intake of high-iron foods such as fruits, grains, and vegetables. The few new vegetarians who may become iron-deficient because of a high dairy intake may psychologically crave what they remember on a subliminal level as the prime source of iron and find themselves wanting meat. As meat is also a good source of iron, they feel better if they eat it. In one's transition to vegetarianism, to avoid an iron deficiency it is better to eat a minimal amount of dairy and lots of fresh fruits, vegetables, and grains.

The tannic acid in black teas is another common cause of blocked iron uptake. If one insists on drinking black teas in one's diet, it is best to drink the tea at least one hour before meals. Tannic acid is also found in the skins of almonds. If one eats a lot of almonds, then it is a good idea to take off the skins, as explained in the food preparation section.

A note of caution for those who are iron-deficient: The best way to increase iron is to eat high-iron foods such as kale and spinach. Iron supplementation for a short time will not cause an imbalance, but research reported in the *American Journal of Clinical Nutrition* in 1986 shows that long-term use of iron supplementation can result in a decreased copper, zinc, and selenium absorption.

Does Vegetarianism Make You “Cold”?

WHAT TCM PRACTITIONERS DESCRIBE AS “internal cold” and “dampness,” two symptoms of yang deficiency, is worth considering, especially if one is a kapha type. In the Ayurvedic system, people with predominantly kapha constitutions tend toward water imbalances and internal cold. They also have problems with excess mucus production when the weather is cold and damp. These are also symptoms of “internal cold and dampness” in TCM. Excess mucus in itself can contribute to coldness. My clinical experience shows that kapha types have considerably less mucus on a live-food vegetarian diet. My findings parallel the findings of Arnold Erhet's mucusless diet approach. Erhet found that when he put himself and thousands of his followers on a diet that eliminated highly mucus foods, such as flesh food, dairy, and cooked grains, they had less mucus and phlegm. According to Erhet, my clinical experience with patients, and my own personal experience (my predominant constitutional type is kapha), a live-food vegetarian diet is the best for decreasing mucus in the body. This is distinctly opposite to what is hypothesized by TCM practitioners.

It is possible to create a water excess in a vegetarian, particularly with a live-food diet. This is done by increasing fruit and vegetable intake and not decreasing intake of other fluids. Fruits and vegetables contain more water than flesh foods and grains. Fruits consist of approximately 80% highly structured water, the most biologically active water available. There is no better water that one can take into the body. The more fruits and vegetables one eats, the less one needs to drink water or other liquids. In this way the fluid balance can be maintained at a healthy level. Making the adjustment of drinking less fluid to avoid a fluid excess and “dampness” in the system as one increases fruit and vegetables in the diet is primarily important for those with kapha constitutions. In general, most people do not get enough fluid, so the increased intake of fruits and vegetables will usually be beneficial to health. By being aware of this dynamic interplay between water intake, biological water from fruit and vegetables, and one's constitution, one can intelligently work with the diet to become more in tune with optimal fluid needs.

Initially, one may feel a little colder on a live-food vegetarian diet. If one stops one's observation and efforts at this beginning transition stage, one will jump to the conclusion that there is a spleen yang-deficient condition developing because of the experience of coldness. If one continues to make scientific observations on the process, after several months, and even a year or so with some individuals, one actually becomes warmer. As the body becomes healthier, the arteries become less clogged and circulation improves. With better circulation, vitality, and health, the body then begins, in the long term, to become warmer on a vegetarian and live-food diet, even in a climate as harsh as Alaska. In the meantime, until one completely adjusts, dressing a little more warmly, exercising, and using heating herbs and foods will make this transition easier.

This increased warmth has certainly been my own experience. My body is more tolerant of cold now than when I was on a flesh-centered diet or when I initially became a vegetarian. Earlier, I mentioned a preliminary retrospective survey that I conducted with vegetarians and live-fooders in chilly Anchorage, Alaska. It was carried out at my suggestion by the owners of Enzyme Express, a wonderful live-food restaurant in Anchorage. We found that one hundred percent of the vegetarian customers who filled out the questionnaire had no difficulty with the cold Alaskan weather. More than two-thirds of these people ate 50% or more of their exclusively vegetarian food live. Approximately one-third of the total surveyed ate 75% of their food live. All reported increased health and vitality on this diet, even in the Alaskan climate. This is consistent with the finding in *Diet for A New America* which showed that “over 95% of former meat eaters report that a switch to a vegetarian diet increases their energy, vitality, and overall feeling of well-being....” About half of these people in the Alaskan study used warming herbs and one-third used exercise to help keep them warm during the winter. Most were long-term vegetarians, although 10% had made the transition to vegetarianism in the last six months.

In the transition to a vegetarian or live-food diet, the moderate use of heating herbs such as ginseng, cayenne, ginger, curry, and black pepper helps to supply a drying and heating energy. The point is that even an initial transitory coldness can be compensated for by the use of heating herbs and food as part of the diet. Although I initially used ginseng to increase yang heat, I stopped using it after one year because it made my body too hot. This was obviously a sign that the transition to increased internal heat had been made.

Another powerful approach to increasing body heat is to exercise vigorously on a daily basis. This distinctly increases body yang energy and dries the body of excess fluid. This is consistent with Ayurvedic teachings which stress the importance of kapha people exercising regularly. With intelligent application of the use of heating herbs,

foods, and exercise, the initial coldness that one may encounter transitioning to vegetarianism, particularly if one is a kapha or vata type, can be intelligently compensated for and balanced. The best use of these herbs and exercise is during the time of maximum kapha imbalance toward excess mucus and coldness between 6 AM and 10 AM, or 6 PM and 10 PM. If one is a vata, the use of herbs and exercise is best between 2 AM and 6 AM, and 2 PM and 6 PM.

The answer to the question “Does vegetarianism make you cold?” is “No, it does not make you cold.” Aside from a transient coldness in some people as they detoxify and rebuild, the overall positive health effects of vegetarianism—including increased circulation—gradually increase one's inner heat and strength. I have certainly found that to be the case for myself since I became a vegetarian in 1973.

Be Aware of a Transition Detox

A VEGETARIAN DIET, AND PARTICULARLY A LIVE-FOOD DIET, is a powerful detoxifying diet. Too short a transition time from a flesh-centered diet to a vegetarian diet may precipitate a detoxification reaction or healing crisis. For those who are hesitant to become vegetarians or biased against a vegetarian diet as a way of life, the malaise often associated with detoxification reactions is sometimes pointed to as evidence that a vegetarian diet is not working or isn't good for a person. This way of thinking misses the point because the temporary weakness, nausea, and malodorous smells are actually signs that the diet is healing the body. If one makes a careful, patient transition, there is usually little problem with the transition to vegetarianism. If one begins to detoxify in a way that is uncomfortable, then one can always slow the transition process to a rate that one can more easily tolerate. Most often, the detoxification process, if it occurs at all, usually lasts a few days to several weeks, although it sometimes lasts longer.

Do Vegetarian Women Stop Having Menses?

ANOTHER MYTH IS THAT THE MENSTRUAL CYCLE of vegetarian women stops. The menstrual period of females will tend to stop, whether vegetarian or not, when a critical minimum percentage of body fat, which contains a certain amount of estrogen, becomes too low. This cessation of menstruation has been observed in both vegetarian and nonvegetarian female athletes. While it is true that vegetarians have less fat in their diet than the 40% fat of the typical American diet, this lower percentage of fat is associated with improved health. What I do observe is that most women who become vegetarians have a more moderate menstrual flow and become more regular.

The one exception to this is women on a fruitarian diet. After about eight months to one year on an exclusive fruit diet, many of these women have been noted to cease their periods entirely. In helping some of these women recover from the effects of a fruitarian diet, my observation is that as soon as they return to a balanced vegetarian diet and reach the needed minimum body fat, their menstruation resumes. With a few rare exceptions, most people are not ready for a fruitarian diet. I do not generally recommend a fruitarian diet unless a person is prepared physically and spiritually and has been on live foods for an extended period of time. It is definitely not recommended when one is pregnant or breast-feeding.

Because of the greater SOEF energy contained in a vegetarian (and particularly live foods) diet, one may experience the diet as too powerful when one has been years on a flesh and cooked-food diet. The transition from cooked vegetarian foods to living foods may produce the same sort of experience. For example, when many of the people who live in India or have stayed there a long time come to America and try to eat salads instead of the highly cooked vegetarian food to which they are accustomed, initially they often have digestive troubles. This does not mean that a live-food diet weakens digestion. It is a sign that the body did not have adequate time to strengthen itself to handle the purer, higher-energy food. It may take several months or even years to acclimate oneself. This is why it is so important to carefully monitor the transition. In time, the digestive fire grows strong enough to handle the live or vegetarian foods. This transition process can be helped with chewing the food well and using ginger, cayenne, and/or live plant digestive enzymes. If the digestive process becomes slow because one is too alkaline, then rebalancing the body toward a neutral pH by eating more acid-producing foods is worth trying. The transition to a higher-energy vegetarian and live-food diet can be successfully managed if one pays attention and is patient.

The research, as well as my own clinical experience, strongly indicates that a vegetarian does not have to worry about iron deficiencies or developing a spleen yang deficiency. This is particularly true if one develops a vegetarian diet individualized to one's psychophysiological constitution and based on a regimen of organic, whole vegetables, grains, fruits, beans, nuts, seeds, and legumes. If one eats a vegetarian diet high in junk and other processed foods, sweets, coffee, black teas, and dairy, it is possible to run into all sorts of health problems. This is compounded if the diet is primarily cooked rather than live. A primarily live diet enhances mineral, vitamin, and protein absorption.

I hope that I have sufficiently shown that *a well-balanced, vegetarian diet does not lead to anemia, less endurance, less vitality, poor health, decreased digestive power, excessive inner "dampness," weakened immune system, cessation or imbalance of the menstrual cycle, or long-term internal coldness. In short, one does not have to worry about becoming spleen yang-deficient if one becomes a vegetarian.*

BLACKBOARD FACTS

The first direct teaching in the Bible to be vegetarian comes from Genesis 1:29:

“And God said, Behold, I have given you every herb-bearing seed which is upon the face of the earth, and every tree, in which is the fruit of a tree yielding seed; to you it shall be for food.”

Nowhere in the Bible can you find a place where God commanded that we kill and eat any of his living creatures who walk upon the face of the earth.

Preview of Chapter 17

THIS CHAPTER CLEARLY MAKES THE POINT that the first dietary law and the diet prescribed for spiritual life in the Torah (Five Books of Moses) is vegetarian. It quotes Torah scholars and rabbis who support the idea that the eating of flesh foods was a temporary concession because the people were not ready to return to a vegetarian diet. There is no positive commandment in the Torah which tells people to eat flesh food. We discuss five moral precepts that a vegetarian diet fulfills. Four of the past Chief Rabbis of the pre-State and State of Israel have been vegetarian. Israel has the highest percentage of vegetarians outside India. Are you ready to look at your religious and cultural dietary habits in the light of this understanding of the Five Books of Moses and make the changes that will bring you into alignment with them?

- I. Old Testament and prophets supportive of vegetarianism
 - A. Vegetarianism the first dietary law
 - B. “Thou shalt not kill” commandment
 - C. Vegetarianism is the dietary blueprint for spiritual love
 - D. Changes that occurred when flesh-eating was consented to in Judaism
 - E. Vegetarianism as the diet compatible with the Messianic Epoch
- II. Vegetarianism fulfills five moral precepts of the Torah
 - A. Compassion and noncruelty to animals
 - B. Peace
 - C. Preservation of personal health
 - D. Feeding the hungry
 - E. Preservation of the Earth
- III. Vegetarianism as the spiritual nutritional blueprint preparing for the Golden Age of Peace



Judaism and Torah (Old Testament) Teachings on Vegetarianism

THE FIRST TEACHING ABOUT VEGETARIANISM in the Torah or Five Books of Moses and also the first dietary law of Judaism is:

Behold, I have given you every herb-yielding seed which is upon the face of all the earth, and every tree, in which is the fruit of a tree yielding seed—to you it shall be for food. (Genesis 1:29)

It does not take much imagination to assume from this original commandment that God's intention was for humans to be vegetarians. The Talmud, the highly respected commentary on the Jewish laws made by its sages, also agrees that vegetarianism was the primary spiritual directive. It is no accident that after the giving of this dietary law, in Genesis 1:31 it says God saw all that he had made and “behold, it was very good.” In other words, vegetarianism is part of God's plan as it is described in the Torah. Other early verses in Genesis also support the idea of a vegetarian diet.

And the Lord God commanded the man saying: of every tree of the garden, thou mayest freely eat... (Genesis 2:16)

...and thou shalt eat the herbs of the field. (Genesis 3:18)

In Exodus 20:13, it says, “*Thou shalt not kill.*” This sixth commandment is basic in terms of its compassion and love for all of creation. The exact Hebrew translation reads “*lo tirtzach.*” This word refers to any sort of killing, and not just of humans. The practice of this commandment not only keeps the fundamental order in the world of nature, but supports the basic principle of compassion and love for all of God's creation that is taught in the Torah. It clearly supports the essential observance of vegetarianism.

Vegetarianism is the basic and unitary commandment on diet. It is a blueprint, in essence, of the basic diet needed to support a spiritual life in harmony with all of creation. It gives us a context to understand Genesis 9:3, the first of several concessions to people's lust for flesh:

Every moving thing that lives shall be food for you; as the green herb have I given you all.

Vegetarian Rav Abraham Isaac Hacoheh Kook, the well-respected Jewish spiritual leader and Torah scholar in the early part of the twentieth century and the first Chief Rabbi of the pre-state of Israel, said that the permission to eat meat was only a temporary concession to the people. He believed it was inconceivable that God would design a perfect plan of harmony for humanity and the Earth and find that it was imperfect a few thousand years later. Rabbi Kook thought that Genesis 9:3 was a temporary concession because people had sunk to such a low level of spiritual awareness that they needed to feel superior to the animals and to concentrate first on improving their relationship with each other. He said that humanity's lust for meat was so strong that if they were denied they might even revert to eating human flesh. In his understanding, the permission to slaughter animals was a way to control the blood lust. He interpreted the permission to eat meat as a stopgap measure until a more enlightened era would be achieved and we would all return to vegetarianism.

With the permission to eat meat, animals and people stopped existing in a peaceful harmony. It was a significant shift in the relationship of the human organism to the world ecology.

Kosher laws were seen as a way to make meat-eating tolerable, yet not particularly convenient. A renowned Torah scholar, Rambam, said,

Be holy by abstaining from those things which are permitted to you. For those who drink wine and eat meat all the time are considered "scoundrels with a Torah license."

The reluctance to give this permission to eat meat is evidenced by the prohibition against eating blood.

Only flesh with the life thereof, which is the blood thereof shall ye not eat. (Genesis 9:4)

To have to remove the blood in order to be Kosher is a way of making flesh-eating more difficult and a reminder of the compromise in permitting meat-eating. Even while allowing the eating of meat and not the eating of blood, the Torah gives a suggestion for respecting the life of the animal. There is also a "catch 22" quality to this Kosher law because the physiological reality of the Kosher commandment not to have the blood of the animal is impossible to fulfill. Although one can drain blood from the arteries and veins, it is not physiologically possible to drain it from the capillaries. From a scientific point of view, the only way to be fully Kosher is to be vegetarian. In Genesis 9:5 it says:

And surely, your blood of your lives will I require ...

Directly related to the temporary concession to the carnal desires of humanity, we see an immediate result in a decreased life span. Humanity is forced to pay a price for its blood lust. Within one generation of the Genesis 9:3 statement to Noah, the life span decreased to one-third of its previous length, from approximately 900 years to 300 years, and then eventually to 70 years. Our current medical research has documented that a flesh-centered diet has a detrimental effect on health. This is the physiological modern-day fulfillment of "your blood of your lives will I require."

During Exodus, it appears that God tried to make the Jews return to vegetarianism by just giving them the manna in the desert. Again, however, the flesh lust of the people made them rebel from the diet. They demanded flesh food from God.

And the mixed multitude that was among them fell a lusting; and the children of Israel also wept on their part, and said, "Would that we were given flesh to eat" (Numbers 11:4)

Although Moses was frustrated with the lust of the people, God granted their request by providing them with quails blown in by the wind. But God's anger at their rebellion and their flesh-eating desires brought a plague to the people who ate the quail.

While the flesh was yet between their teeth, ere it was chewed, the anger of the Lord was kindled against the people, and the Lord smote the people with a very great plague. (Numbers 11:33)

Many died and the place where this took place was called the "Graves of Lust;" there they buried the people that lusted. (Numbers 11:34)

It is hard to interpret this concession of eating the quail as supportive of a flesh-centered diet. It is far easier to interpret this incident as evidence of God's direction that the people be vegetarian and that the consequence of meat-eating would be poor health and a shortened life span.

The Torah consistently describes vegetarian foods in a positive light and as a reward. The Divine bounty of the Song of Songs is described in terms of fruits, vegetables, and other vegetarian cuisine. There is a blessing before eating vegetarian food such as the fruit of the vine and the bread of the earth, but there is no specific blessing for eating flesh food.

One of the more subtle issues in the Torah is the question of animal sacrifice. The Essenes, the least known of the three divisions of Judaism at that time, who were reported to be live-food vegetarians, believed that animal sacrifice was not an original part of the Torah, and therefore they were against it. Others, such as the highly revered Jewish scholar, physician, and Rabbi, Moses Maimonides, felt that animal sacrifice was given as a compromise because it was the general custom among all the nations to practice animal sacrifice at the time the Torah was given. He reasoned that it was enough that the Torah took away idolatry and established a faith in one God. To lose both the form of offering as well as idols would have been too big a step for these people. However, there is no reference in the Ten Commandments to having to perform animal sacrifice. Also, when animal sacrifice is first mentioned in Leviticus 1:2, it is mentioned in the context of *if you bring an offering*. The prophets at times spoke against the

obligation to sacrifice, in favor of direct devotion of the heart to God as the real sacrifice.

*I have not burdened thee with a meal offering, nor wearied thee with frankincense... (Isaiah 43:23)
To what purpose is the multitude of your sacrifices unto Me? sayeth the Lord. I am full of burnt offerings of rams, and the fat of fed beasts; and I delight not in the blood of the bullocks, or of lambs, or of he-goats ... bring no more vain oblations ... and when ye spread forth your hands, I will hide mine eyes from you; yea when ye make many prayers, I will not hear; your hands are full of blood. (Isaiah 1:11–16)*

For I spoke not unto your fathers, nor commanded them in the day that I brought them out of the land of Egypt, concerning burnt offerings or sacrifices; but this thing I commanded them, saying “Obey my voice, and I will be your God, and ye shall be my people...” (Jeremiah 7:22–23)

Based on the following prophecy of Isaiah, it is not unreasonable to assume that in the Messianic Epoch to which he is referring, we all will return to the first dietary law and become vegetarian, which appears to be the original prescription of a diet for spiritual life in the Torah.

*And the wolf shall dwell with the lamb,
And the leopard shall lie down with the kid;
And the calf and the young lion and the fatling together;
And a little child shall lead them ...
Their young ones shall lie down together,
And the lion shall eat straw like the ox...
They shall not hurt nor destroy in all My holy mountain.
(Isaiah 11:69)*

Although there is not enough information to absolutely prove that some of the prophets were vegetarian, such as Isaiah, Jeremiah, Amos, Hosea, Daniel, and Ezekiel, there are certainly quotes from their teachings that suggest they taught against the killing of animals and animal sacrifice. These quotes also suggest that they taught a vegetarian lifestyle, as they do not say that people should raise animals to slaughter and eat their flesh. As these were true prophets, one can only assume they lived their teachings. Examples of these teachings are:

*...and the fruit thereof shall be for meat, and the leaf thereof for medicine. (Ezekiel 47:12)
He who kills an ox is like him who slays a man. (Isaiah 66:3)*

Please test your servants for ten days, giving us legumes to eat and water to drink. Then compare our appearance with that of the youths who eat of the kings food. (Daniel 1:12-13)

For I desire goodness, not sacrifice; obedience to God, rather than burnt offerings. (Hosea 6:6)

When they present sacrifices to Me, it is but flesh for them to eat: The Lord has not accepted them.... (Hosea 8:13)

I will restore My people to Israel. They shall rebuild ruined cities and inhabit them; they shall plant vineyards and drink their wine; they shall till gardens and eat their fruits. (Amos 9:14)

Thus said the Lord of Hosts, the God of Israel, to the whole community which I exiled from Jerusalem to Babylon: Build houses and live in them, plant gardens and eat their fruit. (Jeremiah 29:4-5)

Vegetarianism naturally fulfills five of the moral precepts of the Torah:

1. Compassion and noncruelty to animals.
2. Preserving the Earth.

3. Feeding the hungry.
4. Preservation of personal health.
5. Seeking peace.

Because of these teachings, it is no coincidence that there have been three vegetarian chief rabbis in 25 years of the state of Israel's existence, as well as Rabbi Kook of the pre-Israel era. Four percent of the population in Israel is vegetarian, which, outside of India with 83% of its 680 million people who are vegetarian, is the largest percentage of vegetarians in the world. Prominent Jewish thinkers who are or were vegetarian include: Martin Buber, one of the greatest Existential philosophers; Isaac Bashevis Singer, winner of the 1978 Nobel Prize for Literature; Shmuel Yoseph Agnon, Nobel Prize recipient; Rabbi David Rosen, the former Chief Rabbi of Ireland; and Sher Yashuv Cohen, the Chief Rabbi of Haifa.

In the Talmud, Rabbi Yishmael said,

From the day that the holy Temple was destroyed it would have been right to have imposed upon ourselves the law prohibiting the eating of flesh. But the rabbis have laid down a wise and logical ruling that the authorities must not impose any decree unless the majority of the members of the community are able to abide by it. Otherwise the law and those who administer it get into disrepute.

Perhaps this is the crux of the issue for why meat-eating has been allowed by many of the major religions, including Judaism, Christianity, and even Buddhism. Out of compassion for the limitations of their followers, the essential compassion for all life found in all religions needed to wait until people were ready I wonder if we have been waiting too long.

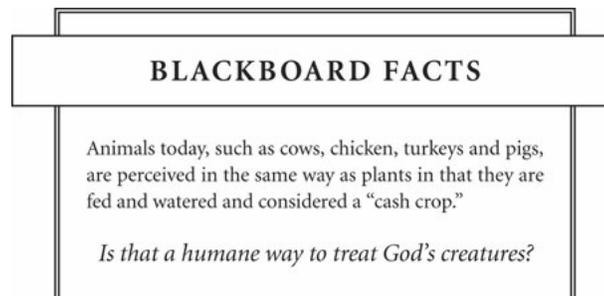
Compassion and Noncruelty to Animals and World Peace

COMPASSION TOWARD AND NONCRUELTY TO ANIMALS are directly linked morally and spiritually to world peace. Killing an animal for food is still a violent act. There is no compassion in it for the animal. There is also a connection between justifying slaughtering animals for food or profit and taking the next step in the violent process, which is the killing of one's fellow human beings for some sort of "good" reason.

George Bernard Shaw once said in his poem, *Song of Peace*:

*Like carrion crows, we live and feed on meat
Regardless of the suffering and pain
We cause by doing so. If thus we treat
defenseless animals for sport or gain,
How can we hope to attain the
Peace we say we are so anxious for?
We pray for it, o'er hecatombs of slain,
To God, while outraging the moral law,
Thus cruelty begets its offspring—War.*

Today, the cruelty extends beyond the mass killing of animals to a systematic, antilife, antihumane treatment of animals from the time they are born until they are harvested as if they were a cash crop. They are systematically deprived of their natural habitat and life cycle for the expediency of the meat industry. Individual killing of animals for food is the first step of cruelty (hunting, fishing). The profit-motivated industrialization of nature's living animals, as if they are inanimate and without any rights, feelings, or soul, is an example of the next step of the expansion of cruelty.



People in the US and Canada consume over 200 pounds of animal flesh per person a year. In one year, four billion cattle, calves, sheep, hogs, chicken, ducks, and turkeys are slaughtered. In a lifetime, a Canadian or US meat-eater eats: 11 cattle, one calf, three lambs and sheep, 23 hogs, 45 turkeys, 1,100 chickens, and 826 pounds of fish. The Hebrew word for meat is "basar." As explained by the Talmudists, it is composed of the letters "bet" (shame), "sin" (corruption), and "resh" (worms).

The famous Talmudic jurist and Rabbi, Moshe ben Nachman, who lived in the eleventh century, said about compassion for animals:

...for cruelty expands in a mans soul, as is well-known with respect to cattle slaughters.

This is a prophetic comment in that a current struggle exists around the destruction of the tropical rain forests in which the cattle farmers and other forces who want to level the forests have been involved indirectly and directly in shooting people who oppose them. The most infamous of these money-, flesh-, and lust-associated killings was the assassination by cattle ranchers in Brazil of Chico Mendes, a leading environmentalist working to prevent the destruction of the Amazon rain forests. This killing of Chico Mendes forms a direct link between first killing animals for personal food, to raising animals to be killed for profit, to the next level of cruelty and violence which

“expands in a man's soul,” the killing of humans to preserve profit from killing animals.

The connection between the violence of killing animals for food and the violence of killing humans has been established by philosophers and religious teachers for hundreds of years. Quaker leader Thomas Tyron (1634-1703) points out that the violence of killing animals for food stemmed from the same source of “wrath” as the killing of humans. Maimonides felt that the Torah's emphasis on compassion was to protect us from acquiring the moral habits of cruelty. The violence of killing animals for our dinner table comes from the same rationale of justifiable violence that leads humans to kill humans. Pythagoras, the Greek mathematician and philosopher, once said:

As long as men massacre animals, they will kill each other. Indeed, he who sows the seeds of murder and pain cannot reap joy and love.

One of the most elegant yet simple statements about the connection between the killing of animals and human violence and pain comes from the enlightened monk, Swami Prakasananda Saraswati. In 1987 he gave this answer to the question of the connection between vegetarianism and peace:

Every animal that is slaughtered for human consumption brings the pain of its death into your body. Think about it. The animal is killed with violence. That violence causes the animal to experience very intense pain as it dies. That pain remains in the meat even after you prepare and cook it. When you eat that meat, then you eat pain. That pain becomes lodged in your body, heart, and mind. That violence and pain which you consume will eat you also. It consumes you so that you must experience the same pain in your own life also.

The earth is the Lord's and the fullness thereof. (Psalms 24:1)

This is the Torah teaching; that we are to help, as God's co-workers, preserve and improve the world. It is essential to the teaching of Tikkun, in which the Torah instructs that it is part of one's role in life to help heal the substance and soul of the planet. This means that we are to protect the resources of the Earth as well as the animal and human inhabitants.

BLACKBOARD FACTS

The average American meat-eater consumes in a lifetime:

- A. Eleven beef steers
- B. One calf
- C. Three lambs
- D. Twenty-three hogs
- E. Forty-five turkeys
- F. Eight hundred and twenty-six fish

The Hebrew word for meat is BASAR (which means shame, corruption, and worms)!

When a vegetarian looks at these facts, it is bizarre!

A flesh-centered diet that many follow results in just the opposite. For example, according to John Robbins' book, *Diet for A New America*, livestock use approximately 50% of all the water in the US. Livestock produce twenty times the excrement as the human population of the US. This increases the nitrate/nitrite water pollution. Extensive water use for livestock is pushing us closer to a clean water shortage. It requires 60-100 times more water to produce a pound of beef than a pound of wheat. Robbins estimates that if everyone were vegetarian, there would be no need for irrigation systems in the US. Livestock require excessive water usage because the land needed to grow grain for livestock takes up about 80% of the grain produced, and because water is needed for the animals. When one considers the water needed for this extra grain and for the care of the livestock, a flesh-food diet creates a need for 4,500 gallons per day per meat-eater as compared to 300 gallons per day for a vegan. A vegan saves approximately 1,500,000 gallons per year as compared to a flesh- and dairy-eater. Much of this information is found in a greatly

expanded form in *Diet for A New America*.

The destruction of the rain forests for grazing land and the resultant greenhouse effect is another example of the deleterious effects of a flesh-centered diet on our ecological system. In Deuteronomy 20:19 it says, "You must never destroy its trees ... you may eat of them, but you shall not cut them down."

This statement in Deuteronomy is one of the bases of the Talmudic laws which prohibit willful destruction of natural resources or any sort of vandalism to the natural resources, even if it is by those who have a deed to the land. An article in *Vegetarian Times* estimates that rain forest destruction causes the extinction of 1000 species per year. For each fast-food, quarter-pound hamburger, 55 square feet of rain forest are destroyed. One hundred species become extinct for every two billion fast-food burgers sold. The effects of livestock land use in the US account for about 85% of the four million acres of topsoil lost per year. A pure vegetarian diet, on the other hand, makes less than five percent of the demand on the soil in this country.

The ratio of food productivity per acre of land from livestock versus vegetarian food reveals a tremendous disparity from the same amount of natural resources. For instance, one acre of land yields 20,000 pounds of potatoes versus 165 pounds of beef. An acre of grain gives five times more protein than beef. An acre of legumes gives ten times more and an acre of leafy greens produces twenty-five times more protein than one acre of beef. Grain for 100 cows will feed 2000 people. Neither land, water, atmosphere, nor animal populations are safe from the resource-intensive destruction that results from a meat-centered diet.

We simply cannot escape the fact that raising animals for meat and dairy has a disastrous effect on our ecological system. US livestock regularly eat enough grain and soy to feed the US population five times over. More than 80% of the grain grown in the US is to feed livestock. This includes 80% of corn and 95% of oats. The total world livestock regularly eat about twice the calories as the human world population receives. By cycling our plant protein through the beef, the conversion to beef protein is between one-tenth and one-twentieth of the plant protein yield. This is a 100% loss of complex carbohydrates and a 95% loss of calories when plant protein is cycled through livestock. This is a significant waste of protein, complex carbohydrates, and calorie resources when so many people in this world suffer from malnutrition. It is an ecological shame to realize that meat-eaters, according to *Diet for A New America*, use three and one-half acres per year to supply their meat and dairy consumption lifestyle, whereas vegans require one-quarter of an acre of land. In other words, *approximately 14 vegans can live off the same land and water supply that it takes for one meat-eater.* A nondairy and nonmeat diet saves one acre of trees per year because of how few resources the diet demands. On our planet, with ever-increasing shortages of land and water, this is a tremendously significant amount of resources wasted.

A vegetarian diet also helps to conserve the world's fuel energy and total raw material resources. Seventy-eight calories of fossil fuel are required for each calorie of protein from feedlot-produced beef. Grains and beans require approximately .6 to 3.9 calories of fossil fuel to produce each calorie of vegetarian food. *About twenty times more fossil fuel energy is needed to produce one calorie of beef as compared to one calorie of vegetable protein.* The energy required to produce food is about 16.5% of the total energy requirements of the US. The value of the raw materials consumed for livestock production is greater than the value of all the oil, gas, and coal produced in this country. Raw materials needed to support the livestock industry constitute one-third of the value of all the raw materials consumed in this country. The Earth resources demanded by a flesh-centered diet are enormous as compared to those required by a vegetarian diet. *A flesh-centered diet is a significant stress on the Earth's ecological balance. It is an unnecessary hoarding of resources.*

Feeding the Hungry

NEITHER HUMANS NOR ANIMALS are safe from the collective effects of a flesh-food diet. Approximately sixty million people starve to death per year on this planet. The reasons for this terrible state of affairs are associated with many political, economic, and natural disasters, et cetera. However, the fact remains that a flesh-centered diet creates an overextended use of water, land, energy, and other resources. It is estimated by nutritionist Dr. Jean Meyer of Harvard that if meat-eaters ate just ten percent less flesh per year, the resources saved would be enough to feed all these sixty million who starve to death.

The number-one health problem in the world today is chronic malnutrition. The United Nations estimates that one-half the world's population suffers from malnutrition and 700-900 million people are seriously malnourished. Twenty-five percent of the world's children suffer from a lack of food. Forty-two thousand children die per day from malnutrition. That comes to 15 million per year or 30% of all the world's deaths per year. *In the last ten years, more people died from malnutrition than from all the wars, revolutions, and murders of the last 150 years.*

In the Jewish tradition, the Talmud teaches that providing sustenance to the hungry is as important as all the other commandments of the Torah combined.

To loose the chains of wickedness, to undo the bonds of oppression, and to let the oppressed go free.... Is it not to share thy bread with the hungry? (Isaiah 58:6-7)

The Midrash—a highly respected compilation of commentaries by rabbis on the five books of the Torah—says that whenever we give food to the poor it is as if one is feeding God. The feeding of the hungry extends even to ones enemies.

If your enemy is hungry, give him bread to eat. If your enemy is thirsty, give him water to drink. (Proverbs 25:21)

The ethic of feeding the hungry can be seen directly in Leviticus 19:9-10:

And when you reap the harvest of your land, thou shalt not wholly reap the corner of thy field, neither shalt thou gather the gleanings of thy harvest. And thou shalt not glean thy vineyard, neither shalt thou gather the fallen fruit of thy vineyard; thou shalt leave them for the poor and the stranger.

BLACKBOARD FACTS

Forty-two thousand children die per day from malnutrition—that's 15 million children per year who starve to death. US livestock eat enough grain and soy foods to feed our population five times over!

Over 80% of corn and 95% of oats are fed to livestock!

One acre of land gives only 165 pounds of beef protein. Yet one acre of land will produce 20,000 pounds of potatoes!

While we feed our cattle to fatten them up for our flesh desires, 60 million human beings are starving to death each year.

If we cut back our flesh-food intake by only 10% a year, there would be enough resources and grain to feed these 60 million people for a year.

A flesh-centered diet creates a hoarding of resources in a way that greatly contributes to world hunger. World hunger, however, reflects a social and political disharmony as much as it does a resource problem. But it does help to have ample resources. Vegetarianism is a major step in reorganizing how our world food resources are used.

The implication of the above statistics is that one who is a vegetarian is indirectly helping to feed the hungry of this planet.

Preservation of Personal Health

THE RENOWNED TWELFTH-CENTURY PHYSICIAN, rabbi, and sage Mai-monides, in his commentary on the Torah, makes it obvious that one must not place one's health and life in danger. This teaching includes the importance of actively living in a way that will bring good health. In Deuteronomy 4:9 it says:

Take heed unto thyself and take care of thy life.

It is obvious at this point that a vegetarian diet is the most healthy diet.

Summary

A VEGETARIAN DIET is the basic spiritual diet of the Torah and is consistent with many of its key teachings. Vegetarianism is compatible with, and supportive of, *any spiritual path* because it is conducive to spiritual growth of the individual. A vegetarian diet is automatically Kosher. It is the essence of sharing because it puts far less stress on the environment and allows far more of the Earth's bounty to be shared with everyone. It brings peace to the world because it establishes habits of peace and a relationship of peace with all of nature. By learning compassion for all of God's creatures, we develop habits that allow us to show peace and compassion for our fellow humans. Such a diet also brings us into a harmonious balance with the ecology of the planet. In this way *a vegetarian diet is the basic nutritional blueprint not only of the Torah, but for enhancing aspects of spiritual life for all of humanity It is part of the plan for the coming Golden Age of world peace.*

BLACKBOARD FACTS

Five basic biblical moral precepts according to Jewish tradition are:

1. Compassion and noncruelty to animals
2. Preserving the Earth
3. Preservation of personal health
4. Feeding the hungry
5. Seeking and creating peace in the world.

Following the original vegetarian diet prescribed in Genesis 1:29 automatically fulfills these teachings.

Preview of Chapter 18

ALTHOUGH IT CANNOT BE PROVEN that Jesus did not eat flesh food, consider the following evidence: He grew up in an Essene community that was vegetarian and against animal sacrifice; his family, and probably all his disciples, were vegetarian; and many of the early Christians were vegetarian, and some claimed to have been directly instructed by him to be vegetarian. The fact that Jesus was the master example of love and reverence for all life strongly suggests that he was vegetarian. Although it may be easier for us to believe and project that a Son of God would eat meat, we may have to accept that Jesus came to help us return to the original spiritual plan and dietary blueprint of God as revealed in Genesis 1:29 (see previous chapter). Are we ready to give up our human projections of Jesus so that we can see him in his original light and teaching?

I. Jesus and vegetarianism

A. Dead Sea Scrolls

B. *The Essene Gospel of Peace*

C. Inaccurate translations from the Council of Nicea

II. The historical Jesus

A. The Essene Jesus

B. *The Gospel of the Hebrews*

III. History of vegetarianism in early Christianity

IV. The vegetarianism of the disciples, including writings on the disciples' eating habits

V. Many early Christian leaders were vegetarian

VI. Summary

A. Historical evidence suggests Jesus was a vegetarian

B. Messianic prophecy includes a vegetarian Messiah

VII. Contemporary Christian vegetarians

A. Ellen G. White, Seventh-Day Adventist

B. Christian vegetarian writers in early America



Jesus and Vegetarianism

WHETHER OR NOT JESUS WAS A VEGETARIAN is a delicate subject with no definitive answer because of variations in different historical accounts. The Dead Sea Scroll materials unearthed in 1947 indirectly suggest that Jesus was a lifelong vegetarian. This is because they indicate that the Essenes were vegetarian, and historically there is evidence that Jesus was raised in an Essene community; therefore it is highly likely that he and his family were vegetarian. *The Essene Gospel of Peace, Book One*, taken from the original Aramaic third-century manuscript discovered in 1927 in the secret Vatican archives by Dr. Edmond Bordeaux Szekely directly and strongly suggests that Jesus was a lifelong vegetarian. It reveals his direct teachings against the eating of flesh. Nevertheless, as these documents come to the surface, there is still lack of definitive proof, as well as confusion about mistranslations and conscious and unconscious changes made in the scriptures as we see them today. This is especially true with the claims of various changes and deletions in the Gospels and Epistles that in all probability largely occurred at the Council of Nicea in A.D. 325. According to *The Prophet of the Dead Sea Scrolls* by Upton Clary Ewing, a theologian praised by world-famous Albert Schweitzer, M.D., as the “renaissance of Leonardo da Vinci”:

There is hardly a single scholar among Bible exegetists who will not agree that there are many inconsistencies and contradictions to be found in the Gospels and the Epistles.

Perhaps this inability to make a final proof one way or the other is fortunate, as no one's faith need be flatly challenged by this chapter. Ultimately there is room to believe whatever one feels comfortable believing. This topic is not meant to challenge anyone's religious beliefs. It is meant to raise issues and information not readily available in order to aid and support those who are Christian vegetarians already or those Christians contemplating the transition to vegetarianism as part of the medicine for healing themselves and this planet. The following information is for those who are confused or disempowered in their desire to be vegetarian by the commonly held interpretations, based on the currently used editions of the New Testament, that maintain Jesus was not a vegetarian.

To understand the relationship of Jesus to vegetarianism, we must probe into a realm in which much of the historical documentation has been lost, and that which is left is partially confused by the subtleties in the translation from Greek to English. The accuracy of the translations has also been affected by the limited understanding and philosophy of those who were doing the translating. For example, the word “meat,” which appears nineteen times in the New Testament, seems to imply that Jesus sanctioned meat-eating. The most accurate understanding, however, of the word “meat” in the translation from Greek to English does not imply flesh food at all. The Greek word translated as “meat” is more precisely translated as “food” or “nourishment,” and not animal flesh as we currently think when we hear the term “meat.” For example, Jesus did not actually say, “Have ye any meat?” as in John 21:5 but “Have ye anything to eat?” And when the Gospels say that the disciples went away to buy meat (John 8), it merely means to buy food.

Similar mistranslations have occurred with the use of the word “fish.” The misunderstanding of this word results in a portrayal of Jesus as eating fish and encouraging the eating or killing of fish by others. In the early church, the word “fish” was a secret term. The Greek word for fish is I-CH-TH-U-S. It is made up of the first letters of the words “Jesus Christos Theou Uios Soter.” This translates as Jesus Christ Son of God Savior. The fish is also found as a Christian symbol in the catacombs. It is symbolic of the Piscean Age, which was emerging at that time. It is entirely conceivable that the word “fish,” as written in the New Testament, was used primarily in this deeper mystical way. Since Jesus taught in parables and metaphors, I believe its use in the New Testament was to communicate this deeper meaning of “fish” rather than the literal idea of a dead fish that was physically eaten. In this context, the feeding of the fish to the people is a metaphor for the feeding of the higher teachings of the Master to the masses. In a second-century book by Irenaeus (A.D. 120-202), it is twice stated that Jesus fed the multitude of five thousand with bread alone. Others have pointed out that there is an aquatic plant called the fish plant that was

used as a food in that era as well as during Babylonian times. These fish plants were dried in the sun, beaten into mortar, and baked into bread-like rolls and sold in the open market. Perhaps in the translation, the “plant” portion of the word designated as the fish plant was omitted. It was only in the fourth century that fish was added to the bread offering in the scriptures. This suggests that the second-century version of *The Gospel of the Hebrews* might be more authentic. In this translation, it says in Lection XXIX, verses 7 and 8:

And when He had taken the six loaves and the seven clusters of grapes, He looked up to heaven, and blessed and broke the loaves, and the grapes also, and gave them to His disciples to set before them, and they divided them among all.

And they did all eat and were filled. And they took up twelve baskets full of the fragments that were left. And they that did eat of the loaves and of the fruits were about five thousand men, women, and children, and He taught them many things.

In any case, the souls of the five thousand, we can assume, were at least fed with the mystical meaning of fish.

The Historical Jesus

IT IS A LOT EASIER TO UNDERSTAND Jesus' teachings about vegetarianism when he is understood in his historical context. He and his family were associated with the Essene movement of the times. The Essenes were Jewish communities of very evolved people who had broken away from the mainstream of Jewish thought several hundred years before the time of Jesus. They were vegetarians in accordance with the highest meaning of the Law of Moses, which said, "Thou shalt not kill." They were also against the practice of animal sacrifice. In *The Prophet of the Dead Sea Scrolls*, Ewing quotes Philo of Alexandria, a historian writing during the time of Jesus' ministry, who said:

They are called Esseni because of their saintliness. They do not sacrifice animals, regarding a reverent mind as the only true sacrifice.

Ewing quotes Professor Teicher in saying:

But we have there (in the Essene scriptures) the emphatic prohibition of eating animals. No consumption of meat means no killing of animals and both together means no sacrifice of animals.

The Dead Sea Scrolls, by Millar Burrows, quotes from the Essene scriptures:

Let not a man make himself abominable with any living creature or creeping thing by eating of them.

The lives of the Essenes required a discipline and purity of mind, body, and spirit that was beyond the practice of the typical religious person of the time. The Essenes developed self-sufficient communities in the peace of the desert in order to make it easier to focus on God. It is thought that Jesus and his parents were part of the Essenes, some of whom were also called the Nazarenes. It is said that Jesus escaped to an Essene community in the desert to avoid the murderous intent of King Herod. It was in the Essene communities that he was raised and trained. Some of the Essenes, such as John the Baptist, as well as the Master Jesus himself, went out into public to uplift the people. As part of their teaching of compassion and love for all life, they taught vegetarianism. For example, in *The Essene Gospel of Peace, Book One* (p. 36), Jesus is quoted as saying:

God commanded your forefathers: "Thou shalt not kill" But their heart was hardened and they killed. Then Moses desired that at least they should not kill men, and he suffered them to kill beasts. And then the heart of your forefathers was hardened yet more, and they killed men and beasts likewise. But I do say to you: Kill neither men nor beasts, nor yet the food which goes into your mouth. For if you eat living [uncooked] food, the same will quicken you, but if you kill your food, the dead food will kill you also.

What is important here is that this teaching is a direct quote of Jesus from an original Aramaic third-century manuscript found in the secret archives of the Vatican. It is not a teaching by implication. The message is consistent with Jesus' own dietary practice and that of his community of birth and where he grew up, which also practiced vegetarianism. Aside from these exciting findings, most of the information concerning Jesus' explicit teachings on this subject has been lost or destroyed. One exception is the work by Epiphanius (A.D. 315-403), a Catholic bishop of Constantia in Cyprus. In his book *Panarion* (as explained in *A Critical Investigation of Epiphanius' Knowledge of the Ebionites: A Translation and Critical Discussion of "Panarion,"* by Glenn Alan Kochit), Epiphanius points out that according to the Ebionites, a group of early Judaic Christians who were vegetarians:

Whenever you speak to them (Ebionites) concerning flesh food, the Ebionites reply they were vegetarian because "Christ revealed it to me." [This was a direct teaching they were referring to and not a revelation.]

There is another early book called *The Gospel of the Holy Twelve*, also known as *The Gospel of the Hebrews*, the *Essene Gospel*, the *Gospel of the Ebionites*, or just plain "the Gospel." This book has been translated from the Aramaic by the Englishman Reverend Gideon H. Ousley (1835-1906). Ousley claims that it is the translation of the original gospel, and that it had been preserved first by the Essenes and then later in a Tibetan monastery after the

Essenes were forced to leave their communities in A.D. 68 by the advancing Romans. The Essenes apparently hid many of their scriptures in the desert (such as the Dead Sea Scrolls) and took some with them as they dispersed. Reverend Ousley claims that this Gospel was taken to a Tibetan Buddhist monastery by Essene monks. It was in the Tibetan monastery that Reverend Ousley found it. If this is authentic, as some scholars believe, it would be the most ancient and complete writings available about Jesus and his teachings. Dr. Ewing believed that this might be the original gospel, but it might have been known primarily as “the gospel” and was written in western Aramaic. Jesus’ teaching of vegetarianism in *The Gospel of the Hebrews* is both poetic and clear as he answers a doubting Sadducee man who asked, “Tell me, please, why sayest thou, do not eat the flesh of animals... ?” Jesus’ beautiful answer to him was:

“Behold this watermelon, the fruit of the earth.” Jesus then broke open the watermelon and said: “See thou with thine own eyes the good fruit of the soil, the meat of man, and see thou the seeds within, count ye them, for one melon maketh a hundredfold and even more. If thou sow this seed, ye do eat from the true God, for no blood was spilled, nay no pain nor outcry did ye hear with thy ears or see with thine eyes. The true food of man is from the mother of the earth, for she brings forth perfect gifts unto the humble of the land. But ye seek what Satan giveth, the anguish, the death, and the blood of living souls taken by the sword. Know ye not, those who live by the sword are the ones who die by the same death? Go thine way then, and plant the seeds of the good fruit of life, and leave ye off from hurting the innocent creatures of God.”

In a teaching to his disciples in Lection XXXII, verse 4, of *The Gospel of the Hebrews*, Jesus is completely clear about his opposition to killing and eating animals:

For of the fruits of the trees and the seeds of the herbs alone do I partake, and these are changed by the Spirit into my flesh and my blood. Of these alone and their like shall ye eat who believe in me, and are my disciples, for of these, in the Spirit, come to life and health and healing unto man.

In the same section, verse 9, Jesus explains the problem of the custom of flesh-eating with an understanding of the past and a prophecy for the future return to vegetarianism for the whole world:

Verily I say unto you, in the beginning, all creatures of God did find their sustenance in the herbs and the fruits of the earth alone, till the ignorance and the selfishness of man turned many of them from the use which God had given them, to that which was contrary to their original use, but even these shall yet return to their natural food, as it is written in the prophets (Isaiah), and their words shall not fail.

In Lection XXXVIII, verses 3,4, and 6 of *The Gospel of the Hebrews*, the spiritual meaning of the *awareness and practice of the oneness with all of life* is translated into Jesus’ teachings of vegetarianism and noncruelty to animals and all of life; his words are consistent with the awareness one would expect from someone of Jesus’ great spiritual stature:

3 God giveth the grains and the fruits of the earth for food; and for righteous man truly there is no other lawful sustenance for the body.

4 The robber who breaketh into the house made by man is guilty, but they who break into the house made by God, even of the least of these are the greater sinners. Wherefore I say unto all who desire to be my disciples, keep your hands from bloodshed and let no flesh meat enter your mouths, for God is just and bountiful, who ordaineth that man shall live by the fruits and seeds of the earth alone.

6 And whatsoever ye do unto the least of these my children, ye do it unto me. For I am in them and they are in me. Yea, I am in all creatures and all creatures are in me. In all their joys I rejoice, in all their afflictions I am afflicted. Wherefore I say unto you: Be ye kind one to another, and to all the creatures of God.

History of Vegetarianism in Early Christianity

FROM EPIPHANIUS' BOOK IT IS SHOWN that the immediate followers of Jesus, the Judaic Christians, were vegetarians until the fifth century. This was about 100 years after the historical struggle among the three main factions of Christianity of those times: Judaic Christians, Christian Gnostics, and Catholic Christians. According to the evidence presented in *The Vegetarianism of Jesus Christ* by Charles Vaclivik, the Judaic Christians were led for 30 years after Jesus left the physical realm by his brother James. Vaclivik's historical evidence suggests that the Judaic Christians were the very first Christians. They were the ones who actually walked and prayed with Jesus. After them, the Christian Gnosticism developed, and around A.D. 70 the Catholic Christians began their ascent to power. The Judaic Christians and Gnostics were vegetarian and the Catholic Christians were not. Many early Christian leaders were also vegetarians. Clement of Alexandria (A.D. 160-240) wrote,

It is far better to be happy than to have our bodies act as graveyards for animals.

St. John Chrysostom (A.D. 345-407) also taught that the unnatural eating of flesh meat was polluting.

Many scholars think that the original Christian documents were altered at the Council of Nicea in A.D. 325 to make them acceptable to the emperor, Constantine. Steve Rosen, in *Food for Spirit*, points out that flesh-food-eating was not officially permitted until the fourth century, when Emperor Constantine, through his powerful influence, made his version of Christianity the official version for everyone. Vegetarian Christians had to practice in secret or risk being put to death for heresy. Rosen writes that Constantine used to have molten lead poured down their throats if they were captured. By the fourth century, the Catholic Christians became considerably more politically powerful than the other two groups. Most of the literature of the Judaic Christians and Gnostics was essentially destroyed during the political repression of this time period. In *The Vegetarianism of Jesus Christ*, it is postulated that the translations after this time may have been altered away from a vegetarian menu, as the Catholic Christians did not believe in vegetarianism and/or were not ready for it. If people are surprised that there was more than one Christian faction in the first 100 years after Jesus, it is useful to remember that we now have hundreds of different Christian churches.

Jesus and Animal Sacrifice

EPIPHANIUS POINTS OUT that the Essenes were not only vegetarians, but also opposed animal sacrifice. It is in this context that one gets a further understanding of why Jesus chased out the money lenders from the Temple and freed the animals who were going to be sacrificed. It was the money lenders who exchanged money so that Jews coming from foreign lands could purchase animals for sacrifice. The teachings of Jesus and the Essenes stood directly against the practice of the other Jewish sects and that of the Romans, who also practiced animal sacrifice. Titus Flavius Clemens, one of the most respected of the early Christian fathers, is quoted in *Ethics of Diet* by Howard Williams as saying,

Sacrifices were invented by men as a pretext for eating flesh.

This seems to be essentially the Essene understanding of the motivation behind sacrifices. According to Ewing, the Essene understanding of diet was based on the commandment, “Thou Shalt Not Kill” and the first dietary commandment of Genesis 1:29, quoted earlier, which gave humanity fruits, nuts, seeds, vegetables, grains, and grasses to eat, but specifically not flesh food. The position of Jesus against animal sacrifice is, of course, consistent with his humaneness, his love for all of God's creatures, and his vegetarianism. According to the *Hastings Encyclopedia on Religion and Ethics*,

The Gospel according to the Apostles was used by the Ebionites (viz Nazarenes). Herein is found the “Essene Christ.” He denounces sacrifice and the eating of flesh.

Epiphanius quotes Jesus, in his confrontation with the high priest in the Temple after he has chased out the money lenders,

I come to abolish sacrifices, and unless you cease sacrifices my anger will not cease from you.

The Gospel of the Hebrews also clarifies that Jesus not only advised against eating our animal friends, but he had come to end blood sacrifices. In Lection XXI, verse 8, preaching to his disciples he says:

I am come to end the sacrifices and feasts of blood; and if ye cease not offering and eating of flesh and blood, the wrath of God shall not cease from you; even as it came to your fathers in the wilderness, who lusted for flesh, and they ate to their content, and were filled with rottenness, and the plague consumed them.

Many believe that Jesus ate the lamb of the Passover meal and use this as indirect evidence that he did not teach or practice vegetarianism. In *The Gospel According to the Hebrews*, Lection LXXVI, section 27, which predates the edition of the Gospel used today, Judas is quoted as inciting Caiaphas against Jesus for not eating lamb at the Passover:

Now Judas Iscariot had gone to the house of Caiaphas and said unto him, Behold he [Jesus] has celebrated the Passover within the gates [of Jerusalem], with the Mazza in place of the lamb. I indeed bought a lamb, but he forbade that it should be killed, and lo, the man of whom I bought it is witness.

It is important to remember that the information in the Gospel came from earlier Judaic sources and not vice versa. Changes in translations commonly occur, and this could be one of them. Again, Jesus' refusal to eat the Passover lamb is consistent with his role and high spiritual awareness as the great Essene Teacher of the time and also his actions against animal sacrifice in the Temple.

The Vegetarianism of the Disciples

DR. EWING POINTS OUT THAT THE HIGHLY RESPECTED Church Father Eusebius quotes Hegesippus (about A.D. 160), who said that James, the Disciple and brother of Jesus who became head of the Judaic Christians after Jesus, was a vegetarian who “drank no wine, wore no wool, nor ate any flesh.” It was said that he followed this practice from birth. It is likely that all of Jesus’ family, including himself, were raised as vegetarian and lived that way as adults. It is also likely that in the light of the overall evidence, all but one of the disciples were vegetarian. Ewing quotes the Clementine Homilies XXII, 6, who also suggests that most of the disciples, if not all, were vegetarian:

They followed the Apostles in their custom of daily lustrations. They refused to partake of flesh or wine, taking as their pattern St. Peter, whose food was bread, olives, and herbs...

Clement of Alexandria, in his book *The Instructor*, states:

Accordingly, the apostle Matthew partook of seeds, and nuts, and vegetables, without flesh.

Peter was also historically known to be vegetarian as well. He was quoted as telling Clement:

I live on bread alone, with olives, and seldom even with potherbs.

Peter is also noted to be vegetarian in the Clementine Homilies XII, which dates back to the middle of the second century. Dr. Ewing cites an early Christian document which quotes Peter as saying:

The unnatural eating of flesh is as polluting as the heathen worship of devils, with its sacrifices and impure feasts, through participation in which a man becomes a fellow eater with devils.

In a letter to Trajan, the Roman Emperor, Pliny, the historian and governor of Bithynia (an area where Peter was teaching), describes the early Christian practices:

They affirmed the whole of their guilt, or their error ... binding themselves by a solemn oath never to commit any sin or evil and never to falsify their word, nor deny a trust, after which it was their custom to depart and to meet together to take food, but ordinary and harmless [vegetarian] food.

Dr. Ewing also quotes an early Christian document which presents Thomas as:

... fasting, wearing a single garment, giving what he has to others, and abstaining from the eating of flesh and the drinking of wine.

John the Baptist was another vegetarian. *The Gospel of the Hebrews* describes his food as:

... wild honey and cakes made with oil and honey.

The word “locust,” which is commonly given, is a mistranslation. The Greek word for oil cakes is “enkris” and the Greek word for locust is “akris.” This translation of cakes of honey and oil is in keeping with the appearance of the angel, Gabriel, to John the Baptist’s mother, instructing her that John should be raised on honey and butter.

Another major follower of Jesus was Paul. Paul may have been the only major early teacher who was not initially vegetarian. He appears to have become vegetarian a little later in his ministry. In Corinthians 8:13 Paul states:

Therefore if food makes my brother stumble, I will never eat flesh at all, that I may not make my brother stumble.

According to Dr. Ewing, the well-respected Christian Father, Flavius Clemens, the founder of the Alexandrian School of Christian Theology, wrote in A.D. 190:

It is good neither to drink wine nor to eat flesh, as both St. Paul and the Pythagoreans acknowledge, for this is rather characteristic to a beast, and the fumes arising from them (flesh pots) being dense and darken the soul... For a voice will whisper to him (Paul) saying "Destroy not the work of God for the sake of food. Whether ye eat or drink do all to the glory of God."

Vegetarianism of Early Christian Leaders

AS ALREADY POINTED OUT, many of the early Christians, such as the Judaic Christians, the early Gnostics, the Ebionites, and the Mon-tanists, were vegetarian. Early church fathers, such as Tertullian, St. John Chrysostom, Clement of Alexandria, Origen, St. Benedict, Eusebius, Papias, Cyprian, and Pantaenus, all supported vegetarianism as part of Christianity. It is no accident that these Christian leaders of the time were vegetarians, as they were still influenced by the direct teaching of the first Christians.

One of the great figures of Latin Christianity was Florens Tertullianis, who was born in Carthage about A.D. 155. His spiritual understanding was so profound that he is referred to by the Bishop of Carthage as the “Master.” In *Ethics of Diet*, Tertullianis makes the underlying point on the issue of the vegetarianism of Jesus. He said:

How unworthy do you press the example of Christ as having come eating and drinking into the service of your lusts: He who pronounced not the full, but the hungry and thirsty blessed, who professed His work to be the completion of His father's will, was wont to abstain— instructing them to labor for that food which lasts to eternal life, and enjoining in their common prayers, petition not for flesh food but for bread only

Concluding Points

THE HISTORICAL EVIDENCE from the writings of the early Christian Fathers, the Jewish philosopher Philo, the Dead Sea Scrolls, *The Gospel According to the Hebrews*, *The Essene Gospel of Peace, Book One*, and evidence from the work of the Catholic historian Epiphanius all indicates that the Essene culture in which Jesus was raised, his family, most if not all of his twelve disciples, and his early Christian followers were vegetarian. The prophecy of his coming in Isaiah 7:14-15 even foretells of him being a vegetarian:

14 Therefore the Lord Himself shall give you a sign; Behold a virgin shall conceive, and bear a son, and shall call His name Immanuel (with us is God).

15 Butter and honey shall He eat, that He may know how to refuse the evil, and choose the good.

The historical evidence also strongly suggests that Jesus did teach vegetarianism, was a vegetarian, and therefore did not eat flesh food. This is consistent with his teachings of love of all God's creatures, his commitment not to kill any life according to the highest understanding of the Law of Moses that "Thou shalt not kill" (man or animal), the original teachings of vegetarianism in Genesis 1:29, and his stand in the Temple against the sacrifice of animals. Jesus taught that compassion should extend to all of God's creatures. He taught a humane way of life and was a shining example of a fully humane human being. To be humane is to be kind, merciful, and not to kill any living creature. The slaughter of animals can in no way be considered humane.

Although there is compelling and strong evidence that Jesus was vegetarian, there is no absolute proof of this. This leaves the door open for readers who do not wish to entertain this understanding to maintain whatever belief system they want. Could, however, a living Son of God teach anything less or live any way less pure than this?

Contemporary Christian Vegetarians

MORE RECENTLY WE HAVE THE SEVENTH-DAY ADVENTISTS, whose many members are vegetarian. John Wesley, the founder of Methodism, was also vegetarian, as was Sylvester Graham, the Presbyterian minister known for the “Graham cracker.” What is believed to be the first book on vegetarianism published in the US, *Abstinence from Flesh of Animals*, was written by William Metcalf, a pastor of the Bible Christian Church of England. Christian monks such as the Trappist, Benedictine, and Carthusian orders, the Universal Christian Gnostic Movement, and the Rosicrucian Fellowship practice a vegetarian diet, although there may be some individual communities that are exceptions. Many Franciscan monks follow a vegetarian diet. Some of this has changed since the 1965 Ecumenical Council, which relaxed the regulations concerning flesh-food-eating. In September 1990 at Brown University, Bishop Desmond Tutu from South Africa elegantly stated the meaning of vegetarianism in the context of the promise of world peace and equality for all of God's children. To paraphrase him, he said that in God's garden, we are all vegetarians. Since vegetarianism was God's original plan, although shattered temporarily, it will be again!

The Seventh-Day Adventists, Modern Vegetarian Christians

IN JUNE 1863, ELLEN WHITE, a devout Christian woman who had been receiving revelations since 1844, began to receive specific revelations pertaining to reforming the health practices in the Adventist movement. This vision in 1863, often referred to as the “Ostego Vision,” forms the core of the Seventh-Day Adventist (SDA) diet and health practices. She claimed to have received her revelations directly from God. Many of them were said to also come through angelic messengers. The most frequent of these angelic messengers was Gabriel. Her revelations became a tower of guidance for the growth of the Seventh-Day Adventist movement. Vegetarianism, however, was not, and is not, an absolute precondition for joining the Seventh-Day Adventist Church.

Mrs. White makes the clear connection between one's ability to lead a spiritually sensitive, moral, and physically healthy life which enables one to serve God to one's highest ability, and the importance of eating a moderate, simple, vegetarian diet. This is also a diet devoid of overindulgence in even too much “healthy” food or stimulating, rich foods. Her teachings did not recommend stimulants like coffee and other drugs which alter spiritual awareness.

She taught that taking care of one's personal health was a Christian duty. In the 1976 edition of the *Seventh-Day Adventist Encyclopedia*, it said:

SDAs believe that Christians should have a concern for health not because of any ceremonial or legalistic significance, but for the practical reason that only in a sound body can they render the most effective service to God and to others.... Health is related to religion in that it enables men to have a clear mind with which to understand the will of God and a strong body with which to do the will of God.

SDAs believe that at the fall of man all three aspects of mans nature—the physical, the intellectual, and the spiritual—were affected; and that Jesus, who said He had come to restore that which was lost, seeks to save the whole man.

In her book, *Counsels on Diet and Foods*, section in, Ellen White says:

Grains, fruits, nuts, and vegetables constitute the diet chosen for us by our Creator. These foods, prepared in as simple and natural a manner as possible, are the most healthful and nourishing. They impart a strength, a power of endurance, and a vigor of intellect that are not afforded by a more complex and stimulating diet.

In section 112 she is even more specific:

God gave our first parents [Adam and Eve] the food He designed that the race should eat. It was contrary to His plan to have the life of any creature taken. There was to be no death in Eden. The fruit of the trees in the garden was the food mans wants required.

In section 115 she shared her revelation of God's original and present plan:

Again and again, I have been shown that God is bringing His people back to His original design, that is, not to subsist upon the flesh of dead animals. He would have us teach people a better way.... If meat is discarded, if the taste is not educated in that direction, if a liking for fruits and grains is encouraged, it will soon be as God in the beginning designed it should be. No meat will be used by His people.

Her teachings made a clear connection between the diet one eats and the spiritual and moral sensitivity, clarity of mind, and strength of character needed to follow the spiritual life in an enduring way In section 95 she says:

Foul blood will surely becloud the moral and intellectual powers, and arouse and strengthen the baser passions of your nature. Neither of you can afford a feverish diet; for it is at the expense of the health of the body, and the prosperity of your own souls and the souls of your children.

You place upon your table food which taxes the digestive organs, excites the animal passions, and weakens the moral and intellectual faculties. Rich food and flesh meats are no benefit to you....

BLACKBOARD QUOTES

In the *Gospel of the Holy Twelve*, Section XXXVIII, Verse 4, Jesus says:

“Wherefore I say unto all who desire to be my disciples, keep your hands from bloodshed and let no flesh meat enter your mouths, for God is just and bountiful, who ordaineth that man shall live by the fruits and seeds of the earth alone.”

Remember:

“It is far better to be happy than to have our bodies act as graveyards for animals.”

—Clement of Alexandria (A.D. 160–240)

I entreat you for Christ's sake, to set your house and hearts in order. Let the truth of heavenly origin elevate and sanctify you, soul, body, and spirit. “Abstain from fleshly lusts, which war against the soul”

In section 92 she adds:

Indulgence of appetite strengthens the animal propensities, giving them the ascendancy over the mental and spiritual powers.

Abstain from fleshly lusts, which war against the soul, is the language of the apostle Peter.

The teaching that what and how we eat directly affects our spiritual sensitivity is consistent with the original teachings of Jesus. Although *The Essene Gospel of Peace, Book One*—which essentially describes Christ's teaching of a live-food, vegetarian diet as a part of the cleansing, rebirth, and harmonizing with the spiritual path—was not available to Ellen White in the nineteenth century, she indirectly refers to this core teaching. In section 73 she says:

The Redeemer of the world knew that the indulgence of appetite would bring physical debility, and so deaden the perceptive organs that the sacred and the eternal would not be discerned...

The main point of her revelations was that it was time for all people to return to the original diet prescribed by God in Genesis 1:29. Ellen White was divinely directed to help people understand that a vegetarian diet would help them physically emotionally mentally and spiritually prepare for the Second Coming.

Preview of Chapter 19

IN APPRECIATING THE IMPORTANCE of a vegetarian way of life, it is help-ful to understand that vegetarianism is a world-wide teaching that is a historical part of many major religions. It seems that in each part of the world people have independently acknowledged the importance of vegetarianism as a way to create peace, harmony, health, and spiritual growth. Are you ready to create less pain in the world and bring more peace and harmony by making the transition toward a vegetarian way of life?

I. Buddhism

II. Zoroastrianism

III. Jainism

IV. Sikhism

V. Islam

VI. Hinduism

VII. Principle of *Ahimsa*

A. Vegetarianism as a major way to create less pain

B. Dilemma of surviving without creating pain in the world



Vegetarianism in the World's Religions

UNIVERSAL COMPASSION FOR ALL OF GOD'S CREATURES is consistent with the highest ideals of many of the world religions, such as Zoroastrianism (Parseeism, as it is called in India), Buddhism, Hinduism, Pythagoreanism, Jainism, and Sikhism, all of which teach vegetarianism. Presently it is not universally practiced in Buddhism and Sikhism for perhaps the same reasons as in Judaism and Christianity. Buddha, however, is quoted in the *Lankavata* as saying:

For the sake of love of purity, the bodhisattva should refrain from eating flesh.... For fear of causing terror to living beings, let the bodhisattva, who is disciplining himself to attain compassion, refrain from eating flesh.... It is not true that meat is proper food and permissible when the animal was not killed by himself, when he did not order others to kill it, when it was not specifically meant for him.... Again, there may be some people in the future who ... being under the influence of the taste of meat will string together in various ways many sophisticated arguments to defend meat-eating ... But meat-eating in any form, in any manner, and in any place is unconditionally, and once and for all, prohibited.... Meat-eating I have not permitted to anyone, I do not permit, and will not permit.

In the *Surangama Sutra* it is written:

After my parinirvana (supreme enlightenment) in the final kalpa (time era), different kinds of ghosts will be encountered everywhere deceiving people and teaching them that they can eat meat and still attain enlightenment.... How can a bhikshu (seeker) who hopes to become a deliverer of others, himself be living on the flesh of other sentient beings?

This teaching in the *Mahaparinirvana Sutra* sums it up in terms of the importance of vegetarianism for Buddhism and perhaps all spiritual paths:

The eating of meat extinguishes the seed of great compassion.

The present Dalai Lama has expressed a strong conviction numerous times that it is important not to harm other sentient beings (including animals). He considers it part of the Buddhist practice of harmlessness not to eat meat. Although Tibetans as a culture eat meat, Buddhists in general do not. Now that the Tibetan Buddhists are in exile, the Dalai Lama feels that all Tibetan followers, as well as other Buddhists, should conform to the Buddhist practice of vegetarianism. The Dalai Lama himself is working in the direction of becoming a vegetarian.

In Jainism, *ahimsa*, the doctrine of nonviolence, is a central theme. Because of this, the Jains have maintained a strong and unbroken vegetarian lifestyle throughout history. Some Jains are so committed to nonviolence that they wear a mask over their mouths so that they do not accidentally swallow any insects, and they also sweep the path in front of them as they walk so as not to step on any living creatures.

The Zoroastrian religion goes back many thousands of years and is perhaps the first religion in recorded history that taught the principles of a balanced way of life, including vegetarianism and an ecological awareness. In this religion, the title of Zarathustra was given to great sages over time, but has been most associated with their last spiritual leader, who lived around 600 B.C. He was a strong advocate of a vegetarian lifestyle.

Sikhism, developed by Guru Nanak in the fifteenth century, is not strictly vegetarian because some of its roots are from the Islam tradition. According to *Vegetarianism in Sikhism*, by Sawan Singh Sanehi, a Sikh scholar, the Sikh teachings of Guru Nanak fully support the practice of vegetarianism. Guru Nanak was said to have considered the eating of flesh food improper, especially when using the practice of meditation as part of one's spiritual life. In the

West, the 3HO Golden Temple Movement is one of the biggest Sikh organizations and they are completely vegetarian. The Namdhari sect of Sikhs is also vegetarian.

Vegetarianism in Islam

ALTHOUGH VEGETARIANISM IS NOT specifically endorsed by Islam, there is evidence of some support for it in the Islamic religion. Mohammed is quoted as saying,

Whosoever is kind to the creatures of God is kind to himself.

The prophet's earliest biographies showed his universal compassion for all of creation. He spoke out against the mistreatment of camels and the use of birds for the targeting of marksmen. The Koran (s. 6, vs. 38) says,

There is not an animal on the earth, nor a flying creature on two wings, but they are peoples like unto you.

Mohammed was said to prefer vegetarian foods, such as milk diluted with water. He was said to eat only pomegranates, grapes, and figs for weeks at a time. He is quoted as saying to some hunters, "Maim not the brute beasts." At another time Mohammed said,

There are rewards for benefiting every animal having a moist liver (all living creatures).

Mohammed was not the sole voice sympathetic to vegetarianism in Islam. Al-Ghassali (A.D. 1058-1111), a brilliant Muslim philosopher, wrote:

Compassionate eating leads to compassionate living.

Although vegetarianism is not mandated in the Sufi path (of Islam), many of the Sufis (Islamic mystics) practice vegetarianism for spiritual reasons. The Sufi mystic Hazrat Rabia Basra would often be surrounded by animals when she meditated in the woods. One day, a disciple approached her in the woods and the animals ran away. He felt sad that the animals ran away from him and sought her advice on the issue. She asked him what he had eaten that day. When he revealed that he had eaten some animal fat, Rabia explained that the animals run from those who eat their flesh. The Sufis as a group, however, do not specifically advocate a vegetarian way of life. It is left for each individual to decide whether to make it part of their spiritual life or not.

The Islamic Holiness M.R. Bawa Muhaiyaddeen, considered by many an Islamic saint, was a vegetarian. He shares some specific teaching about vegetarianism that is universal for all. In his book, *The Tasty Economical Cookbook—Volume II*, he says:

A true human being must have compassion toward all lives. There are so many ways to eat good clean food, without killing or tormenting other lives, and without eating the flesh or bones of other lives.... If a man eats meat, he will take on the qualities of the animals he eats. The qualities of all these animals can be imbibed by eating their flesh.... And once those qualities enter, the man's anger, his hastiness, and his animal qualities will increase. The animal's blood will intermingle with his blood.... These animal qualities are what causes one man to murder another, to harm and torment another.

In an unpublished discourse, Bawa Muhaiyaddeen gives both specific and universal answers to the question of the Islam and Sufi practice of vegetarianism. From a spiritual perspective, a deeper level of vegetarianism arises from the inside out, rather than from the outside in. He clarifies vegetarianism as the result and natural consequence of the development of spiritual consciousness:

When a man's mind attains a state of completeness in wisdom and when he reaches a state where he will not hurt any life within himself (in one's mind), then he will not harm anything on the outside either. Inside he will not intend any harm or pain to any other life. Nor will he do anything harmful or eat any life on the outside. This is a state of wisdom, clarity, and the light of God. This is Sufism. Man is such a dangerous animal, and it is only when he changes his behavior that he becomes a good man, a true human being. When he changes into a good man, he will no longer have within himself the thoughts of killing or gaining victory over

another life. He will not have within himself the qualities of distressing other lives, of wanting to harass or ruin other lives. If he does not kill anything on the inside, then he will not kill anything on the outside.

Once a person has the wisdom, the potentialities, and the qualities of the true human being, once he attains that liberation, he will have reached the exalted state of God. The darkness in him will have been dispelled and he will love his neighbor as he loves himself. Once he attains the quality of loving every other life as he loves his own, he will never kill another life. Nor will he ever cause pain to another life. Because he feels that the other life is also his own flesh, he will never eat flesh.

... such a one will not eat flesh. He will not eat another human being (within his heart) nor will he eat an animal. Some people will not eat animals (on the outside), but they will devour other human beings (within their hearts and minds).

The same difficulty seems to exist in Islam as in Judaism and Christianity. Initially a vegetarian way of life is too big a change for people and becomes a stumbling block for them. According to Bawa Muhaiyaddeen, in the past,

The Prophet came and told them, "Do not kill. It is a sin. You are taking another life."

Because the people were not able to follow this teaching, Mohammed then had to limit, but ultimately allow, the eating of flesh because the people were not of the consciousness that allowed them to go beyond their blood lust. As in Judaism, the killing of animals was limited by laws that were very difficult to follow. These laws are called *qurban*, involving the slaughter of animals after certain prayers are recited and while one looks the animal in the eyes.

As with the Kosher laws, the Koran lists forbidden foods rather than the foods one must eat. These forbidden foods center on meat. There are elaborate regulations for preparation that limit the amount of animals one is able to kill and therefore make eating meat considerably more of a burden than eating a vegetarian diet. Muslim vegetarians, like Jewish vegetarians, have no real scriptural dietary restrictions. Because Allah is praised as merciful and compassionate, vegetarianism and other types of compassion toward animals constitute a way of following the Islamic teachings. Although Islam, like other modern religions, does not advocate vegetarianism to the masses, vegetarianism is quite compatible with its essential teachings.

Hinduism and Vegetarianism

HINDUISM IS ONE OF THE RELIGIONS that has maintained its vegetarian perspective, perhaps from the beginning of written history. There are about 550 million Hindu vegetarians. It is clearly part of the spiritual path as described in the Vedas, ancient spiritual scriptures somewhere between six and eight thousand years old. The wisdom of the Vedas underlies a wide variety of spiritual paths related to the practice of Hinduism. Also involved in the practice of a vegetarian diet is the science of Yoga and the science of Ayurvedic medicine that itself originates from the Vedas. As pointed out earlier, Ayurveda describes three diet types. One of them, called the sattvic diet, enhances inner peace and spiritual development; it is a simple vegetarian diet. *Ahimsa* is another primary force behind vegetarianism in India. Ahimsa may be broadly defined as nonviolence or a dynamic compassion for all of life. Mahatma Gandhi, a vegetarian, taught that the two pillars of ahimsa are truth and compassion.

The following quotes represent the Vedic teachings on vegetarianism. They emphasize compassion, respect, and nonviolence for all of God's creation:

*Having well considered the origin of flesh foods,
And the cruelty of fettering and slaying corporeal beings, let man
entirely abstain from eating flesh. (Manusmriti 5.49)*

*You must not use your God-given body for killing God's creatures,
whether they are human, animal, or whatever. (Yajur Veda 12.32)*

*By not killing any living being, one becomes fit for salvation.
(Manusmriti 6.60)*

Ahimsa

THE PRINCIPLE OF AHIMSA can also be found in the Buddhist Eightfold Path, which has been a guide to living a harmless, compassionate life for thousands of years. In *Ahimsa*, by Nathaniel Altman, Buddha is quoted as saying:

Him I call a Brahmin who is free from anger, who gladly endures reproach, and even stripes and bonds inflicted upon him without cause. Him I call a Brahmin who slays no living creatures, who does not kill, or cause to be killed, any living thing

Often translated as “nonviolence” in the West, the principle of ahimsa has a broader meaning in the East. Ahimsa incorporates an active stance in the world with a dynamic compassion for all of life. Nonviolence, without the dynamic aspect, has more of a passive, restraining-from-violence connotation. Ahimsa is acting from a compassionate awareness and empathic identification born of a reverence for life that affects every facet of daily existence. It involves a personal responsibility to respect, and work for, the well-being of all sentient creatures. Although often thought of as compassion between humans, ahimsa is compassion for all of the Earth and its life forms.

One consideration that arises in the discussion of ahimsa and vegetarianism is the killing of plants. Ever since the publishing of *The Secret Life of Plants*, which scientifically documents the pain plants experience in being harvested and cut up, I have been aware that plants do experience some pain. For most of us, it is necessary for our survival to eat plants. Our very existence causes some sort of pain on the planet, but there is a relativity to it. For those who want to equate all pain as equal in order to justify their flesh-centered diet, I find it hard to compare the blood slaughter and eating of a sentient being, such as a cow, with the simple harvesting and eating of a carrot. To even the most callous observer, the experiences are magnitudes different in pain and violence.

A vegetarian also creates less pain than a nonvegetarian because he or she is not participating in the systematic slaughter and pain of billions of animals every year. The US Department of Agriculture reports that 4.5 billion cattle, calves, sheep, lambs, hogs, chickens, ducks, and turkeys are slaughtered yearly in the US. A vegetarian also causes less overall death to plants than a meat-eater because the animals the flesh-eater raised for consumption have eaten thousands of plants before they themselves are slaughtered. There is a significant difference between the gross exploitation of animal life because of greed and a flesh-centered diet, and living simply and relatively harmlessly on a vegetarian diet so that others, including the planetary organism Gaia, or Mother Earth, will simply live and survive.

It is possible that there may be no perfect state of nonviolence while we are in a physical body. Although vegetarians cause significantly less pain and global ecological destruction than flesh-eaters, fruitarians cause even less pain than vegetarians because they do not destroy the life of the plant when they pick fruit off trees. Those rare few who live on just water and air cause even less pain than fruitarians.

Ahimsa is a practice that strives to create less and less disorder and pain in the world as we do our best to live our lives with ever-increasing harmony, compassion, and love. Theoretically, since there is no cut-off point where we stop causing pain by our very existence, the guilt about causing pain could be endless. Perhaps we were given the grace of Genesis 1:29, God's command to be vegetarian, as a way to establish a relatively peaceful, guilt-free way of living on the planet.

Because our planet offers herself for our survival, I feel humble and grateful for the pain she endures. We would do well to take the minimum from Mother Earth and cause the least amount of pain and destruction so that the mutual survival of all life on the planet will be harmoniously ensured.

BLACKBOARD FOOD FOR THOUGHT

It's no accident that vegetarianism is compatible with the teachings of:

- ✿ Christianity
- ✿ Judaism
- ✿ Hinduism
- ✿ Buddhism
- ✿ Islam
- ✿ Jainism
- ✿ Sikhism
- ✿ Zoroastrianism

Vegetarianism preserves life, health, peace, the ecology, creates a more equitable distribution of resources, helps to feed the hungry, encourages nonviolence for the animal and human members of the planet, and is a powerful aid for the spiritual transformation of the body, emotions, mind, and spirit.



Transition to Vegetarianism

AT THIS POINT YOU HAVE BEEN EMPOWERED by the knowledge of how to individualize your diet, learned about acid/base balance, constitutional type, psychology of eating, and process of assimilation, and addressed doubts and fears about becoming vegetarian. You understand the impact of diet on the ecology of the planet, cruelty or compassion for animals, individual health, feeding the hungry, and peace in the world. You understand the connection between diet and spiritual life. You have had a chance to contemplate food as a love note from God and may have even tried taking the time to read some of these daily notes. If you are already vegetarian and have done all these, you might have already become a—sensitive, aware, alert, and compassionate—*conscious eater*. For others for whom this book is a bridge into this new world of health and spirit, there is one more major step in the process: learning how to make the transition to a vegetarian diet.

There are many ways to become a vegetarian. This section outlines the changes and steps one often takes. Questions about the transition are explored. The reader is given guidance regarding how to move from the present diet to lactovegetarian to vegan to a live-food, vegetarian diet. Enjoy the walk, take your time, and be gentle with yourself. Vegetarianism is about peace, and the first place to start is to be peaceful with yourself during the transition. Once you have made the major change to vegetarian, the individual diet that suits your own lifestyle and health needs will gradually emerge. Those who move too fast do not always last.

Before moving further, it is important to condition your body, mind, and spirit. Perhaps part of you has even wanted to give up reading the rest of the book because you do not feel ready to become a conscious eater. That may just be your flesh-eating and culturally ingrained old habits fighting back as your intuition, intellect, and spirit are working to guide you to the highest level of conscious eating you can attain. Don't let your resistances control you.

Before moving forward in this section, I suggest you focus on yourself for a few moments. See yourself as strong and healthy, free of pain or sickness, with a pure spirit and God-like mind. Now close your eyes and breathe in radiant health and exhale all negativity and sickness. Do this seven times. Now, see the new you as a—*conscious eater*. Take as long as you need to pray or meditate until such a vision of your Divine potential appears. Feel the experience of this vision in your body as you are filled with health, spiritual power, and sensitivity. Experience the emotions and thoughts associated with the new you as a *conscious eater*. How does it feel to align yourself with the Divine intention of thousands of years? How does it feel to prepare yourself for the promised Golden Age? Write down your experience and date it. As this vision grows with your experience, continue to record your goals. Enjoy!

Preview of Chapter 20

FOR MANY PEOPLE, CONVERTING TO A VEGETARIAN DIET is a major lifestyle change. Without an understanding of the subtleties of the process it is easy to become confused and discouraged. This chapter speaks to those physical, emotional, mental, and spiritual issues. I also put vegetarianism in perspective spiritually by making the point that although a vegetarian diet helps the spiritual process, one cannot eat one's way to God. As you read this chapter, try to see where you experience your own resistances. Are you ready to let go of these resistances? Are you ready to adopt a diet that will most likely make you more sensitive to the presence of God in your life?

- I. The change to vegetarianism
 - A. Reasons for the transition
 - B. Outstanding people who are vegetarians
- II. Physical detoxification
 - A. Physical symptoms of detoxification
 - B. Healing crises
 - C. One becomes cleaner and more vital
- III. Psychophysiology of dietary change
 - A. How we look, how we feel
 - B. Anti-aging research
 - C. Releasing old thoughts in the process of healing
- IV. Perspectives on dietary change
- V. Four transition stages



The Change to Vegetarianism

WHEN ASKED ABOUT SWITCHING TO VEGETARIANISM, some people respond, “Why bother? I like my charbroiled steak. All this stuff about becoming vegetarian makes me feel guilty. Why not just ignore it?” Unfortunately, in this case, ignorance is not bliss. To ignore the harmful effects of diet is nothing less than an accelerated path to physical degeneration, pain, misery, and disharmony with self and nature. This is especially true with the present state of the world. A vegetarian diet helps one attune to the worldwide evolutionary change that is occurring in the direction of peace and harmony for all of creation. The information and ideas that have been shared about vegetarianism are not meant to make anyone guilty, but to educate so that one can begin to make intelligent, informed choices for one's life, health, and happiness. Guilt comes from knowing what is most appropriate for one's well-being and choosing not to follow the dictates of one's conscience. Guilt is one's own creation stemming from resistance to change. It comes from not being able to let go of old habits and addictions that one intuitively knows do not serve one's ultimate well-being and that of the planet.

There is an intuitive “yesness” that many people have found works for them as they apply these concepts in their transition to vegetarianism. The information I have presented is best used as guidelines, concepts, and tools to empower and enhance well-being. There is no single answer for everyone, but there are compelling reasons to make such a change in one's life. The following is a review of some of those reasons.

Reasons for Transitioning to a Vegetarian Diet

1. A vegetarian diet, developed in a conscious, gradual, and scientific way, is an overwhelmingly superior diet for health, vitality, endurance, and general well-being.
2. Vegetarian food tends to create a calmer, more centered, and clearer emotional and mental state.
3. A vegetarian diet is a distinct aid for enhancing spiritual life and awareness. Throughout history, almost all major spiritual paths have acknowledged this awareness, including Genesis 1:29, the first dietary commandment and the first direct teaching to be vegetarian in the Bible.
4. A vegetarian diet enhances the flow of the spiritualizing force in the body. A flesh-centered diet acts as a sludge to the purifying movement of this holy force in all the basic elements of the body, mind, and spirit.
5. A vegetarian diet brings one into ecological harmony with all of creation. In comparison with a flesh-centered diet, it is vastly superior in its ability to conserve land, water, and energy, and to enhance the quality of both human and animal life. It brings us into harmony with the biological cycles of the biosphere, such as the natural oxygen/carbon dioxide cycle of our breath and that of the plant kingdom.
6. A vegetarian diet connects one with the solar, lunar, and stellar forces of the universe. It allows one to extract energy from Mother Nature through the balancing principle of the rainbow diet.
7. A vegetarian diet minimizes the violence and exploitation of our animal friends on the planet. In this nonviolent space, it allows compassion for all life to blossom. A vegetarian diet would help bring planetary peace on every level.
8. A vegetarian diet minimizes the hoarding, wasting, and inefficient use of natural resources and energy for producing food. It minimizes the wasting of the food itself, particularly in the form of grain fed to livestock. Because of this, a vegetarian way of life would make it possible (if the social and political aspects of our society were ready) to curtail the 60 million deaths per year due to starvation. It would also help end the disease and misery of millions more suffering from malnutrition. The abundance of food created by the worldwide adoption of a vegetarian diet would prove that starvation on the planet is caused more by a scarcity of justice than of food.
9. A vegetarian diet is considerably less expensive than a flesh-centered diet, and would be even more so if the meat industry in the US were not significantly subsidized by the government.
10. A shift to a vegetarian way of life is part of a major planetary shift in consciousness. It is the dietary blueprint for the Golden Age we are entering.

A number of outstanding individuals throughout history have undoubtedly understood these principles in their choice of being a vegetarian. The following individuals chose to be vegetarian for many of the above reasons: Jesus, Buddha, Krishna, Rama, Zarathustra, John the Baptist, John the Divine, Matthew, Pythagoras, Plato, Virgil, Horace, Rabia Basra, Henry David Thoreau, Ralph Waldo Emerson, Benjamin Franklin, Richard Wagner, Voltaire, Sir Isaac Newton, Leonardo da Vinci, William Shakespeare, Charles Darwin, H.G. Wells, George Bernard Shaw, Mahatma Gandhi, Leo Tolstoy, Albert Schweitzer, and Albert Einstein, among others.

The process of becoming a vegetarian is one of self-discovery and self-transformation. Because food is more primary than sex, whatever changes we do make have a deep impact on an emotional, mental, and spiritual level. With each change of habit, a little more consciousness is liberated. Part of the self-discovery process is that as we change, old thoughtforms must be brought up, examined, and ultimately discarded.

A rapid shift to a vegetarian diet may precipitate a physical detoxification. For this and the reasons above, *the number-one rule for making the transition to vegetarianism is to move slowly and gently*. If we are to be at peace with ourselves, each step in the process must be one that feels harmonious. Most people can deal with change if it is gradual. If the change comes too quickly, it then becomes a shock to the system. Usually, the complete transition takes several years. I've seen it happen in a few weeks or in as much as ten years. In the overall picture, how long the process takes doesn't matter. What matters is that one has chosen to move along the evolutionary continuum toward health, harmony, and peace. At each step of the way one creates more peace and does less damage to others and oneself. Even taking the life of plants for food involves some violence, so it is important to humbly remember that whatever one does on the physical plane will never be perfectly in harmony, but it will be increasingly harmonious. By moving slowly, one avoids the pitfall of overreacting on a physical, emotional, and psychological level to the

attitudinal changes that are made in the transition to vegetarianism. In this way, one avoids becoming discouraged. In order to work with these changes in a beneficial way, it is important for one to develop some understanding of how they unfold.

Physical Detoxification

BECAUSE OF THE TOXICITY OF THE INNER ENVIRONMENT of our bodies and the outer environments we live in, it is safe to say that all of us have some stored toxins in our system. As one shifts to a healthier diet and away from a flesh-centered one, the stored toxins begin to come out of the tissues. The process of detoxification can be understood by the physical phenomenon known as diffusion. The chemistry of the diffusion process says that elements move from areas of higher concentration to those of lower concentration. With a more toxic diet, such as a flesh-centered one, nutrients as well as accompanying toxins found in these foods flow into the blood and lymph from the intestinal tract. If their concentration is higher than the toxins in the cells, as is often the case with a flesh-centered diet, these toxins diffuse their way into the cells, where they are then stored.

When the toxicity level of our diet is decreased by switching to vegetarian foods, the difference between the concentration of toxins in the intra-cellular fluid and extracellular fluid changes. The cells become more concentrated with toxins than the extracellular fluid because less toxins are put into the latter by a vegetarian diet. Because of the law of diffusion, the toxins that are now more concentrated in the cells begin to flow back into the extracellular fluid. Toxins are diffused into the bloodstream and then go to the liver, kidneys, gastrointestinal tract, and skin systems, where they are eliminated. If the organs of elimination become overworked, then they may go into malfunction. This is called a healing crisis. Typical detox and healing crisis symptoms are bad breath, pimples on the body, nausea, headache, liver pain, odoriferous stool and urine, and general malaise. Sometimes the blood, organs, and glands become so overloaded with toxins that one actually gets sick. Sometimes the toxins come out in the form of a past disease that our organism is releasing from the system. The health pioneer J. H. Tilden, M.D., actually defines disease as a toxemia crisis. Although there may be other primary causes for disease, such as deficiency and genetic causes, the root of many diseases is the toxins produced by the excesses so prevalent in Western society.

Healing crises usually occur when the body vitality reaches a point where it is healthy enough to throw off the toxins. A crisis may last for a few days or even weeks. In my clinical experience, one is unlikely to have a major healing crisis if one detoxifies slowly over a few years rather than going onto a diet that is so clean and pure that the detoxification process is greatly accelerated. Speeding up the recovery from a healing crisis is facilitated by daily enemas, plenty of rest, taking in alkalinizing fluids such as fruit and vegetable juices (which neutralize acid toxins), and maintaining a positive attitude. Seven- to ten-day “relative” fasts can also speed up this overall detoxification process. I define a “relative fast” as follows: if one is on a flesh-food diet, one would undertake several “meat” fasts by eating an ovo-lactovegetarian diet. If one is a lactovegetarian, eating a dairy-free diet for a while or doing several juice fasts may help one shift to a cleaner diet.

In my clinical experience with juice fasting, although people may get transitory healing crises for several days, the fasts provide a controlled and safe situation where one can “reset one's dietary dial” to a healthier diet. After a few positive experiences of fasting on a purer diet, one has enough positive feedback that the transition to the next step goes much more smoothly. After each stage of the transition, people seem to rise to a new level of well-being, energy, love, and light. More energy becomes available to experience one's aliveness in service of the spiritual awareness that is so important for our sensitivity and openness.

Although the discussion thus far has focused on the accumulation of toxins from dietary origin, any habit of body or mind which decreases our vital energy results in the accumulation of toxins in the body. Along with a healthy diet, one needs to develop a new lifestyle that further enhances one's total well-being. The better one feels, the easier it is to find time to exercise, meditate, rest, drink good water, sun oneself, deep breathe, spend time with significant others, and experience the joy of communion with the Divine. All these factors increase the vital force, which then helps one detoxify more easily and at progressively deeper levels.

It is also useful to understand that acid toxin production is a normal part of our metabolism. Exercise produces lactic acid build-up. Protein digestion produces sulfuric and phosphoric acid. Cell metabolism produces carbonic acid. A vital body can easily discharge these toxins, as well as many environmental toxins to which one might be exposed. The idea is not to obsessively spend time running from toxins, but to develop such a vital body force and such good health habits that one is able to handle the different environmental toxic stresses to which one is exposed. This does not mean one ignores common-sense avoidance of toxic environmental situations.

In this detoxification process, one becomes cleaner and more vital over time. If people move too fast, however,

they may become so pure that they actually become too sensitive to the environment or so filled with vital energy that they become ungrounded in their lives. This is where the art of spiritual nutrition becomes important. It guides one beyond rigid concepts based on the mythical ideal. *The core idea of the art of spiritual nutrition is to find a diet that best establishes balance, function, and harmony in ones life.* This artful, intelligent, appropriate diet choice both supports one's daily function in the world and enhances one's communion with the Divine.

The Psychophysiology of Dietary Change

DIETARY CHANGE OF ANY SORT forces us to face patterns, habits, conscious and unconscious psychological attachments, our own ego defense systems, and an acceptance of our new body image. It is an opportunity through the self-knowledge that comes from dietary change, to expand our awareness and clarity about who we are. It is a healing step that can potentially be a catalyst bringing us into a new level of personal health. Along with psychological changes usually comes a change in our body image, sensitivity, and physical body structure.

Not all of this comes effortlessly or is necessarily easy to accept. Once when I was interviewed by a Canadian national TV network, the quite portly TV interviewer looked at a photograph of me twenty-five years ago when I was a 188-pound, bull-necked, all-New England, football middle linebacker and guard, one of eight National Scholar athletes picked by the National College Football Hall of Fame, and the co-captain of an undefeated college team. He then said to me, "You looked so strong and healthy then and now you look so 'thin and puny compared to your football days.'" Well, I can't say I enjoyed being called puny on a national TV interview. It was a direct challenge to my new body image, but he went straight to the point of controversy: real health as compared to "looking healthy." "Looking healthy" is a subjective cultural concept that is not grounded in the science of health and longevity. Not too many years ago there were many young, steroid-raised athletes who looked very strong and buff on the outside, but who were tragically pointed toward serious health problems such as cancer and liver disease. Nevertheless, creating a new body image that does not fit with cultural stereotypes of health is not easy.

When I returned from India after a one-year stretch of studying and working in a medical clinic, the contrast between the "normal" Indian body and the "normal" American was quite dramatic in the reverse. Almost everyone in America looked overweight to me. Is there an objective standard that can help us get some clarity?

As one observes various cultures around the world, those with the best quality of health and longevity are those who eat one-third to one-half the protein and total calories that Americans do. These people would be judged "thin" and "puny" by our subjective cultural standards. Even by our objective, generally accepted standards—i.e., according to the Metropolitan Life Insurance Ideal Weight tables—there are many people who are overweight in the United States. Most of the cultures known for health and longevity, whose members may appear thin to us, are actually the appropriate weight associated with health and longevity.

Stuart M. Berger, M.D., in his book *Forever Young*, has a weight scale for optimal longevity that shows I am at the optimal weight for a youthful longevity I pointed out to the Canadian interviewer that my weight as a football player was thirty-two pounds greater than the maximum for my weight-to-height range according to the Metropolitan Life Ideal Weight scales. I also pointed out that my flesh-eating, extra thirty-two pounds was all muscle, designed to tackle or block opposing players. Since I was no longer playing football, this extra thirty-two pounds of muscle was no longer needed. In fact, I explained that with my new body, I felt considerably more healthy than I did in my football-player body. This new body that is built primarily on living food is considerably more flexible, pain-free, physiologically more balanced, more vital, and more full of light than in my college years.

Although during high school and college my health would have been considered "good," I still got the average amount of colds and flus, had energy fluctuations, and had less mental endurance than I do now. My health and vitality back then wasn't close to the quality of my almost disease-free health now. Since beginning a 95% live-food diet in 1983, I've experienced an ever-increasing vitality and digestive power, strong immune and endocrine systems, and increased life force.

Being at one's ideal weight does not mean one loses relative strength or endurance, even if it doesn't fit with the stuffed body image of "healthy." In my fifty-sixth year, I did 400 push-ups on the fifth day of a juice fast. Seventy push-ups was my maximum when I was a twenty-one-year-old football player. Each year I feel stronger and distinctly more flexible.

In addition to observing the lifestyle patterns of cultures which enjoy greater health and longevity, some of the research by Roy Walford, M.D., one of America's leading anti-aging researchers, is highly noteworthy. Dr. Walford, in his book *How to Double Your Vital Years*, shows with hard scientific data from animal studies that by eating a high-nutrient, low-calorie diet (what he calls a high/low diet), animals are found to increase their longevity by 50%. This is equivalent to humans living to be 150 to 160 years of age. This high/low diet is designed to find the point of maximum metabolic efficiency, maximum health, and maximum life span. His recommended calorie intake for maximum health and longevity is approximately 1500 calories per day. He cites research that he feels is beyond any

reasonable doubt showing that a high/low diet significantly extends life span, retards the rate of aging, and retards the onset of the major chronic degenerative diseases. He reports that the maximum life span in some mice in his minimal eating experiments was three to four times greater. Dietary restrictions, imposed even at late stages in the animal's life, greatly extended life span. Walford says that he is:

... convinced with a high order of probability that the same kind of diet will produce the same sort of results in humans.

Walford believes his approach cuts disease susceptibility in half. Humans, like the research animals, would reap health and longevity benefits by starting this low-calorie, high-nutrient diet even in middle age or later. Walford himself is following the principles he expounds upon in his research. Dr. Walford points out that 25% of women and 12% of men in the United States are obese. Obesity is defined as weighing more than 20% above the body weight ascribed by experts to a person's height and relative bone structure. It is indeed time we begin to reconsider a new cultural definition of health, along with a corresponding change in what a healthy body is supposed to look like.

What happens almost universally when one stops eating flesh foods is that one drops excess weight. The loss of superfluous, unneeded weight continues when one stops eating dairy products. One's true, ideal weight is often easily discovered after one adopts a live-food diet. A body built on high-quality, whole, organic, nature-developed foods is also of higher quality than body weight built on poor-quality commercial foods, or the new, "improved" fast foods the industry is coming out with.

Walford suggests that most of us would do well to eat less. By cutting down to 1500 calories, over a few years one soon learns that whatever is eaten at 1500 calories per day better be especially good and healthy. A vegetarian, live-food diet allows one to eat the least amount of food and receive the most nutritional and energetic impact. As in my case, without counting calories, a live-food diet naturally has the ability to bring one to one's optimum weight.

It also takes time to get used to one's new body. The process is easier without people around who are infecting one with irrational fears born of cultural biases about the "dangers of vegetarianism." To balance this widespread view, which is primarily based on ignorance, it is good to have objective, supportive data from cross-cultural studies, modern actuarial and scientific research, and convincing animal research.

Another part of this transition in the process of healing is the release of old, contracting thoughtforms. In my work with patients, students, and myself involving meditation, the Zero Point Process, prayer, spiritual awakenings, energetic healing, hands-on healing, and dietary change, I have noticed there seems to be a common pathway by which what I call "mental toxins" are released. All of these processes enhance the spiritual energy that comes into the system and the amount of energy the system is able to handle. The more our bodies move toward health, the higher our vibration and vital force become. Many people believe that even though the mechanism is too difficult to scientifically establish at the present level of research technology, negative thoughtforms are stored in the subtle system of the body at lower vibrational rates. When the body begins to operate at a higher vibrational rate, these lower-vibrational thoughtforms are forced out. They may come out in dreams, meditations, contemplations, or just during the day. Dietary changes seem to be the mildest form of releasing negativities. Of all the forms of diet, the live-food diet brings out the most rapid release of old, limiting thoughtforms.

Although relatively mild, for people who are not expecting it, this release of previously suppressed materials is one of the reasons a live-food diet may initially be difficult to sustain. This is why I recommend live foods as part of a continuum rather than having people jump right into it. By gently passing through the various stages of a vegetarian diet, our minds and psyches are able to become more peacefully accustomed to the increased life force and accelerated release of negative thoughts that are associated with the healing and purification process. The body needs time to readjust on both the physical metabolic and mental levels of experience.

Perspectives on Dietary Change

CHANGING ONE'S DIETARY PATTERN is not a search for a perfect diet because the only thing that is perfect is beyond the body-mind complex. The only thing that is perfect is the Truth of God, in all, as All. We are already imbedded in this perfection except that most of us are not aware of this reality. A healthy diet is an aid in clearing our consciousness and body so that we can be more receptive to the experience of this absolute level of truth. However, it must be remembered that despite all the emphasis and importance I have placed on right diet, *one cannot eat ones way to God*. Diet is not the key to spiritual life, but it is a positive helping factor that assists in opening the door to communion with the Divine.

Besides enhancing our communion with the Divine, an appropriate diet can help us reach stages of health in which we can fully enjoy life and live more youthfully, longer. Diet is not religion or an obsessive form of searching for God. Diet is simply one part of a balanced, harmonious life that is in attunement with universal laws. As has been mentioned, an appropriate diet can also help bring one into harmony with the social, ecological, and political issues of the planet. Interestingly enough, although coming from a different perspective, this intuitive, individualized dietary approach of conscious eating yields about the same results in terms of total daily calories and body weight as Walford's scientifically approached, calorie-counting diet. With the harmony of wholeness approach, however, you never have to look at a calorie counter.

This conscious eating approach is the reflection of, and contributor to, our state of internal balance and external harmony with ourselves, our society, and our planet. It is part of the unfolding process of being in tune with the primary natural laws of the universe. A healthy diet is most appropriately developed not as a mechanical process separate from our life, but in a full spiritual context of right livelihood, good company, loving our neighbors as our true selves, meditation and/or prayer, and starting each thought, word, and action with love. It is through this perspective that we are best able to develop an individualized diet that reflects the highest state of awareness and is completely appropriate to maximal function in the world.

Transitioning

IN THE WESTERN, INDUSTRIALIZED, mechanized, left-brained lifestyle of today's world, our relationship with nature has become confused, exploitive, and very fragile. How else could the FDA have approved such an obvious health-destroying process as the irradiation of fresh fruits, vegetables, wheat, spices, herbs, pork, and poultry products as a way of preserving them? This decision of the FDA reflects the extent to which many of us have broken our ties to nature.

What seems normal is abnormal and vice versa. According to an article in the *East-West Journal* by Becky Gillette and Kate Dumont on Roy Wal-ford's research, fully two-thirds of Americans die from diseases caused by a poor diet. Approximately 1.5 million people died of diet-related disease in 1987. One has the choice to avoid these diet-related diseases by adopting the type of diet that both cures and prevents the chronic degenerative diseases from which so many suffer.

Vegetarians and a vegetarian diet are sometimes considered extreme. And this is true if your goal is to be "extremely" healthy and feel extremely good. It is difficult to change a dietary pattern, even if it is unhealthy, when it means swimming upstream against social pressure and our old, programmed habits and belief systems. Nevertheless, it is necessary to examine one's programming and be willing to abandon what is no longer appropriate for maintaining one's state of total well-being of body, mind, and spirit. In this unfolding process, one learns to abandon what does not keep one in health and harmony. This gentle approach also helps to guide the rate of transitioning so it is in harmony with the body's physiological changes, the clearing of mind, and the subtle opening of spirit in one's life.

Planning one's own individualized diet and rate of transition requires some artful intelligence in the application of the principles and concepts I have shared. The process is real and basic rather than esoteric. It is a self-discovery process of trial and error to see what works to maintain the experience of the One. The hunger for the Divine can serve as a guiding light behind the appetite and direct one's choice of diet.

The place to start is with one's immediate dietary pattern. This involves learning to eat, by trial and error, the right amount of food that energizes the mind, body, and spirit. This will ideally maintain and enhance the present flow of cosmic energy into the body, thus sustaining the present level of love communion. One aid to the digestive system is to limit one's food intake to a maximum of three meals per day, with only juices or an occasional piece of fruit between meals. The exception to this is if one has a strong fast-oxidizer physiology, or hypoglycemia, which requires frequent snacks until the condition is stabilized or cured. Chewing food well and creating a peaceful, joyful atmosphere in which to eat or digest the food will immediately improve digestion.

Four Transition Stages

THERE ARE SEVERAL MAJOR STAGES of dietary transition. Each stage may take as little as one season in a yearly cycle. The concept of “transitioning” allows one to be receptive to the continued progress of one’s evolutionary growth, no matter what the time frame. More detail will be provided about these stages in later chapters, but for now it is sufficient to foreshadow this material by way of a brief description of these four dietary stages. Stage one is a transition from all bioacidic foods to natural, whole, organic foods. This means letting go of all processed, irradiated, chemicalized, pesticide-ridden and fungicide-containing, adulterated, fast, and junk foods and other sorts of “Hostess Twinkie”-type foods. In this stage we also begin to give up red meats.

The second stage is letting go of all flesh foods, such as poultry and fish. It also includes not eating eggs.

Stage three is a vegetarian diet with the inclusion of dairy at the beginning and then moving to an 80% live-food intake by the end.

Stage four is vegetarian without dairy and may be as much as 95-100% live foods by the end. Not eating flesh or any dairy products is not technically defined as a vegan because to be a true vegan means the absolute avoidance of any animal products in the total lifestyle. This includes the avoidance of leather clothing, honey, and gelatin capsules.

BLACKBOARD QUIZ

1. A high percentage of juvenile delinquents stopped their asocial behavior when they were put on a healthy diet with a minimum of sugar.
 True False
2. Food is not medicine. True False
3. Food affects the body but not the mind and spirit.
 True False
4. Hypoglycemia is a sickness that can be corrected by proper food balance and a healthy lifestyle.
 True False

(1. T; 2. T; 3. F; 4. T.)

Preview of Chapter 21

THE FIRST CONSCIOUS EATING STAGE is not becoming vegetarian. It is simply becoming conscious of what you are eating, from pesticides to nitrates. It is learning to read labels and ask the right questions to protect yourself. In this stage junk foods and commercially produced foods are given up for the most healthy and cost-effective organic foods. One also gets a chance to look at the viral, bacterial, and parasitic dangers of eating beef and chicken. In this stage, we let go of red meat. The time for action has begun. Are you ready to make this first step in the commitment?

- I. Biocidal food
- II. Protecting yourself from chemicalization
 - A. Major source of pesticide exposure comes from animal foods
 - B. Avoid commercial foods to be safe
- III. Learning to read labels is good for your health
- IV. *Au naturel*— buy organic
- V. Dangers of eating flesh
 - A. Chemicals in factory-farmed animals
 - B. Estrogen-injected animals—problems manifested in people who eat that flesh
 - C. Leukemia in children linked to diseased milk
 - D. Detrimental effects of fats in the diet
 - E. Unhealthy chickens and chicken processing



Stage One: I Have No “Beef” with This

THE FIRST STAGE IN THE TRANSITION PROCESS is mental acceptance and an understanding that a dietary reorientation is necessary. Stage One is a time to begin thinking about the acid-base ratio of the foods one eats and its effect on the body the practice of food combining, regular exercise, and cultivating healthy eating patterns. Eating more fruits, vegetables, grains, legumes, nuts, seeds, and raw dairy as the central focus of one's diet is a big departure from the typical American diet, but most everyone finds this new world of health-giving foods exciting and rewarding. After an initial adjustment phase, these foods generally taste better in the long run. Stage One can be considered the first major step in one's gradual re-education and shift to healthful eating patterns.

This means significantly reducing one's intake of tamasic, health-destroying, biocidal foods. Giving up biocidal foods—processed, commercially grown, fast food and junk foods—means no longer offering oneself up as a sacrificial guinea pig to the pesticide, herbicide, additive, fungicide, food processing, food irradiating, microwaving, fast food, and junk food industries. Stage One eliminates such deleterious foods as white sugar, white bread, candy, TV dinners, soft drinks, any meats that have been treated with nitrites and nitrates, pasteurized milk and cheeses, baked goods containing refined oils, foods containing additives, and prepared foods that have been stored in the refrigerator for more than two or three days.

Actually, almost all cooked foods become biocidal approximately twenty-four hours after preparation. Whether it takes one to four days to become contaminated with bacteria or mold is not the point, for all stored foods have lost their vital energy even if kept in the refrigerator. This is significantly less so if the food is quick-frozen. As early as 1930 Dr. Kouchakoff found that the intake of processed foods so disturbed the white blood cell pattern of the immune system that it looks the same as a white blood cell pattern that is seen with infections. Eating highly processed, nitrate-, pesticide-, and additive-filled meats, like hot dogs and salami, gives the white blood cell pattern that one typically sees with severe food poisoning. Pesticides, herbicides, and additives in the foods have been linked with cancer, weakened immune system, allergies, neurotoxicity, hyperactivity in children, and brain allergies.

Another category of common pathological effects from these toxins is varying levels of neurotoxicity to the brain and rest of the nervous system, which has more subtle symptoms, such as reduced mental functioning, decreased mental clarity, and poor concentration. Although the hard statistics of cancer are mentioned frequently in the discussion of pesticides, increased cancer rates is just one of the most extreme results of toxins in our food and water.

Unless one eats organic fruits and vegetables, one is continually exposed to pesticides. One of the most significant effects of an organic vegetarian diet is the tremendous health benefits of stopping the chronic poisoning from pesticides. In 1985, nearly one thousand people in the western United States and Canada were poisoned by the pesticide Temik in watermelon. People had a variety of reactions, including grand mal seizures, cardiac irregularities, and even several stillbirths. Next the dangers of alar in apples were exposed. In 1987, the National Academy of Sciences concluded that in our lifetime pesticides in American food may cause more than one million additional cases of cancer in the United States. Laurie Mott and Karen Snyder of the Natural Resources Defense Council (NRDC) reported in the *Amicus Journal* that each year 2.6 billion pounds of pesticides are used in the United States and nearly all Americans have residues of the pesticides DDT, chlordane, heptachlor, aldrin, and dieldrin in their bodies. A 1987 Environmental Protection Agency Report indicated that because of the massive agricultural use of pesticides, at least twenty pesticides, some of which are cancer-causing, have been found in the groundwater of twenty-four states. Between 1982 and 1985, the FDA detected pesticide residues in 48% of the most frequently consumed fresh vegetables and fruits. In 1975, the sixth annual report of the Council on Environment stated that dieldrin, which is five times more potent than the outlawed DDT, was found in 99.5% of the American people, 96% of all meat, fish, and poultry, and in 85% of all dairy products. Dieldrin is one of the most potent carcinogens known. It has caused cancer in laboratory animals at every dosage ever tested, no matter how

infinitesimal. Low-level exposure in humans has been known to cause convulsions, liver damage, and destruction of the central nervous system. Fortunately dieldrin was banned in 1974, but who knows how lethal the next new line of pesticides may be. It's a form of American roulette. The drug companies are the only winners.

Dioxin (2,4,5-T), an active component of Agent Orange, is considered by Dr. Diane Courtney, head of the Toxic Effects Branch of the EPA's National Environmental Research Center, to be the most toxic chemical known. According to *Diet for A New America*, millions of pounds of 2, 4, 5-T have been sprayed on American soil. The EPA has officially recognized that cattle which graze on land sprayed with dioxin accumulate it in their fat. According to pesticide authority Lewis Regenstein, those who eat beef get a dose of dioxin that has been concentrated as it moves up the food chain. Dioxin has been shown to produce cancer, birth defects, miscarriages, and death in lab animals in concentrations as low as one part per trillion. It is no wonder, according to David Steinman in *Diet for a Poisoned Planet*, that deaths from cancer in this country have risen from less than one percent in the beginning of the nineteenth century to one in four American men and one in five American women today. Although there are other factors besides herbicides and pesticides that play a role in increasing the incidence of cancer, such as nuclear radiation and cigarette smoking, I wonder how much the cancer rate would drop if we stopped actively putting these and all the other pesticides in our food chain. Even if their toxicity is discovered and they are banned, once they have been introduced into the environment, the chlorinated hydrocarbon pesticides are extremely stable compounds that do not break down for decades or longer.

I do not think scientists have discovered the full extent of the damage pesticides have already done to the nation's health. The types of cancers that are statistically emerging suggest that they are originating from the specific effects of certain pesticides. According to *Diet for a Poisoned Planet*, between 1950 and 1985, urinary bladder cancer increased by 51%; kidney and renal pelvis cancer increased by 82%. These types of cancers are directly associated with toxins in the drinking water. Testicular cancer, which occurs in significant proportion among farm workers and manufacturers of pesticides, has increased 81%. In 1985, non-Hodgkin's lymphoma, which is linked with pesticide exposure, increased by 123%. The Surgeon General's Report on Nutrition and Health in 1988 estimated that as many as 10,000 cancer deaths annually could be caused from the chemical additives in food. This estimate does not even include pesticides. It is extremely difficult to know the exact percentage of the cancer increase due to pesticides, additives, and other environmental factors in our food, water, and air, but it most likely is significant.

In addition to the single pesticide factor effect which can be directly tested in the laboratory, there is often a more powerful synergistic effect from the multiple use of different toxins working together in the environment. This synergistic effect is difficult to assess. The cumulative effect of widespread, chronic, low-level exposure to multiple pesticides is only partially understood. One National Cancer Institute study found that farmers exposed to herbicides had a six times greater risk than nonfarmers of getting one specific type of cancer. Research at the University of Southern California discovered in 1987 that children living in homes where household and garden pesticides were used had a sevenfold greater chance of developing childhood leukemia. The *Amicus Journal* article entitled "Pesticide Alert" reported that in 1982 a congressional report estimated that 82-85% of pesticides registered for use have not been adequately tested for their ability to cause cancer. In addition, 60-70% of pesticides were not tested for creating birth defects, and 90-93% were not tested for the possibility of causing genetic mutations.

In addition to the absence of single-factor data, there is almost no data to show how these pesticides work when combined. In the *Journal of Food Science*, one of the few studies on the synergistic effect of pesticides reported that when three chemicals were each tested separately on rats, there was no obvious ill effect. When two of the three chemicals were added together, the health of the rats diminished. When all three were used synergistically, the rats all died within two weeks. This synergistic pesticide porridge of our food and water is probably creating the most overall damage to the health of all living forms in our environment. People who do not use purified water or organic food are exposing themselves significantly to this danger. The lack of available data on the health-destroying effects of pesticide use, both individually and synergistically suggests the EPA has to be regulating more out of ignorance than knowledge. More than no different pesticides were detected in all foods between 1982 and 1985. Of the 25 pesticides detected most frequently in our foods, nine are known to cause cancer. This is a serious situation.

'90s Update on Pesticide Use

SINCE THE FIRST EDITION OF *Conscious Eating*, the tide of pesticide and herbicide use has continued to increase rather than ebb. The following data come from a report in *Pesticide Action Network* published by Californians for Pesticide Reform (CPR). In California, which uses 25% of all the pesticides in the US, the trend is toward an increasing use and dependence on toxic pesticides and herbicides. California literally puts hundreds of millions of pounds of chemicals on our crops, soil, water, homes, schools, and work places each year. The environmental protection laws simply are not strong enough. Six and one-half pounds of pesticides per person are used in California, which is more than double the national average of 3.1 pounds per person.

Pesticide use in California increased 31% from 1991 to 1995, a jump from 161 to 212 million pounds per year. The increase occurred primarily in the intensity of pesticides per acre as the number of agricultural acres stayed about the same. The use of cancer-causing pesticides rose 129%—to more than twenty-three million pounds—what is now 11% of the total pesticide use in the state. Use of acutely toxic nerve poisons increased 52% to about nine million pounds. The use of restricted pesticides—those which regularly cause damage to people, crops, and the environment—increased 34% to forty-eight million pounds in 1995. The total volume of carcinogens, reproductive hazards, endocrine disrupters, category I acute systemic poisons, category II nerve toxins, and restricted-use toxins increased 32% between 1991 and 1995. This is approximately seventy-two million pounds, or 34% of the total reported pesticide use. Strawberries and grapes were the two most heavily pesticided crops. Strawberries received about three hundred pounds of active pesticides per acre, and grapes received a total of fifty-nine million pounds of pesticides in 1995.

A report by Californians for Pesticide Reform (CPR) shows that 87% of the forty-six California school districts surveyed used highly toxic pesticides in their routine building and lawn maintenance. These forty-six districts serve one and one-half million children. Seventy percent of these school districts used suspected carcinogens; 52% used pesticides that are known to cause birth defects or impair normal mental and physical development; 50% used pesticides suspected of disrupting the human hormonal system; and 54% used nerve toxins. This data was typically unavailable to parents, teachers, and the public. CPR had to use legal counsel to obtain these simple data.

According to the Environmental Working Group, every day one million US children under the age of five consume unsafe levels of pesticides that are known to harm their developing brain and nervous system. An analysis of the federal information is that most of the risk comes from five organophosphate insecticides: methyl parathion, dimethoate, pirimiphos methyl, and azinphos methyl. The foods most likely to contain toxic levels are peaches, apples, nectarines, popcorn, and pears. The baby foods most likely to have unsafe levels are pears, peaches, and apple juice. This study found that approximately one in four peaches and one out of eight apples had levels of organophosphates that are unsafe for children. Can we afford not to protect our children by not buying organic produce?

If you think this increase in pesticides and herbicides is just a bunch of statistics and has no effect, think again. The incidence of childhood cancer increased 10.8% from 1973 through 1990, according to the EPA. (*Cancer now kills more children under the age of fifteen than any other disease.*) A child born today has a one in six hundred chance of developing cancer by the age of ten, according to the EPA. By a child's first birthday, the combined cancer risk of just eight pesticides on twenty foods they may have eaten exceeds the EPA's lifetime level of acceptable risk. Children eat more food and take in more water relative to their size than adults and thus have elevated exposures to pesticides and other contaminants. Industrial pollution is a form of domestic violence. With these kinds of statistics, do you have any wonder why I so strongly stress the importance of feeding ourselves, pregnant mothers, and our children as close to 100% organic foods as possible?

Pesticide Pestilence

PESTICIDES CAN AFFECT EVERY LIVING ORGANISM. Human beings are no exception. The more detrimental effects of pesticides, herbicides, and fungicides include cancer, nervous system disorders, birth defects, alterations of DNA; liver, kidney, lung, and reproductive problems; and an overall disruption of ecological cycles on the planet. According to Dr. David Pimentel, an entomologist and agricultural expert at Cornell University, pesticides cost the nation \$8 billion annually in public health expenditures, ground water decontamination, fish kills, bird kills, and domestic animal deaths.

The potential for health problems depends on the extent and type of pesticide exposure and the susceptibility of the individual. Children and the elderly are the most susceptible, the latter because their immune systems and organ function decline with age. Children's bodies are smaller and they receive proportionally higher doses of toxins per body weight; their organs can be damaged more readily because they are not fully developed. Furthermore, many of the most frequently used pesticides affect the nervous system, and children are more susceptible to neurotoxins than adults. The National Cancer Institute found an increased risk of leukemia in children whose parents used pesticides in their home or garden.

Among the effects of pesticides, cancer is the most studied. Between 1969 and 1986, several types of cancer increased significantly among people ages 64 to 84 in six leading industrial countries. These cancer types are multiple-myeloma (a cancer that starts in the bone marrow and spreads to other bones), melanoma of the skin, and cancer of the prostate, bladder, brain, lung, and breast. Although farmers' general lifestyle is healthier than city folks, with lower risks for most cancers and noncancer diseases, they were found to have some specific cancers, including multiple-myeloma, lymphomas, skin melanomas, leukemia, and cancer of the lip, stomach, prostate, and brain. Work-related exposures were theorized to be causing specific cancers among farmers.

Evidence has accumulated that many industrial chemicals (including many common plastics and pesticides) mimic estrogen hormones, thereby disrupting reproduction and development in humans, mammals, birds, and fish just like diethylstilbesterol (DES) did to mothers and fetuses who received the drug in the '60s. These estrogenic-like chemicals may be the cause for the increasing incidence of cancer of the breast, testicles, and prostate. According to the American Chemical Society: (1) sperm count in men worldwide is 50% of what it was fifty years ago; (2) the incidence of testicular cancer has tripled and prostate cancer has doubled in the past fifty years; (3) in 1960 the incidence of breast cancer was one in twenty and in 1998 it is one in nine; and (4) young male alligators in pesticide-contaminated lakes in Florida have such small penises they are unable to function sexually. Estrogen-mediated hormonal imbalances can create all these changes and more.

Estrogen is usually considered a female hormone, but males produce estrogen in small amounts. In the developing fetus, a specific ratio of androgens (male hormones) to estrogen must be maintained for proper sexual differentiation to occur. If the hormone balance is disturbed, the offspring may be born with two sets of sexual organs or a single set that is incompletely developed. Diminished sperm count and possible predisposition to cancer may be set at this stage.

Examples of estrogen mimickers are DDT, DDE, dieldrin, dicofol, methoxychlor, some PCBs, alkyl phenols from penta- to nonylphenol, as well as bisphenol-A (the building block of polycarbonate plastics, used in many common detergents, toiletries, lubricants, and spermicides). Many of these estrogen mimickers resist breaking down in the environment and are highly soluble in fat; thus they accumulate in the bodies of fish, birds, mammals, and humans. Nonvegetarians obviously accumulate a higher amount. One study showed that the mothers' milk of vegetarians contained only 1% the amount of pesticides as the milk of meat-eating mothers. Many of these estrogen mimickers will cross the placenta barrier and pass into the developing fetus.

Even the conservative *Journal of the American Medical Association* has reported that estrogenic chemicals have an effect. Ana Soto, a researcher at Tufts University, combined ten estrogenic mimickers, each at one-tenth the dose necessary to produce a minimal response. She found that when all ten were combined, they were strong enough to produce an estrogenic response. This is significant because the US government has been regulating based on its testing of individual chemical effects. They have almost no data on the synergistic effects of the many pesticides, herbicides, fungicides, plastics, PCBs, etc., working together.

Scientists can pretend to discern "safe" levels for an individual chemical, but they have no idea of any safe level for combining chemicals. In fact, there are no "safe" levels. Political decision-makers need to understand that we

have to abandon the chemical-by-chemical regulation approach and regulate whole classes of chemicals. Furthermore, instead of setting standards according to pesticide effects on healthy adults, their effects on children should be used to set maximum exposure. Certain categories of dangerous chemicals need to be immediately discontinued if we are to survive as a species.

There are at least nineteen major chemicals used on US crops that are associated with disrupting the human hormone system. According to the Washington, DC-based Environmental Working Group, about 220 million pounds of these hormone disrupters are applied to sixty-eight different crops annually. In 1992, Frank Falck, M.D., Ph.D., assistant professor of surgery at the University of Connecticut School of Medicine, examined the tissues from suspicious breast lumps in forty women and found that those which were cancerous had higher levels of PCBs, DDT, and DDE (a DDT byproduct) than the benign tissues. Dr. Wolff, professor of community medicine at Mt. Sinai Medical Center in New York City, analyzed blood from more than 14,000 women and found that those who developed breast cancer had higher levels of DDE. He found that the women with the highest levels of DDE had four times the risk of breast cancer than those with the lower levels.

Since the 1960s, most researchers in the US have expressed the opinion that the findings which connect the estrogenic pesticides with breast and other cancer are only preliminary, but the Israeli government has already acted on the evidence with exciting results. From 1976 to 1986, Israel was the only country among twenty-eight countries studied where the breast cancer death rate dropped. One explanation was that in 1978, Israel banned three estrogenic pesticides. Within two years after the ban, lindane levels in the tissues dropped by 90%, DDT by 43%, and BHC by 98%. By 1986, the death rate for breast cancer among Israeli women below the age of 44 had dropped by 30%.

The amazing observation is that pesticides don't even achieve their stated purpose, yet we still are willing to risk our lives to use them. Dr. David Pimentel, one of the world's leading agriculture experts at Cornell University, estimates that more than 500 species of insects are now resistant to pesticides. It is no accident that crops destroyed by insects have nearly doubled during the last forty years in spite of an almost tenfold increase in the amount and toxicity of insecticides. One study showed that recent pesticide usage by Filipino rice farmers costs the individual farmer more in medical bills than it generates in increased rice production. Even on a cost-benefit versus health approach, the use of pesticides comes out on the negative side of things. Aside from increased rates of certain cancers, farmers in the Philippines who were not organic growers suffered nearly double the kidney and respiratory problems compared to organic farmers and were five times more likely to experience eye problems. Farmers who used pesticides had considerably more skin complaints, gastrointestinal problems, neurological problems, and hematological problems.

In 1986 the Indonesian government sponsored a plan to decrease the use of pesticides. The rice production since then has increased by 10% and there is much less capital outlay for pesticides and their concomitant medical problems. In Bangladesh, farmers using integrated pest management spent 75% less money on pesticides and increased their crop harvest by 14% over those using high levels of pesticides.

Pesticide usage is a major public health problem worldwide. It reflects a consciousness that is completely out of touch with the laws of nature. The National Academy of Sciences estimates that pesticides are responsible for 20,000 cancer cases per year. Cancer in the US is a serious concern, but what about the increased neurological problems, learning disabilities, and hyper-activity our children are experiencing on what appears to be a mass basis? How many environmental allergies and other detrimental effects on the immune system are being created?

What sort of consciousness does it take to continue to deliberately poison yourself and your family in order to get *less effective* crop outputs? What sort of consciousness does it take to manufacture these poisons and sell them? (Especially to sell banned poisonous chemicals to third-world countries where the people do not understand how to minimally protect themselves because of ignorance and poverty) Pesticide usage not only leads to disease but directly destroys the life force of the soil. I do not understand how people can choose to spend money for something that not only doesn't work, but poisons humans and the environment.

We can protect ourselves and change the situation by buying only organic produce. This not only helps us avoid pesticide poisoning, but supports the organic farmers who are rebuilding the soil. The more organic farmers there are, the less the organic produce will cost, and the more the soil is brought back into balance. According to a study at Tufts University, organic produce has a nutrient content approximately 88% higher than commercially grown produce. This means that by buying organic produce we actually get more for our money and for our health. Another way to oppose pesticide madness is to stay abreast of legislative attempts to undermine protection. For example, we all need to support bills like the Pesticide Food Safety Act. Presently, there is a movement to deregulate environmental protection on many levels, including pesticide regulation. Let the politicians know it is time they awoke and became more responsible to themselves and to their constituency.

Regardless of what Washington does, ultimately it comes down to us taking responsibility for our own health and the safety of our families and communities. We have the power to refuse to consume what is detrimental to our

health and to the planet. This power of the marketplace is stronger than that of Washington politics. Let us put our money where our mouths and health are. Buy organic produce whenever possible. This simple act can help heal the Earth and all its inhabitants. We have the power to restore the world to one that is aligned with the healing harmony of the universe. Let us do it.

You Can Protect Yourself Against Food Chemicalization

SINCE THERE IS VERY LITTLE REAL CONTROL and monitoring by the US government or by the chemical companies, the responsibility for our health lies with us, as it always has. One has to avoid excess exposure to these poisons the best one can. According to the *Pesticide Monitoring Journal* published by the EPA, *the major source of pesticide exposure comes from foods of animal origin. Diet for A New America* points out that 95–99% of all the toxic chemical residues come from meat, fish, dairy, and eggs. One can substantially avoid this high toxic exposure by choosing to eat vegetarian foods such as fruits, vegetables, nuts, seeds, and grains, which are lower on the food chain and thus have less accumulation of these poisons. As mentioned earlier, *The New England Journal of Medicine* published a finding that *the breast milk of vegetarian women has only one or two percent of the pesticide contamination that is the national average for breast-feeding women on a flesh-centered diet.* This is a significant indication of how much effect one can have on one's pesticide exposure by becoming vegetarian. It is possible to further decrease exposure by only eating organically grown vegetarian foods. Sometimes, one is in places where it is not possible to obtain organic, vegetarian foods. It is still a safer choice to eat commercially grown fruits, vegetables, grains, nuts, and seeds rather than flesh foods. The body can detox a little pesticide exposure but becomes overwhelmed if the exposure is chronic or too high.

David Steinman, in his book *Diet for a Poisoned Planet*, has done an enormous amount of work in studying exactly which fruits, vegetables, nuts, seeds, and grains have the lowest toxic residues. He analyzed foods for more than one hundred different industrial chemicals and pesticides, using laboratory detection limits that were five to ten times more sensitive than the normal FDA detection standards. He did this by taking his food samples from four different geographic regions, analyzing them exactly as they would be eaten, and repeating this for four years ending in 1986. This gave him a total of sixteen samples per food to analyze and average. Each of the foods was rated according to which toxins it contained and how much toxic residue was present. The combination of these two figures was factored into a cancer risk assessment. These findings were placed into three categories according to their safety. Safety was determined by the amount of pesticide residues and their cancer risk assessment. What I label as “relatively safe” are commercial foods which have minimal toxic effects. The next category, “marginally safe if eaten sparingly,” is for foods to be avoided regularly. The third category is for commercial foods so potentially toxic that it is best to completely avoid them. I've turned his data for fruits, vegetables, nuts, seeds, and grains into several graphs shown on the following pages. Using these charts will minimize one's toxic exposure if, and when, organic produce is not available (see the following tables).

The best way to be safe, of course, is to avoid commercial foods. If enough people care about themselves and their children to buy only organic foods, the law of consumer demand on the market will force a shift that will increase the amount of organic farming and make more organic foods available at lower prices. Fortunately, a subtle shift toward organic farming and produce is happening in many parts of the US.

Commercial Grains						
RELATIVELY SAFE	Rice	18	Biscuits.....	28	Raisin bran cereal.....	42
	Farina	21	Egg noodles	30	Dinner rolls	44
	Oatmeal.....	24	Shredded wheat cereal	31	Blueberry muffins	46
MARGINALLY SAFE	Chipped rice cereal	5	Corn bread	32	Whole wheat bread.....	49
	Oat ring cereal ...	9	Pasta (with meat sauce)	33	Rye bread	49
	Corn flakes	10	Fruit-flavored cereal.....	26	Granola	27
	Pasta (with tomato sauce)	10	Granola	27	Saltines.....	28
	Grits.....	15	Saltines.....	28	Popcorn (popped in oil)	37

Residue data is from *Diet for a Poisoned Planet* by David Steinman.

Commercial Vegetables

RELATIVELY SAFE	Bamboo shoots (canned)	Carrots 32	Kohlrabi
<i>Number of Residues</i>	Bean sprouts	Snap green beans (fresh) 34	Lentils
Onions 0	Beets (fresh)	Spinach (canned) 35	Mung beans
Peas (canned) 1	Brussels sprouts	Lettuce 36	Mustard greens
Corn (canned) 1	Cassava	Tomato sauce (canned) 36	Okra
Corn (fresh) 2	Chives	Lima beans (immature) ... 41	Parsley
Navy beans 2	Cilantro	Sweet potatoes .. 43	Parsnips
Pinto beans 2	Daikon	Broccoli 45	Poblano peppers
Cauliflower 3	Fava beans	Winter squash ... 48	Pumpkin
Beets (canned) ... 4	Fennel roots	Tomatoes (fresh) 50	Red peppers
Cabbage 7	Garlic	ADDITIONAL MARGINALLY SAFE IF EATEN SPARINGLY	Rutabagas
Red beans 7	Jicama	Artichokes	Serrano chiles
Asparagus 8	Kidney beans	Bok choy	Soybeans
Peas (fresh) 12	Leeks	Cherry tomatoes	String beans
Snap green beans (canned) 12	Mushrooms	Chili peppers	Swiss chard
Tomatoes (canned) 13	Radicchio	Choy sum	Tomatillos
Black-eyed peas . 18	Rapini	Dandelion greens	Turnips
Lima beans (mature) 19	Red chard	Dill	UNSAFE
Mixed vegetables (canned) 20	Rhubarb	Eggplant	<i>Number of Residues</i>
ADDITIONAL RELATIVELY SAFE	Shallots	Endive	Potatoes (peeled) 60
<i>Number of Residues</i>	Snow peas	Escarole	Cucumbers 67
Aduki beans	Watercress	Green peppers	Celery 78
Alfalfa sprouts	Yams	Jalapeño peppers	Summer squash . 81
Asparagus	MARGINALLY SAFE	Kale	Green bell peppers 83
	<i>Number of Residues</i>		Collards 87
	Mushrooms (canned) 31		Spinach (fresh) .. 95
	Radishes 32		Potatoes (with peel) 96

Commercial Fruits

RELATIVELY SAFE	ADDITIONAL RELATIVELY SAFE	MARGINALLY SAFE	Cranberries
<i>Number of Residues</i>	Bitter melon	<i>Number of Residues</i>	Crenshaw melon
Bananas 0	Coconut	Cantalope 58	Currants
Pears (canned) 1	Dates	Cherries 61	Honeydew
Avocados 2	Figs	Prunes 62	Kiwi fruit
Watermelons 10	Guavas	Grapes 63	Kumquats
Fruit cocktail 11	Lemons	Plums 68	Nectarines
Applesauce 13	Limes	ADDITIONAL MARGINALLY SAFE IF EATEN SPARINGLY	Persimmons
Peaches (canned) 14	Papayas	Apricots	Pomegranates
Grapefruit 16	Passion fruit	Blackberries	UNSAFE
Oranges 24	Pineapples	Blueberries	<i>Number of Residues</i>
	Plantains	Casaba	Pears 79
	Tangerines		Apples 80
			Strawberries 86
			Peaches 97
			Raisins 110

Commercial Nuts and Seeds

RELATIVELY SAFE	ADDITIONAL RELATIVELY SAFE	Sesame seeds	MARGINALLY SAFE IF EATEN SPARINGLY
<i>Number of Residues</i>	Almonds	Sunflower seeds	Lychee nuts
Pecans 14	Chinese pine nuts	Walnuts	Radish seeds
UNSAFE	Flax	Water chestnuts	
<i>Number of Residues</i>	Hazelnuts	Watermelon seeds	
Peanuts 183	Pistachios		
	Pumpkin seeds		

Residue data is from *Diet for a Poisoned Planet* by David Steinman.

Learning to Read Labels Is Good for Your Health

WHEN ONE DOES DECIDE THAT FOOD QUALITY and health are important, one enters into a whole new world of organic food and the healing lifestyle that goes along with it. There is great delight in learning to eat whole, natural, organic foods. Part of this dietary shift requires learning to read labels. One has to be clever at this. The *U.S. News and World Report* 6/18/90 issue points out that the FDA found 47% of domestic and 76% of foreign foods did not live up to the nutrient billing on the product label. I want to caution that shopping in a health food store does not mean one should not read labels. Not everything in a health food store is necessarily healthy.

The word “natural” these days can mean almost anything. The safest thing is to look for the words “certified organic.” By insisting on organic foods whenever possible, we are not only protecting ourselves and our families but also encouraging support for organic farming and, therefore, directly supporting the regeneration of our degenerating soils. A Harris poll showed that 80% of Americans want organic fruit and vegetables and over half are willing to pay for the small added cost of buying organic. Not only is organic food safer, but because it is grown in organically prepared soils, some initial research has suggested the organic food usually contains a greater concentration of nutrients, such as vitamins, minerals, and enzymes, than pesticide-grown foods. For example, in the Firman Bear Report on research done at Rutgers University, organically grown foods were much richer in minerals than the “look alike” commercial produce. For example, organic tomatoes had greater than five times more calcium, twelve times more magnesium, three times more potassium, 600% more organic sodium (organic sodium does not necessarily increase blood pressure like table salt), sixty-eight times more manganese, and 1900 times more iron. Organic spinach had more than double the calcium, five and one-half times the magnesium, more than three times the potassium, seventy times the sodium, one hundred and seventeen times as much manganese, and eighty-three times the iron. Organic lettuce had three and one-half times the calcium, three times the magnesium, three times the potassium, thirty times the sodium, one hundred and sixty-nine times the manganese, and fifty-seven times the iron. *The overall estimate of the Rutgers research suggested that organic foods had 87% more minerals and trace elements than food that was commercially grown.* Although organic foods may cost more, mineral for mineral they are more than worth their price. Even though I do not have data about increased vitamins in organic food, I am sure it is also the case.

Au Naturel

Dr. Paavo Airola, in his popular book *How to Get Well*, points out that it has been scientifically proven that health and longevity are directly related to the naturalness of the food one eats. He notes that in areas where indigenous people eat whole, natural, unprocessed foods, they experience good health and longevity. When denatured, refined, processed, and canned foods such as white flour and white sugar are introduced into these cultures, acute and chronic degenerative diseases become rampant. Knowing this, one can make a choice to reverse this process by starting to eat whole organic foods. This is further explored in Chapter 8, “Deficient Diet: A Cause of Physical and Mental Degeneration.”

Part of making this shift involves buying one's food in different places. It means getting familiar with health food stores which have organic produce sections, finding supermarkets which have added organic produce sections, or even asking your local supermarket to add an organic produce section. In certain parts of the country, farmers' markets are frequented by organic farmers selling their produce at prices extremely competitive with commercially grown produce. If one can find organic produce at local farmers' markets, it is worth talking to the organic farmer about how his or her soil is prepared. This way one develops a feeling for the meaning of organic produce and also gets to know the person who is producing the food. It is a way to personalize the process of food “gathering.” The food and the food provider are no longer anonymous with this approach.

Dangers of Eating Flesh

STAGE ONE INCLUDES DROPPING RED MEAT from the diet. If one is not ready to completely let go of red meat, one may consider eating organically raised flesh foods until one is ready. Letting go is much easier to do if one is well-informed about the health dangers of red meat, not to mention the moral issues connected to eating meat, which have already been addressed in previous chapters. The first thing to keep in mind is that farm animals, primarily cattle, chickens, eggs, and milk, are not of the same quality or as safe as they were one hundred years ago. In the past, the animals were a lot healthier because their food was largely unadulterated, since most of them were “free range” animals.

The livestock industry has depersonalized today's farm animals into “products” that are mass-produced in an assembly line fashion. Farm animals have a considerably higher percentage of fat today due to lack of exercise and the chemicals and hormones added to make them grow bigger and faster in as cheap a way as possible. In 1975, the World Conference on Animal Products reported that *factory-farmed animals have about thirty times more saturated fat than pasture-raised animals*. Since World War II, these farm animals have been inundated with an insidious brew of pesticides, hormones, growth stimulants, insecticides, tranquilizers, radioactive isotopes, herbicides, antibiotics, and other assorted drugs and colorants. All these substances are considered legal. Other illegal hormones are sometimes added to increase weight.

There are so many problems associated with eating flesh and animal by-products such as milk and eggs that it would literally take another book in itself to describe these hazards. A few outstanding pieces of information must be mentioned, however. For example, Dr. Saenz, a pediatrician, reported in the February 1982 issue of *Journal of the Puerto Rico Medical Association* that an epidemic of premature sexual development was connected to the eating of hormone-rich animal products. The segments of the population primarily afflicted were female children age one and up. Infants and young children began to develop mature breasts and uteruses, vaginal bleeding, and other signs of puberty. One fourteen-year-old boy was reported to have mature female breasts that needed to be surgically removed. Dr. Saenz's findings showed that the appearance of abnormal breast tissue in infants was related to local, whole milk consumption. In the older children, it was related to consumption of whole milk, beef, and chicken flesh from animals given estrogen to increase their weight. The doctor consistently found that when these foods were removed from the diet, the symptoms usually disappeared within a short time. According to *Diet for A New America*, one English medical journal reported that hormone traces in chemically fattened livestock were causing British school girls to mature sexually at least three years earlier than the previous national average. There is reason to believe that to some extent this high estrogen intake from beef and dairy products happens in the US as well.

Modern science has found a variety of diseases and parasites that can be transferred from animals to man, such as trichinosis, toxoplasma gondii, fungi, and even viral infections and salmonella, which is the main cause of acute dysentery. There is also the problem of severe infections from antibiotic-resistant bacteria growing in the meat as a result of the heavy use of antibiotics in livestock.

Dr. Rudolph Ballentine points out in his book *Transition to Vegetarianism* that over 40% of adults have been exposed to toxoplasmosis, a fungus in humans, dogs, cats, and other mammals. Toxoplasmosis has been known to cause blindness and mental retardation in newborns. Most toxoplasmosis infections come from meat, and some may also come from cats. In the *Cancer Journal for Clinicians*, an article by Kin Shim, M.D., reported that 100% of monkeys fed milk from leukemic cows developed leukemia within a year. In Denmark it was found that child leukemia was connected to the consumption of cow's milk taken from Danish cows that had leukemia. Twenty percent of the cows in Denmark have leukemia. The hypothesis is that a leukemia-inducing virus is transferred from cows, through their milk, to the children. The monkey leukemia infection suggests the same route of infection as the children of Denmark. All this animal- and food-related disease brings up the question of how long must people experiment with themselves as human “guinea pigs” before waking up to the dangers of eating flesh foods and dairy products?

Many people switch to poultry when they stop red meat. Unfortunately, poultry, which has a similar profile of dangers as red meat, has some outstanding problems of its own: high incidences of salmonella and campylobacter infections. According to *Advances in Meat Research*, by Pearson and Dutson, over 80% of chickens and 90% of turkeys are infected with campylobacter. These bacteria cause an intestinal infection similar to salmonella. These organisms have become antibiotic-resistant because of the high use of antibiotics in poultry. This means that when

they cause an infection, antibiotics will not work effectively to kill the pathogenic bacteria.

According to the Project Censored ratings, a news report in the June 8, 1990 *Pacific Sun*, the “fowl” play in the chicken industry was voted one of the ten most underreported stories of 1989. In their article it is pointed out that the incidence of bacterial salmonella infection is now two and one-half million cases per year, including an estimated one-half million hospitalizations and nine thousand deaths. Apparently the epidemic is caused by a huge leap in consumer demand for “healthier food” called chicken, as they switch from red meat, and by a massive failure of the US Department of Agriculture to inspect the chicken. A decrease in USDA staff led to an increase in contaminated chicken slipping through *en masse*. The article states:

The USDA has placed gag orders on inspectors and destroyed documents disclosing that the agency has approved massive amounts of contaminated food.

In the *Pacific Sun* article, Dr. Carl Telleen, a retired USDA veterinarian, revealed how

... chicken carcasses contaminated with feces, once routinely condemned or trimmed, are now simply rinsed with chlorinated water to remove stains.

According to Telleen,

Thousands of dirty chickens are bathed together in a chill tank, creating a mixture known as “fecal soup” that spreads contamination from bird to bird.

This creates what Telleen calls “instant sewage.” Articles like this make it easier for many readers to make the transition away from poultry a little faster.

In addition to these two potent bacteria, there may be a type of viruslike organism found in chicken tumors that seems to be transmittable to humans. This organism is thought to be identical to the microbe found by Dr. Peyton Rous in chicken tumors, which he showed to be transmittable. For this pioneering work he received a Nobel Prize in 1966. The extent to which the Rous virus might be associated with human cancer is still debatable. As discussed earlier, the work by Virginia Livingston Wheeler, M.D., strongly suggests that most chickens are at least microscopically infected with cancer and that this chicken cancer, like the Rous virus, may be transmittable to humans.

To eat animals and fish in today's world is to take on the psychology of victim consciousness. Once informed of the dangers, it is hard to separate the eating of flesh food from a passive form of death wish.

What if it were possible to consistently get organically grown beef and poultry? Would it be worthwhile to eat beef and chicken for our nutritional well-being? Nutritionally, meat is relatively high in iron, B12, and protein. However, it is not a balanced food and is almost totally lacking in vitamins A, C, and E. Flesh foods are also low in minerals such as calcium, and high in phosphorus. A high phosphorus pulls the calcium out of bones in an effort to achieve balance. The optimum phosphorus-to-calcium ratio is 20/1. The US Army Medical Research and Nutrition Laboratory in Denver, Colorado, has found that the more meat one eats, the more B6-deficient one becomes. A high-protein diet seems to cause severe deficiencies in B6, calcium, magnesium, and niacin. High flesh-food intake also increases ammonia in the body, which has been found by Dr. Willard J. Visek of Cornell University to be implicated as a carcinogenic agent. High ammonia in the system is also toxic to the nervous system.

A most significant problem associated with flesh-eating is the fat one consumes with a high-meat diet. By eliminating the high fat intake associated with the flesh diet, it is estimated that 90% of the deaths from colon cancer in the US would dramatically be eliminated. The risk of colon cancer for meat-eaters is 4.3 times greater than for vegetarians. Heart disease, according to the 1961 *Journal of the American Medical Association*, would be drastically reduced by 97% if people were vegetarian. Cancer and heart disease are the two leading causes of death in this country. In beef, pork, and lamb, the percentage of calories that come from fat is 75% to 85%. Chicken is right up there with 60% of the calories coming from fat. Turkey has 55% of the calories in the form of fat. It is significant that these fatty foods are consumed in heated, cooked form.

Cooked fats, especially of animal origin, are positively harmful to health. The average American diet contains around 40-45% of calories in the form of cooked fats. This high percentage of cooked fat in the diet is associated with the increased incidence of heart disease, cancer, and other chronic degenerative conditions.

Although nuts and seeds have oil contents as high as the fat contents in some flesh food, because these plant-based foods do not contain cholesterol or store ingested estrogen and other chemicals in their oil as do animals, these foods are much safer and healthier. Nuts and seeds can be eaten raw, preferably soaked. When they are eaten in this form, the naturally occurring, fat-digestive enzyme—lipase—helps to digest the oils in the nuts and seeds.

There seems to be a dramatically different effect for raw and cooked fat in the diet. It actually holds true for raw meat as well. Raw meat, like live fruits, vegetables, nuts, seeds, and grains, possesses viable fat-digestive enzymes which are not destroyed unless heated. I am not suggesting that we start a raw, flesh-food fad, however. *The real issue associated with fats and their linkage to cardiovascular disease may not simply be the amount of fat in the diet, but whether the fat is raw or cooked.* The well-respected, nutritionally oriented physician Henry Bieler, M.D., in his book *Food Is Your Best Medicine*, makes exactly the same point in his discussion of cardiovascular disease. He writes:

Overeating of fats and oils, as long as they are in their natural state, cannot cause arterial disease... It is only when unnatural fats, or fats which have been altered by being overheated, are consumed as food that the trouble arises.

The Fat of the Land Is Not So Dangerous if It's Raw

TO COMPLETE THE DISCUSSION OF FATS, oils, and raw foods, one needs to be familiar with the terms “cis isomer” and “trans isomer.” Isomers are two compounds that have the same atoms but different chemical and physical properties because they are structurally organized in a different way. The cis form is the biologically active form of fatty acids, and it is organized in a curved structure. The trans form is the biologically inactive form, and it is organized with a straight structure. The cis form of the essential fatty acids can be biologically processed by the body to form the biologically active fatty acids and prostaglandins. The trans form cannot be biologically processed in an effective way by the body and essentially clogs the metabolic pathways. The cis form of fatty acids is found in the live, whole foods and to a lesser extent in low-heat-processed, extracted oils.

Dr. Douglass of the Kaiser Permanente Hospital in Los Angeles reports that not only does cooking fats change the molecular configuration of fatty acids from what is called a “cis” to a “trans” configuration, but also pressing and hydrogenating changes fats from the curved cis formation to a straight trans formation. This trans configuration of the fatty acids goes into the molecular configuration of our cell membranes just as the normal cis formation does. The result is that the trans fats partially block the respiration function of the cell membrane. This seems to be associated with a less efficient cell function and even cancer. Many studies, for example, have shown that fried fats are highly carcinogenic. This is one reason why no margarine exists that is healthy to eat because every brand contains processed fats with a high percentage of trans fatty acids.

Another major difference between processed and raw fats is the enzyme content. Studies on the Eskimos who eat raw blubber by the pound show no significant incidence of hardening of the arteries or other forms of circulatory disease, including hypertension. On the other hand, Eskimos of the same genetic background who had taken up modern civilization's habit of cooking their food, and who kept the same high-fat diet, had a high percentage of cardiovascular diseases. In addition to the difference between cis and trans structures, another major difference is the active lipase found in the raw blubber. Lipase is the enzyme needed to digest fat. In the raw form, the fat contains a significant amount of lipase to help with its own digestion. All throughout nature, when the raw fats of an animal or raw oils of plants are eaten along with their associated enzymes, no harmful effect on the arteries or heart seems to result. (Fats that come from animal sources are opaque; oils that come from plant sources, with the exception of coconut oil, are translucent.) This doesn't contradict the studies on high fat intake and their association with cardiovascular disease because the studies were all done primarily with cooked fats in which the lipase is destroyed and the fat molecular structure is changed. The nutritionists who strongly urge low-fat diets seem to have overlooked this major difference between cooked and raw fats. What this means is that vegetarians who have raw avocados and raw, soaked, or sprouted nuts or seeds do not have to be as concerned about atherosclerosis; however, beware that an excess of raw oils in the diet may cause some problems, such as red blood cell clumping, decreased blood flow in smaller vessels, and less oxygen getting to the tissues.

BLACKBOARD FACTS

Dangers of a High-Fat Diet

1. Leads to clogged arteries, high blood pressure, fatigued heart, and heart attacks.
2. Clumps red blood cells, causing slower blood flow to brain and all tissues.
3. Makes diabetes worse.
4. Impairs function of the liver.
5. Slows digestion.
6. Slows the mind because of sluggish circulation.

All types of processing of oils tend to destroy the lipase, not just cooking. For example, olives and coconuts have plenty of lipase, but their oils have none. In general, oils as they occur naturally in plants, as in sunflower seeds and avocados, have all their nutrients and enzymes intact, whereas the extracted oils, even if cold-pressed, are missing many nutrients and their associated enzymes. The usual form of heat-processed, polyunsaturated oils containing the omega-6 and omega-3 fatty acids, such as safflower and other vegetable cooking oils, may have 20-50% of their fatty acids in the trans form. Foods high in processed, polyunsaturated, fatty acids include bakery goods, processed meats, soups, candies, cookies, and fried foods. These heat-processed polyunsaturated fatty acids may actually lead to a deficiency of essential fatty acids because we fill ourselves up with these trans fatty acids instead of the raw, active, cis essential fatty acids. Research reported in the March 1971 issue of *Lancet* has also shown that these heat-processed, polyunsaturated, fatty acids—although linked to decreased heart disease to some extent—have been associated with the near doubling of cancer rates as compared to control people in the study who were on a low intake of polyunsaturated fatty acids. The fact that cancer rates increased may result from the effect of the high amount of trans fatty acids produced in the processing, and because of the increase in free radical production from the heating of the polyunsaturated fatty acids in the cooking and processing of the oils.

BLACKBOARD FACTS

How to Avoid Dangers of Fats

1. Eat primarily low-fat foods like vegetables, fruits, and grains.
2. Meet your daily oil and fatty acid needs with unprocessed, uncooked whole foods, such as raw seeds, nuts, and avocados.
3. Avoid pressed and extracted oils and fatty foods which have been cooked, fried, hydrogenated, or irradiated.
4. Avoid cooked foods with high fat content, such as flesh foods, eggs, fried foods, dairy, mayonnaise, ice cream, pizza, cookies, and candies.
5. Avoid a high-salt diet because it creates a craving for fats.

Until some research is done to prove otherwise, the main danger of fats and oils is from being cooked, irradiated, hydrogenated, fried, or even cold-pressed. Oils in small to moderate amounts seem to be quite safe if they are ingested in their natural form in whole, uncooked foods. This is not an invitation to push the raw oil and fat intake up to 40% of the diet, as we see in the typical American diet. Although there is not enough research to document exactly how much uncooked food is safe that is high in fat or oil, my general feeling is 10-20% of calories from fat in the diet is healthy and safe. The percentage varies with each person according to their constitution. A diet that is approximately 10% calories from natural, whole, uncooked, high-fat or high-oil foods will be healthier for kapha and pitta constitutions; a diet that is healthier for vata constitutions will be closer to 20%. Aside from nuts and seeds and a few high-fat fruits or vegetables, like avocados, a vegetarian diet of fruits, vegetables, grains, beans, and legumes has a minimum of oil. In other words, a normal vegetarian diet is a low-oil diet.

A High-Flesh-Food Diet is an Unhealthy, Low-Fiber Diet

ANOTHER PROBLEM ASSOCIATED WITH A HIGH-FLESH-FOOD DIET is the *low* fiber content. Red meat, poultry, fish, eggs, and cheese are essentially devoid of fiber. The lack of fiber is associated with a sluggish digestive tract. A sluggish colon produces such symptoms as constipation and accumulation of toxins. One of the beneficial functions of fiber is to help remove toxins from the colon. For example, fiber removes toxins secreted by the liver and bile and also removes the cancer-causing bile acid breakdown products. If these toxins and bile acid breakdown products are not removed, they often are reabsorbed into the system through the colon. Also, certain bacteria grow on the bile acids and produce a cancer co-factor that is associated with cancer of the colon. Dietary fiber is also important for removing radioactive breakdown products from the colon. Fiber is needed for normal bowel functioning. I often see people who have had difficulties with constipation and gas develop normal bowel functioning when they switch to a high-fiber, vegetarian diet.

BLACKBOARD FACTS

1. Eating additive-, nitrite-filled foods like hot dogs and processed deli meats can give the same white blood cell pattern that one sees with severe food poisoning.
2. Unless one eats organic fruits and vegetables, one is continually exposed to pesticides, herbicides, and other assorted toxins.
3. The Surgeon General's report on Nutrition and Health in 1988 estimated that as many as 10,000 cancer deaths annually could be linked to chemical additives in food.
4. Forty-seven to seventy-six percent of food manufacturers do not live up to the nutrient information that was produced on the product labels (*U.S. News & World Report* 6/18/90).
5. Not everything in a health food store is necessarily healthy.
6. The words "all natural ingredients" should not let you forget to pay attention. *Take the time to read the labels.*

As the awareness of moral issues and health consciousness continues to awaken in our world, it will become easier and easier to give up flesh foods. In making the transition through Stage One, and for that matter, through any of the four stages, it is important to move slowly enough that one can fully integrate each step of the way to facilitate a permanent change. Fasting from flesh foods for one week four times a year helps to support one's transition away from flesh foods.

Preview of Chapter 22

THERE ARE NO NUTRIENTS FOUND IN FISH that cannot be found in safer and more healthy vegetarian sources. At one time it was thought that fish had the highest percentage of omega-3 fatty acids, which are known to prevent blood clotting. Flaxseed has at least 18-24% omega fatty acids as compared to 0-2% in fish. What fish do have in abundance as compared to vegetarian food is mercury PCBs, salmonella, and hepatitis virus found in polluted waters. The toxicity in many fish is so serious that some studies have found that babies whose mothers ate fish from Lake Michigan had lower birth weight and more neurological problems. There are no good reasons for hanging on to our old habitual flesh-food patterns by continuing to eat fish, and many reasons for letting go. This is the last big step in the transition to a vegetarian diet. Are you ready to make this “off-fishal” transition into a new world of health and spiritual enhancement?

I. Why fish was once considered a viable alternative to beef and chicken

- A. Fish are high in minerals
- B. Fish protect against certain diseases
- C. Omega-3 fatty acids

II. Flaxseed is a much better alternative to fish EPA

- A. Flaxseed contains more omega-3 fatty acids than fish provides
- B. How to take flax

III. Dangers of eating fish—PCBs and mercury toxicity



Stage Two: Not a Time to Go Fishing

THE KEY FEATURES OF THE STAGE TWO DIET increase the amount of organic, health-promoting foods to about 90% and phase out fish and chicken. To eliminate flesh foods from one's diet except for fish and chicken is a major step toward health. Usually, most people seem to naturally eliminate chicken first.

Fish, in many ways, seems to be a transition food in our culture. Sometimes fish are euphemistically referred to as “sea vegetables.” This is a nice way to avoid acknowledging that we are eating a living, breathing, moving, conscious animal form. Ecologically speaking, fish do not destroy topsoil as the poultry and animal industries do. Fish also possess several healthy nutritional aspects. Lean fish, such as flounder, haddock, and cod, have as little as one percent fat. This makes them a relatively fat-free source of concentrated protein. Marine fish are also good nutritional sources of selenium, iodine, and many trace minerals not found in poultry and red meat. They are high in vitamins A and D and also vitamin B12. The fact that fish have these beneficial nutrients does not mean, however, that I recommend fish on a general basis.

Perhaps the most important nutritional attribute of fish is the high content of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), both derivatives of omega-3 fatty acid, commonly known as linolenic acid. The main omega-3-containing fish are cold-water fish: mackerel, sardines, tuna, trout, and salmon. Researchers have found that diets high in EPA protect against heart disease, strokes, pulmonary embolisms, and peripheral vascular diseases, including gangrene. The high concentrations of EPA seem to act as a natural blood thinner and antisludge factor. Decreasing the clotting tendency of the blood is probably the main mechanism by which the EPA works to create less mortality from heart disease. It is generally recognized that EPA also decreases cholesterol and triglyceride levels. DHA, which is the main long-chain fatty acid in the brain, is discussed in detail in Chapter 30, “Nutrition for Pregnancy.” Although we can synthesize it, our ability to do so decreases with age. The main source of it for vegetarians is a golden algae, although DHA is found in most sea algae.

There is a plant-based source of omega-3 fatty acids that not only rivals but surpasses fish sources on all counts. According to Donald Rudin, M.D., and Clara Felix, in *The Omega-3 Phenomenon*, flaxseed is the highest in omega-3 fatty acids of all foods. Flaxseed omega-3 cuts blood cholesterol by 25% and triglycerides by 65%. EPA is also produced in the human body from one of the omega-3 “essential” fatty acids called linolenic acid. The word “essential” in this context means that the human body cannot produce linolenic acid by itself, but must depend on outside sources to supply it. Fish oils are known to have a high content of essential fatty acids, especially the omega-3 fatty acids, including the linolenic acid which is made into EPA by the body. The fatty acids are components in every cell in the body and help to determine the biological properties of these cells. The World Health Organization suggests that 3% of the total caloric intake for adults should be from essential fatty acids. Children and pregnant and lactating women are advised to take 6%. The essential fatty acids provide energy to the body, maintain body temperature, insulate the nerves, enhance the immune system, and protect body tissues. The two principal forms of essential fatty acids for humans are the omega-6 and the omega-3 fatty acids.

The omega-3 and omega-6 fatty acids are the biological precursors to a group of highly reactive, short-lived, molecular, hormone-like substances known as prostaglandins (PGAs). The PGAs play a role in regulating the second-by-second functioning of every part of the body. Each organ produces its own PGAs from the essential fatty acids stored in that organ. The PGAs are critical for cell membrane function because they become a part of the membrane construction themselves. PGAs help to balance and heal the immune system as well as reduce inflammatory reactions such as those seen in arthritis and allergic reactions. If there are dietary imbalances that lead to imbalances in the PGAs, then disease may arise. Although the research is not definitive, a ratio of omega-6 to omega-3 fatty acids of approximately 4/1 seems to be the best balance.

In the omega-6 series there is linoleic acid (LA), gamma linolenic acid (GLA), dihomo-gamma linolenic acid (DGLA), and arachidonic acid (AA). The omega-6 fatty acids are found in seed oils such as sunflower, safflower,

corn, soy, and evening primrose. Peanut oil has some omega-6, as do olive, palm, and coconut oils. High amounts of GLA are found in mother's milk, primrose oil, borage, and black currant oil.

Fish are found to have high amounts of EPA and some moderate amounts of the precursors of the omega-3 series. Fortunately, vegetarians do not have to worry about sources of omega-3 fatty acids because flaxseed, walnuts, legumes, and sea vegetables have high concentrations. In the omega-3 series, there is alpha-linolenic acid (ALA), eicosapentaenoic acid (EPA), and docosahexaenoic acid (DHA).

The omega-3 series should constitute approximately 10 to 20% of our fat intake. Some of the reported benefits of the omega-3s include protection against heart disease, strokes, and clots in the lungs; anticarcinogenic activity against tumors; protection against diabetes; prevention and treatment of arthritis; and treatment for asthma, PMS, allergies, inflammatory diseases, water retention, rough, dry skin, and multiple sclerosis. The omega-3s are reported to increase vitality and contribute to smoother skin, shinier hair, softer hands, smoother muscle action, the normalization of blood sugar, increased cold weather resistance, and a generally improved immune system. Omega-3s are also important for visual function, development of the fetal brain, brain function in adults, adrenal function, sperm formation, and the amelioration of some psychiatric behavior disorders. It may take three to six months after starting flaxseed oil supplementation to see results.

Flaxseed contains 18-24% omega-3 compared to the low content in fish of 0 to 2%. This is significant because many people mistakenly think that they need to eat fish in order to get the omega-3-derived EPA for heart and artery protection. Abundant research on the subject indicates that this is simply not true. The vegetarian flaxseed has many major advantages over fish oil. The first is that the omega-3 is a basic building block in the human body for many functions, only one of which is to make EPA. The fish oil doesn't supply omega-3; it supplies the EPA-and therefore limits the body's options to make what it needs from the omega-3. Thus, the omega-3 is a better nutritional resource than the high-EPA fish oil.

Another major difference is the fiber that comes in the flaxseed. Fish has no fiber and also is a highly concentrated food. Unlike many other plants, flaxseed has a special fiber called lignin that our body converts to lignans, which help to build up the immune system and have specific anticancer, antifungal, and antiviral properties. High levels of lignans are associated with reduced rates of colon and breast cancer. Just ten grams, or about one to two teaspoons of flaxseed oil per day, raises levels of the lignans significantly. A third advantage of the flaxseed oil over fish oil is that fish and fish oil are high in cholesterol. Three and one-half ounces of cod liver oil contain 570 milligrams of cholesterol, which equals the amount found in two egg yolks. The fourth advantage of flaxseed oil over fish oil is the fact that fish are often high in toxic residues because they sometimes live in polluted waters. The fifth reason flaxseed is more propitious is that high levels of fish oil are rich in vitamin A and D, which can be toxic in high doses. Please note that provitamin carotene, which is converted by the body to utilizable vitamin A, cannot be toxic like animal-sourced vitamin A.

How to Take Flax

ALTHOUGH SOME CLINICIANS HAVE ESTIMATED that one regularly needs as much as three tablespoons of flaxseed oil per day, this may be more a therapeutic dosage than a maintenance dose. Dr. Rudin, a flaxseed researcher, uses two to five tablespoons per day. Researchers at Omega Nutrition, who produce a high-quality flaxseed oil, claim that a healthy daily dose is closer to one teaspoon of oil per day or three teaspoons of the flaxseed in its whole form. Flaxseed oils from Omega Nutrition and Barleans seem to be the flaxseed oils on the market with the most enzymes preserved and the least amount of fatty acids changed from cis to trans. Because their flaxseed oil is so close to the natural state, it is the one exception to using free oils in the diet.

When taken as a whole seed, the flaxseed can be soaked, as with other seeds, in order to deactivate the enzyme inhibitors. I have found it best to use them in a blender with water, fruits, vegetables, or other seeds. Breaking up the soaked seeds in a blender makes them easier to assimilate and minimizes the laxative effect from the whole soaked seeds. One can also just grind the whole, dry flaxseed in a coffee mill and take it directly. This is the easiest and perhaps the most effective way to take the flaxseed. Conversely, when oil is extracted, which causes some omega-3 loss, it begins to break down to plain fatty acids, which may not happen when flaxseed is soaked. I feel that the addition of flaxseeds to the diet is important for vegetarians, particularly live-fooders. I have had several cases of people on a raw-food diet that did not include flaxseeds who had health problems which disappeared within a month after they began taking flaxseed or flaxseed oil. I consider flaxseed an essential for a healthy live-food diet. If one wants to take flaxseed oil instead of the seeds themselves, the oil should be packaged in a light- and air-blocking container and should not have been heated to temperatures above 118 degrees F during the processing and bottling. Once opened, the flaxseed oil should be refrigerated and consumed within three to six weeks. In an unopened state it will retain its strength for four months. Freezing will extend shelf life for up to one year.

Fishing in Polluted Waters

FROM A PRACTICAL POINT OF VIEW, eating fish is potentially dangerous because of the widespread, ever-increasing pollution of the waters of the world. The biggest water contaminants are the PCBs and mercury. PCBs, along with dioxin, DDT, and dieldrin, are among the most toxic of chemicals on the planet. According to J. Culhane, in his 1988 article "PCBs: The Poisons That Won't Go Away," only a few parts per billion of these substances can cause cancer and birth defects in lab animals. The Tenth Annual Report of the Council on Environmental Quality sponsored by the US government found PCBs in 100% of all sperm samples. According to a *Washington Post* article in 1979, the PCBs are considered one of the main reasons that the average sperm count of the American male is approximately 70% of what it was thirty years ago. This same article also points out that 25% of college students were sterile at the time as compared to one-half of one percent thirty-five years earlier. Most toxicity experts agree that the main source of human contamination comes from eating fish from waters in which the PCB levels are high, which today can be almost anywhere. The Environmental Protection Agency estimates that fish can accumulate up to nine million times the level of PCBs in the water in which they live. PCBs have been found in fish from the deepest and most remote parts of the world's oceans.

Fish and shellfish are natural accumulators of toxins, because they live and are flushed by the water in which they dwell. Shellfish such as oysters, clams, mussels, and scallops filter ten gallons of water every hour. In a month, an oyster will accumulate toxins at concentrations that are 70,000 times greater than the water they are living in. The problem isn't solved by not eating fish when one realizes that half the world's fish catch is fed to livestock. According to *Diet for A New America*, more fish are consumed by US livestock than by the entire human population of all the countries in Western Europe. Periodic testing in the US has found eggs and chickens highly contaminated with PCBs after being fed fish that were contaminated with PCBs.

Mercury toxicity from ingesting fish is another well-known source of illness. Two forms of mercury are the most dangerous. One is the quicksilver mercury and the other is methylmercury, which is about fifty times more toxic. Although there is a general agreement that mercury in plants is a less toxic form, experts do not agree as to whether the mercury in fish is stored primarily in the form of the more toxic methylmercury. In any case, children and adults who ate fish from mercury-contaminated waters in Mina-mata Bay, Japan, in 1953, along the Agano River in Niigata, Japan, in 1962, and other locations in Iraq, Pakistan, and Guatemala, all have suffered death, coma, or a variety of brain and neurological damage.

Aside from these more acute incidents of chemical factory mercury contamination, such contamination of fish is widespread. According to Rudolph Ballentine, M.D., mercury toxicity is being reported with increasing frequency by physicians as well as dentists. The two main contributing factors seem to be a diet high in fish and the common use of silver-mercury amalgams for dental work. Fish consumption alone may be enough to cause mercury toxicity. An article by the Canadian Medical Association in 1976 reported that Indians in Northern Canada, who ate over one pound of fish per day, had symptoms of mercury poisoning. A 1985 study in West Germany of 136 people who regularly consumed fish from the Elbe River found a correlation between the blood levels of both mercury and pesticides and the amount of fish eaten.

Fish and shellfish may also carry their own toxins. The most common of these toxins is ciguatera poisoning. The ciguatera toxin is both a neurotoxin and gastrointestinal toxin which may give symptoms of numbness and tingling to lips, nausea, abdominal cramps, paralysis, convulsions, and even death. A little less than one case in ten is fatal. Certain species of red snapper, pompano, jackfish, grouper, and eel may have the toxin. Certain shellfish such as clams, mussels, scallops, and crabs may take in a toxic substance from plankton at certain times of the year, which may also cause a poisoning effect similar in severity to ciguatera poisoning. This poisoning is difficult to treat. I have seen at least one patient who was unable to work for several years after suffering such a poisoning.

Because there do not seem to be any fish available that are not potentially filled with toxins, one should consider carefully whether it's worth the risk to eat fish. In a study published in the *Diet and Nutrition Letter of Tufts University*, it was reported that the more fish pregnant mothers ate from Lake Michigan, the more their babies showed abnormal reflexes, general weakness, slower responses to external stimuli, and various signs of depression. They found that mothers eating fish only two or three times a month produced babies weighing seven to nine ounces less at birth and with smaller heads. Jacobsen, in a follow-up study that was reported in *Child Development*, found that there was a definite correlation between the amount of fish the mothers ate and the child's brain development,

even if fish were eaten only one time per month. He found that the more fish the pregnant mothers ate, the lower was the verbal I.Q. of the children. Children are usually the most sensitive to toxins, and they are prime indicators of what may be happening to adults on a more subtle level. A Swedish study in 1983 found that the milk of nursing mothers who regularly ate fatty fish from the Baltic Sea had higher levels of PCBs and pesticide residues than even meat-eaters. Lactovegetarians were found to have the lowest pesticide residues in this study.

The sanitation problem associated with fish and shellfish must also be considered. Once the fish or shellfish are caught *en masse* in the trawler nets, the crushing pressure on the fish causes the intestinal contents to be squeezed out, contaminating the rest of the catch. Also, the fishing net is oftentimes dragged across the bottom of the ocean where the sediment is highly contaminated with toxins and bacteria. In the book *Basic Food Microbiology*, it is reported that the contamination from the sediment results in a bacterial count that ranges up to a million per gram. This is a very high count; salmonella, for example, in counts as low as one to ten bacteria per gram, have caused infections in humans. Salmonella is not so much a problem with shrimp, but more with bottom-feeding fish and shellfish in coastal waters which have been polluted by sewage. By the time fish have reached port, most have suffered considerable contamination and microbial growth. The task of processing, which involves gutting and filleting, further spreads the contamination. The inspection of fish for contamination is more thorough than government inspection of beef and poultry. Sixty percent of the fish are inspected by the National Seafood Quality and Inspection Laboratory. Shellfish are inspected under a special surveillance agency set up after a typhoid breakout in 1925.

Not only do the bodies of fish become the repositories of chemical toxins, but they have the propensity to concentrate microorganisms as well, especially salmonella and hepatitis. In *Basic Food Microbiology*, it shows that 7 to 20% of shellfish and 40% of the mussels gathered from five separate collecting stations were contaminated with salmonella. Some, but not all, of this bacterial and viral contamination can be avoided if the shellfish are cooked. For example, in *Transition to Vegetarianism*, Dr. Ballentine reports that a bacterial count of over a million per gram was found in crabs that were boiled for thirty minutes.

I have presented many reasons why one would want to give up fish. There are no nutrients found exclusively in fish that cannot be found in safer, healthier, vegetarian sources. Although seafood was once considered a healthy food, modern-day pollution has made it risky to eat. The biggest reason of all not to eat fish is to love oneself more than being addicted to old eating patterns of culture and convenience.

Preview of Chapter 23

STAGE THREE IS THE FIRST STEP INTO VEGETARIANISM. It is a major lifestyle change and needs to be experienced in that light. There may be some minor psychological shifts as well as a slow detoxification process that is initiated. By moving into it slowly and peacefully these changes will have a minimal impact. The two best-known diets for a beginning vegetarian are the Airola Diet and macrobiotics. Both these diets will be discussed. You may settle into either of these two diets and be quite comfortable. The conscious eater diet includes these and, by the end of Stage Three, takes you a little further for optimal health. It allows you to do building or cleansing, heating or cooling, and to balance yin and yang and acid-base. In this chapter you are introduced to the concept of biogenic and bioactive foods and fermented foods. Questions about dairy products, calcium balance, fiber, oxalates, and phytates are also addressed. In beginning a vegetarian diet, give yourself four to six months to make the transition. Are you ready to change to a diet that will significantly improve your health and aid your spiritual well-being?

- I. Developing a vegetarian diet
- II. Biogenic foods
- III. The psychology of the transition to vegetarianism
- IV. Holy cow! Pros and cons of dairy products
- V. The Airola Diet
- VI. The Macrobiotic Diet
- VII. Fermented live foods
- VIII. Nuances of the Stage Three diet



Stage Three: Developing a Vegetarian Diet

THE TRANSITION TO A VEGETARIAN DIET IS A MAJOR LIFE STEP. People come to vegetarianism in many different ways. Some choose it for ethical reasons, others to minimize cruelty to animals, others for health reasons, some to help preserve the ecology or to create an atmosphere for world peace, and some make the change for specifically spiritual reasons or to enhance their meditation. For many the change may be motivated by a combination of all of these arguments. Whatever the reason, it is a transition worth understanding so it can be done gracefully and in the most healthy, harmonious, and peaceful way. By making the changes gradually, one gives the body, mind, and circle of family and friends a period of adjustment that supports the transition. This approach helps to guarantee a sustained shift to a vegetarian way of life.

Most often, when one stops eating all red meat, poultry, eggs, fish, and other seafood, one naturally shifts from a high-protein, high-fat, low-fiber, low-complex-carbohydrate, high-pesticide diet to a low-fat, low-protein, high-natural-carbohydrate one. This high-, natural-, complex-carbohydrate and low-protein diet is the one recommended by the highly prestigious International Society for Research on Nutrition and the Diseases of Civilization.

Not everyone makes a smooth shift from a flesh-centered to a vegetarian diet. There is a tendency for some people, under the illusion they are eating a low-fat and low-protein diet, to think that because they stopped eating the highly concentrated protein of flesh foods, they can begin eating large amounts of dairy, oily foods, tofu, and roasted nuts and seeds. These foods are high in cooked fats and protein and should not be eaten in excess either. The general findings of cross-cultural studies suggest that a diet high in natural complex carbohydrates and low in protein creates the best health, vitality, and longevity. Many of the cultures noted for longevity eat only one-half to one-third the protein that Western nations eat. Diets for fast oxidizers and parasympathetics require a higher ratio of protein and fat to carbohydrates, but can easily remain relatively low-protein. A diet high in complex natural carbohydrates includes fresh fruits, vegetables, nuts, seeds, legumes, and grains. This is the essential diet followed by long-lived people such as the Hunzas of Pakistan, many of whom live close to one hundred years or more, and the Russian Caucasians, called Abkhazians, who have seven times more centenarians per million than the US. Although the Abkhazians eat some meat, according to Paavo Airola, most of their centenarians are vegetarian. Other long-lived cultures, such as the Bulgarians and Vilcabamban Indians, also follow a similar diet. Americans, who are the world leaders in cancer, heart disease, arthritis, obesity, high blood pressure, multiple sclerosis, mortality rates, miscarriages and birth deformities, eat more meat, more protein, and probably more cooked fat than any other nation.

BLACKBOARD FOOD FOR THOUGHT

Unless one tends to overeat, a vegetarian diet will leave one feeling lighter than a flesh-centered meal. Feeling lighter indicates there is less strain on the digestive system and more energy available to the body and mind.

Feeling lighter always feels good! It is a way of loving yourself and being in the light.

Biogenic Foods

RAW OR SPROUTED SEEDS, NUTS, GRAINS, AND GRASSES are the most potent life-force foods. They are called biogenic foods. These foods contain the secret of life itself, the germ, which contains the reproductive power for the perpetuation of the species. They contain the spark of life which sparks the life of those who eat them in their live form. These foods have all the nutrients essential for bountiful human health and longevity. When sprouted, many of the nutrients are increased and the nuts, seeds, and grains become considerably easier to digest. When most seeds and nuts are soaked and sprouted, naturally occurring digestive enzyme inhibitors are washed away and the proteins, lipids, and complex carbohydrates become predigested into free amino acids, free fatty acids, and simpler carbohydrates. Cooking may destroy these enzyme inhibitors, but it also disrupts the SOEFs, destroys vitamins, mineral complexes, and food enzymes, and coagulates the protein. Many of the grains contain complete proteins, essential fatty acids, and many vitamins and minerals. They are a high-quality source of vitamin E, lecithin, and most of the B-complex vitamins. They also are high in fiber, which is so vital to our health. An increased consumption of biogenic foods is part of Stage Three.

Bioactive Foods

THese are fully mature foods that are live, but not the super-high life-force foods that biogenic foods are. They are excellent foods and very much a part of Stage Three. The difference between biogenic and bioactive foods is the difference between the high vitality of a young child who is rapidly growing versus the vitality of a healthy adult. Bioactive foods include all of the vegetarian foods, such as vegetables, fruits, mature seeds, nuts, grains, beans, and legumes.

Vegetables, including sea vegetables such as dulse and kelp, are also extremely important to our health. They are excellent sources of minerals such as calcium and iron, as well as enzymes and vitamins. They contain complete proteins which, according to Paavo Airola, often have a better net protein utilization value than proteins from animal sources. One acre of leafy greens contains twenty-five times the amount of protein as one acre devoted to livestock. Vegetables serve both as cleansers and builders for the body.

Fruits are nature's sunshine and pure gifts to us from Mother Nature. They are nature's solar collectors and can be thought of as condensed sunlight. Most fruits are rich in vitamin A and C and a varied assortment of essential minerals. They are the highest of all foods in boron, which is important in preventing osteoporosis. They are not only nutritive but good detoxifiers and bowel cleaners. They contain a higher amount of structured water than any other food and are high in energetic radiations arising from the four elements of air, sun, earth, and water.

Legumes, such as soybeans, peanuts, and kidney beans, are powerful building foods that are high in protein. According to the Max Planck Institute, about 50% of the protein is coagulated when any protein is cooked, so soy and other legumes that need to be cooked are, for this reason, not the best protein as compared to nuts, seeds, and grains which can be eaten raw or sprouted.

Soybeans have provided a source of high protein in Asian countries for many thousands of years. Because of their strong inhibitory enzymes, they must be sprouted or cooked before they can be safely consumed. They are high in fiber and lecithin. If not cooked, they also provide a good source of vitamins, especially the B vitamins.

A vegetarian diet is always less toxic than animal foods, even if the vegetarian food is not organic. According to pesticide authority Lewis Regenstein, meat contains fourteen times more pesticides than plant foods, and dairy contains five and one-half times more. Regenstein points out that FDA studies also show that red meat, poultry, fish, and dairy contain pesticides more often, and in greater amounts, than plant foods. In 1975, the Council on Environmental Quality reported that 95% of the nation's DDT ingestion was from animals. John Robbins states that this same percentage holds true for other pesticides also.

Shifting to a Vegetarian Diet

TWO OF THE MOST POPULAR VEGETARIAN DIET PATTERNS are Airola's dietary approach and the macrobiotic approach. One general reason they are both so health-promoting is by an act of omission. A vegetarian diet, even if it includes some dairy automatically decreases the incidence of cancer, heart disease, high blood pressure, osteoporosis, rate of aging, and other chronic degenerative diseases. A transition to a nonjunk-food, vegetarian diet, such as the Airola or macrobiotic diets, in which all fast and highly processed, deep-fried, or irradiated foods, white sugar, white bread, TV dinners, french fries, and pastries are eliminated, will bring even greater benefits to health. If done properly, the transition to a vegetarian diet will almost always increase one's sense of well-being, vitality, and endurance.

The Psychology of the Transition to Vegetarianism

THE TYPICAL AMERICAN DINNER PLATE Features an animal food with various minor vegetable side dishes surrounding it. When one switches to a vegetarian diet, psychologically there is a shift from a central meat item on the plate to a more balanced feeling in which all that one eats gets equal attention and value. Unless one tends to overeat, a vegetarian diet will leave one feeling lighter than a flesh-centered meal. This is a new sensation that one will get used to after a while and begin to enjoy. Feeling lighter usually indicates there is less strain on the digestive system and more energy available to the body. After eating, one is less likely to feel sleepy and the mind will tend to be clearer. The bloodstream stops becoming flooded with saturated fats as well as toxins that come from the cells of the deteriorating fish, poultry, or red-meat animals. A clear mind and good health are also associated with a clear bloodstream. All these benefits will accrue to one who becomes a vegetarian.

A vegetarian diet does not tend to numb the emotions, mind, spirit, or subtle physical sensitivity like a flesh-centered diet may. The result is that in the process of the transition one becomes more sensitive and more in touch with feelings and the subtle energies of the life process. Most people find that it makes it easier to meditate as well.

To compensate for the heavier feeling that one was accustomed to on a flesh-centered diet, sometimes in the beginning one will be drawn to heavier, cooked meals such as cheese dishes, lentil loaves, and tofu arrangements that resemble meat dishes. This is often the kind of food featured in vegetarian restaurants. Many feel comfortable with this level of vegetarian diet and do not proceed onward. Ethnic dishes, such as vegetarian lasagna, Chinese food, Mideastern dishes, et cetera, often fit in well with Stage Three because they are culturally accepted and familiar.

Another common tendency is to eat a lot of dairy, nuts, and seeds in order to “compensate” for the fear of not getting enough protein and that sense of not feeling as full as when one ate heavier meat dishes. Many people, including myself, went through this phase in the late sixties and early seventies. Today, the protein scare has been diffused so not as many people worry about not getting enough protein on a vegetarian diet. Although I felt better and healthier on my new vegetarian diet than when I was on an animal diet, when I was eating these heavy cooked vegetarian foods, I actually gained a little too much weight until I figured out what was going on. By cutting down on dairy intake and my frequent snacks of nuts and seeds, I felt even better.

Because Stage Three eliminates all animal products, it is natural for one to begin to eat a lot more grains, beans, fruits, vegetables, raw nuts and seeds, sea vegetables, soaked and sprouted grains, legumes, and raw dairy. Most of these foods are high in fiber, whereas all flesh foods, dairy, and eggs have essentially no fiber. A vegetarian diet increases all types of dietary fiber and consequently produces a cleaner, less toxic bowel condition. On a healthy vegetarian diet there is usually no longer a need to supplement one's diet with oat or wheat bran fiber to assist bowel regularity. In fact, to continue adding fiber to the vegetarian diet can produce an excess of fiber and may even cause digestive difficulties and gas.

Vegetarians Get More Fiber

FIBER IS DEFINED BY ITS INDIGESTIBILITY. The two main types of fiber are cellulose and pectin. Humans do not produce the digestive enzymes to break down either of these. A third type of fiber that is closely related to cellulose is called lignand. The percentage of fiber in a plant increases with its age. Fiber is commonly found in stems, peelings, and hulls. An excess of lignand and cellulose can be irritating to the bowels and can also produce gas. Supplemental bran is primarily this type of combined fiber. Cellulose fiber is good for bulking the stool and also binding carcinogenic and radioactive chemicals. It is the other fiber type, pectin—primarily found in fruits—that binds the bile salts and takes them out of the system. The more bile salts taken out of the system, the less bile salts are available to be reabsorbed to make cholesterol. Another disadvantage of consuming too much of both types of fiber is that an excess of fiber tends to bind minerals and keep them from being absorbed into the system. In order to minimize the mineral loss from fiber, one may want to remove the tough, woody parts of vegetables and fruits, such as the stems, peelings, and hulls. It took me a while to figure this out because I had been attached to the idea of eating the whole plant. Once I began to eliminate the excess and tough plant roughage, particularly stems, I found it easier on my digestion. If people are suffering from sore bowels, juicing the fruits and vegetables is another way to minimize the roughage and maximize the assimilation of minerals and vitamins.

Phytates and Oxalates

THE SIGNIFICANCE OF PHYTATES AND OXALATES in the vegetarian diet needs to be clarified. The very earliest research suggested that in some grains, phytic acid combined with calcium in the grain and prevented the calcium from being absorbed. Later research found when these grains were made into breads, the enzyme phytase became activated and liberated the bound-up calcium from the phytic acid bonds during the rising of the bread. More recent research has found that over time, the body begins to produce its own phytase enzyme for breaking down the phytates. According to Bitar and Reinhold in *Biochemica et Biophysica Acta*, the phytase enzyme produced in our intestines releases the calcium from the phytate binding so that the calcium can be absorbed into the system.

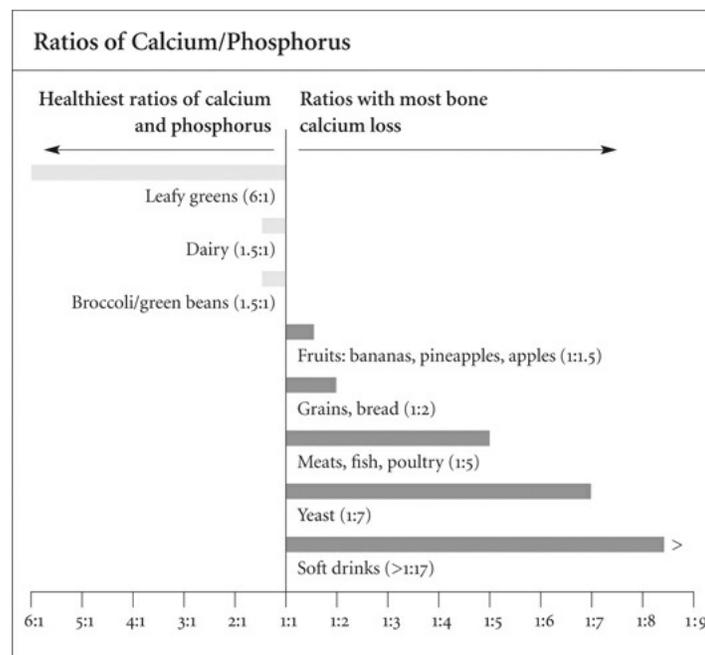
The questions concerning the potential harmful effects of oxalates also require attention. Oxalic acid is found in many foods, such as spinach, caffeine products, sesame seeds, cola drinks, nuts, citrus fruit, tomatoes, asparagus, beets and beet tops, Swiss chard, dandelion greens, cranberries, and ascorbic acid supplements. Some researchers think that the oxalic acid combines with the calcium in these foods to form oxalates, and then this calcium cannot be absorbed. My general observation, in examining the oxalate sediment in the urine of hundreds of people, is that oxalates from natural foods do not build up in the system if the fat metabolism and digestion are working well. Poor fat metabolism seems to be associated with a buildup of oxalate crystals. Dr. Loomis, in a personal communication, pointed out that if one eats lots of chocolate and takes more than 500 mg of vitamin C ascorbate, the oxalates will begin to build up and excess oxalate sediment will accumulate in the urine. Research does show, however, that with some plants, such as spinach and chard, the oxalates can bind with the calcium in a way that prevents some calcium absorption. However, Davidson, in *Human Nutrition and Dietetics*, points out that the chelating effect of oxalic acid on calcium and other minerals is most likely negligible. According to Dr. Ballentine, even the chelating effect of oxalic acid in spinach or chard can be nullified by eating them with rice. In this way, the high calcium present in spinach and chard can be assimilated into the system.

Organic oxalic acid, defined as that which occurs in nature in its raw form, can actually be beneficial to the system. Once foods containing oxalic acid are cooked, according to the dean of juice therapy and author of *Raw Vegetable Juices*, Dr. Norman Walker, the oxalic acid becomes a dead and irritating substance to the system. He feels that in its cooked form it binds irreversibly with the calcium and prevents calcium absorption. An excess of cooked oxalic acid may also form oxalic acid crystals in the kidney. In the live organic form of oxalic acid, Dr. Walker claims oxalic acid stones and calcium blockage do not occur because the organic oxalic acid can be metabolized appropriately. According to Dr. Walker, oxalic acid in its raw form is one of the important minerals needed to maintain tone and peristalsis of the bowel. See Chapter 27 for more information on phytates and oxalates.

Organic Calcium

ON A STAGE THREE DIET it is possible to get plenty of organic calcium. Excellent leafy green sources of calcium, which are also low in oxalates, are kale, collards, mustard greens, broccoli, and cabbage. According to the USDA publication *Nutritive Value of American Foods*, two-thirds cup of collard greens has 91% of the calcium in a cup of milk. According to the *Composition of Foods Book* published by the USDA, other nondairy sources of calcium that are approximately equal to collard greens are almonds and kelp. Sesame seeds that have been hulled, sunflower seeds, and tofu have about one-half as much calcium as collard greens. Kelp is extremely high in calcium but should only be taken in moderate amounts because of its high iodine and salt content. By eating leafy greens, seeds, nuts, tofu, and dulse, vegetarians get more than enough calcium. Because they also eat a lot of fruit and vegetables which are high in boron (boron helps minimize loss of body calcium through the urine), the amount of calcium in the body stays high. As pointed out before, vegetarian men and women have considerably less osteoporosis than flesh-eating men and women.

One other significant factor in calcium absorption is the ratio of calcium to phosphorus in a particular food (see the following figure). Too much phosphorus in a food causes a lowering of calcium in the blood and produces a tendency to lose calcium from the bones. This is what happens on a high flesh-food diet because meat is high in phosphorus. The foods with the healthiest ratios are leafy greens, which have a ratio between 2/1 and 6/1 times more calcium than phosphorus. Dairy is also good, with 1.5/1 times more calcium than phosphorus. Foods like broccoli and green beans also have about 1.5/1 times more calcium than phosphorus. Fruits such as apples, bananas, and pineapples have slightly more phosphorus than calcium. Foods that have the worst ratios, which means they have much higher phosphorus than calcium, are meat, fish, and poultry at a ratio of calcium to phosphorus of 1/15. Yeast is 1/9. Grains and beans have more phosphorus than calcium, but only 1/2 to 1/5 times higher. The soft drinks on the market have enormously high phosphorus-to-calcium ratios and thus make a strong contribution to the creation of osteoporosis.



Think Zinc

THE MINERAL INPUT OF A VEGETARIAN DIET is more than adequate. In a balanced vegetarian diet, manganese intake is at least double that of an animal-based diet. Adding leafy greens, dulse, kelp, and herbs like thyme, ginger, and cloves will increase the mineral content of any vegetarian dish to adequate and even what may be considered high levels. The one possible exception to this is zinc, which may not be as plentiful on a vegetarian diet in relation to other minerals. In my own clinical practice, I have noticed that vegetarians and meat-eaters alike tend to have zinc deficiencies. The study of Freeland and Graves on the zinc status of vegetarians published in the *Journal of the American Dietetic Association* in 1980 suggests that vegetarians tend to have a marginal zinc status. Because only seventy-nine people were studied and there are few large studies on this subject, I feel these findings should not be considered definitive. As we have seen with the B12 work, the question remains to be answered as to what are low, and what are low but actually physiologically safe, levels of zinc for vegetarians? A diet high in grains, which are also high in zinc, may actually result in a lower zinc status because the phytates in the grain combine with the zinc to keep it from being absorbed. The phytase needed to release the zinc from the phytate turns out to be a zinc-dependent enzyme. This means that if you are already low in zinc at the time you switch to a vegetarian diet, you may not have enough zinc to make the zinc-freeing phytase enzyme work efficiently. Once there is enough phytase enzyme to release the zinc phytate bonding, then the cycle is broken and the zinc is able to be freed from the phytates. During the time of transition to vegetarianism one might want to check the zinc status and also eat more foods that are high in zinc, such as brewer's yeast, wheat germ, and pumpkin seeds. Other foods that are high in zinc and do not have phytates are dairy products, tofu, beans, seeds, and nuts. Soaking and sprouting grains eliminates phytic acid and liberates zinc for absorption. People who are particularly at risk for zinc deficiencies are pregnant and nursing mothers, children, young males and females going through puberty, people undergoing physical and mental stress, those healing wounds, or those with a compromised immune system. Young men are more affected than young women since the male reproductive system requires ample amounts of zinc for its normal functioning and development. Increasing pumpkin seeds in the diet during stages of high zinc need helps to maintain a high zinc input.

Holy Cow!

WHEN ONE ESTABLISHES ONESELF AS A VEGETARIAN, questions may arise as to whether or not to include dairy in the diet. Throughout the world, the majority of people who do not eat flesh food are usually lacto-vegetarians. In many cultures, such as in India, dairy plays a role as a condiment and balancing element to the more spicy, fiery elements of the meal. In ancient India, where the cows were treated with much love and respect, dairy was seen as a sattvic, or pure, food. Today in the West the situation is much different. Cows are exploited as living, financial “stock” which produces a product called milk and later becomes another product called red meat that is eaten. Instead of specially respected animals, they are seen as objects to be exploited and milked of their life force. They become victims of our financial and flesh-food greed. One takes on their victim consciousness when one drinks their milk and eats their flesh. Because cows eat or graze on tremendous quantities of vegetable matter, when one drinks their milk, one takes on high concentrations of pesticides, herbicides, radioactive particles such as iodine 131, strontium 90, and cesium 134 and 137, antibiotics, and antibiotic-resistant microbes. One also becomes exposed to animal-borne diseases. Even when the milk is pasteurized, not all of the bacteria or viruses are killed. The acceptable standard for pasteurized milk is approximately 100,000 bacteria per teaspoon or 20,000 bacteria per milliliter. The January 1974 *Consumer Reports* found that one out of six milk samples bought from retail stores had a count of 130,000 bacteria per milliliter.

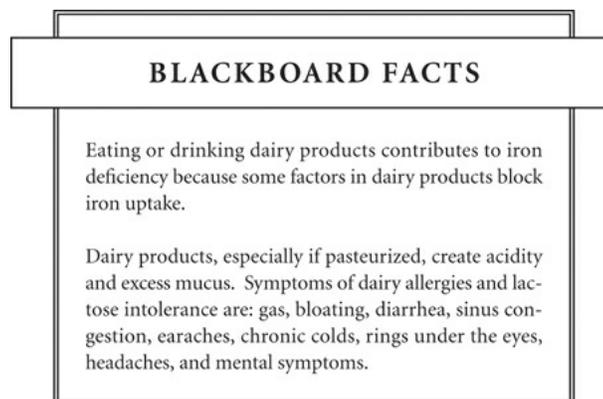
Another problem with pasteurization is that it destroys the live enzymes in the dairy. One of these enzymes is phosphatase, which is important for the assimilation of minerals, including calcium, in the milk. The heating process, according to Dr. Morter, also alters the chemical bonds that hold the minerals together and the calcium becomes less available. The deleterious effect of pasteurization on the nutritive quality of milk is well-illustrated by the research of John Thomson of Edinburgh, as reported by Dr. Bieler in his book, *Food Is Your Best Medicine*. Thomson fed pasteurized milk to one calf of a twin, and the other was allowed to continue to suckle. The calf that suckled grew strong. The calf that was fed only pasteurized milk died within sixty days. Unfortunately for the calves, these same results were found many times.

Dr. Bieler asserts that milk must be raw and fresh if it's to have any nutritive effect on the body. His report that he has prescribed raw milk for fifty years without ever seeing a case of “undulant fever” casts some question on the necessity for pasteurization. Pasteurization also affects the acid-alkaline effect of the raw milk. Raw milk historically has a normally alkaline-producing effect in the body. Dr. Crowfoot, an expert on acid-base balance, in a personal communication to me, reported that raw milk had an alkaline effect in the body as evidenced by alkaline urines that occurred after ingestion. After pasteurization it becomes acid-producing in the body. The acidity increases even more if one chooses to boil the milk because one heats it to higher temperatures than pasteurization. Dr. Morter, in his book *Your Health, Your Choice*, points out a new trend for raw milk. The dairy cows are being fed more protein because it increases milk production. The milk consequently has more protein in it. Because of the higher protein content, the acid-base balance of the milk has shifted and the total effect of even the raw milk is to add more acid to the body.

Problems Associated with Milk

THERE ARE OTHER PROBLEMS ASSOCIATED WITH MILK once we get beyond infancy, where mother's milk is the perfect nutrient food. One problem is that beginning between eighteen months and four years of age, humans lose the enzyme called lactase, necessary for digesting lactose, which is the sugar in milk. Most adults have about five to ten percent of the lactase that they possessed as an infant. When there is a deficiency of lactase, the undigested milk sugar ends up in the intestine as the perfect culture medium for bacteria to grow on. Depending on the degree of lactose intolerance and the amount of dairy eaten, lactose-intolerant people may get symptoms of bloating, intestinal pain, gas, and diarrhea. Black Americans and Japanese are more likely to have milk intolerance than Caucasians because they have not genetically adapted to the use of dairy as have those with a long history of consuming it. In the form of yogurt, the lactose is broken down by the healthy lactic acid bacteria, and therefore yogurt is easier to digest.

Milk, no matter if one has enough lactase to digest it, tends to produce mucus. This is especially true in adults who have already passed through the formative growth period of their life. Milk, with the exception of goat's milk, according to the Ayurvedic system, is a kapha food. If a kapha food is given to an adult, it will increase the tendency to gain weight as well as produce mucus. Cow's milk, as compared to mother's milk, has 300% more casein. Casein is a milk byproduct that is used to make a tenacious type of wood glue. The main ingredient in Elmer's glue is casein. There may be so much kapha mucus that a cold develops in order to rid the body of this excess mucus.



Another problem with eating dairy is that many people have milk allergies. In children, I am always amazed how many have their chronic colds, sore throats, and earaches cleared up when I discover they are allergic to dairy and they stop eating it. Even without an allergy to dairy, the tendency to colds and flus is greatly decreased when dairy is eliminated. The high fat in pasteurized dairy products is associated with increased clogging of the arteries. Yogic traditions also teach that excess dairy clogs the subtle channels of energy flow in the body known as *nadis*.

There are also ecological concerns associated with the use of dairy products, such as the destruction of the rain forest in the tropics and the topsoil virtually everywhere from cattle grazing, cruelty to animals, and excess methane gas from the bacteria in the cow's gut, which is belched out in tremendous quantities that significantly increase the greenhouse effect. If this sounds incredulous at first, it is a fact that the two billion cattle in the US produce **16** million metric tons of methane per year. This is the third-largest contributor to the greenhouse effect.

The answer to the dairy question is that if one does not have milk intolerance, does not easily produce mucus, does not mind being exposed to increased concentrations of toxins, bacteria, and radioactive substances, does not have a milk allergy, does not care about taking on victim consciousness in every sip or clogging developing arteries and subtle energetic channels, does not mind increased weight gain, making your body more acid, or contributing to the destruction of the ecology, then dairy is acceptable, in moderation. For some, dairy can be an important supplement to their diet, but in any case, it should remain as a condiment rather than a major part of the dietary intake as it is for so many people today

The Airola Diet

PAAVO AIROLA, PH.D., was one of the most knowledgeable natural doctors of modern times. The diet he recommends permits raw milk to be used as a condiment if one can tolerate it. The diet he suggests is similar to the traditional way of natural eating that is characteristic of many cultures around the world whose members have good health and longevity. The Airola diet recommends a lot of seeds, nuts, and grains. Next in importance are vegetables and then fruits. These food groups may be supplemented by some raw dairy products from healthy cows or goats, preferably in cultured form such as yogurt. Although Airola doesn't recommend dairy products, he allows use of raw dairy as a condiment in a way similar to what one sees in India by lactovegetarians. Actually, in his own clinical healing practice, dairy would often be the first thing he would ask people to eliminate from their diet. He also points out that only those who are tolerant to milk might even consider using dairy as a supplement. In the conscious eating diet, *I suggest that if there is to be any use of dairy at all, it should be as a temporary transition step.* Airola strongly emphasizes eating approximately 80% of one's food in its live state in the warmer months and closer to 60% live food in the winter, if one feels the need for more cooked food. He particularly emphasizes eating all the nuts and seeds raw, and sprouting most of one's nuts, seeds, and legumes. Airola also emphasizes some foods high in a source of high-quality vegetable oils because they supply the essential fatty acids as well as vitamins E, F, and lecithin. He also recommends kelp as a source of minerals, trace minerals, and particularly for its high iodine content. It is a diet that can be adjusted to balance all three doshas.

The Macrobiotic Diet

ANOTHER MAJOR DIETETIC APPROACH that many people use as their first entry into vegetarianism is called macrobiotics. The term “macrobiotic” did not start with George Ohsawa or even in Japan. It was coined one hundred fifty years ago by the German researcher and physician Christopher Wilhelm Hufeland, in his book titled *Macrobiotic, The Art of Prolonging Human Life*. This is not the macrobiotic approach to which I am referring when I use the term “macrobiotic.” George Ohsawa was the founder of modern-day macrobiotics. The first and foremost student of his was Michio Kushi. Kushi brought macrobiotics to the West in the early sixties. In the nineties, several other macrobiotic leaders emerged who made minor alterations in its theory and practice. Although the most often-practiced macrobiotic diet includes white-meat fish one to three times per week, my use of a macrobiotic transition is a vegetarian version of macrobiotics.

The standard macrobiotic diet, as recommended by Michio Kushi, puts a high emphasis on cooked foods. In his basic diet, Kushi suggests that cooked grains be at least 50% of every meal. Vegetables are suggested to be 20-30% of the daily intake and are recommended at every meal, with two-thirds of them cooked. Cooked beans and sea vegetables, equal to 5-10% of the daily intake, are suggested. Soups made from sea vegetables, grains, or beans with seasonings from miso and tamari are suggested to be 5-10% of the daily intake. The diet also strongly emphasizes cooking all fruit. There is no dairy in the diet.

Like the 80% live-food diet and the Airola diet, the vegetarian version of macrobiotics is an organic, low-protein, and high-natural-carbohydrate one; it is also a nondairy diet. I feel that the inclusion of sea vegetables in the diet is quite beneficial, as it adds minerals, iodine, and certain specific protectors from radioactive fallout particles. In the conscious eater's diet I suggest about two to three ounces of sea vegetables per week.

The other part of the macrobiotic approach which agrees with the *conscious eating approach* is their teaching that how and what we eat is part of a way of life. As I have pointed out earlier, what and how we eat is a reflection and cause of the awareness and harmony with which we lead our lives. As it has evolved, macrobiotics has included more room for individuality in the diet based on one's particular constitution. As a movement, macrobiotics has an effective and extensive public media outreach which makes it accessible and attractive for many to make the transition from the typical American diet. Because of all of the above factors, I applaud vegetarian macrobiotics as a fine transition diet to vegetarianism.

Part of the effectiveness of the macrobiotic diet is the power of omission. Through the avoidance of high-protein flesh food, high-pesticide dairy, non-organic foods, and junk food, it is a great support to general health. The power of omission in a diet should not be ignored or minimized because it allows the self-healing aspects of the body to be able to do their job. One of the most significant health-benefitting impacts of any vegetarian diet is that it is significantly lower in pesticides and herbicides than a flesh-food diet. Stopping or lowering the intake of environmental toxins can't help but be a boon to our health.

Reservations about Macrobiotics

THE GENERIC MACROBIOTIC APPROACH emphasizes a fifty-fifty balance of yin and yang energies of the food in the diet. The system is complex and for most people requires some training in order to master the cooking and yin/yang balancing procedures. In the *conscious eating approach* the focus on the balancing of yin and yang energies uses the totality of one's life to create an overall yin/yang balance, rather than primarily through the diet. This is an important difference because the conscious eating approach is primarily a live-food diet, with a minimal amount of yang grains. The *conscious eating approach* is a powerful aid to spiritual life. It is easy to balance the yin effect of the conscious eating diet with other yang lifestyle activities. It is only fair to point out that although macrobiotics puts a high focus on a balance of yin and yang foods in the diet as a primary way to achieve this balance, it does not entirely ignore the existence of other lifestyle factors which balance yin and yang. The more conscious one becomes, the easier it is to remain centered and grounded with yin foods as the main component of the diet. My observation in working with many spiritually committed people is that yin food, especially a diet high in live foods, accelerates the consciousness process, and as consciousness increases, people are able to increase their percentage of yin live foods without becoming unbalanced. On a theoretical level, I hypothesize that God's Divine fire actually begins to add a yang element that balances the more yin foods.

Although certain key concepts of the theoretical orientation of macrobiotics are right on the mark, I feel the diet itself does not necessarily create a stable, long-term, high-energy, radiant health as compared to a properly implemented live-food approach. The radiant energy of someone on live foods is easy to notice. The standard macrobiotic approach is different in a major way from the guidelines of an 80% or more live-food vegetarian diet recommended over the last hundred years by such nutritional lights as Dr. Airola, Dr. Ann Wigmore, Dr. Norman Walker, Viktoras Kulvinskis, M.S., Max Bircher-Benner, M.D., Max Gerson, M.D., Herbert Shelton, Dr. Edmond Bordeaux Szekely, Dr. Paul Bragg, and Dr. Patricia Bragg, all of whom have found a primarily live-food diet excellent for health and for healing severe degenerative diseases such as arthritis, heart disease, and cancer in hundreds of thousands of patients.

Macrobiotics does not address the scientific facts that show that cooking destroys self-digestive enzymes of the food, valuable antioxidant enzymes, and other living food factors. From this point of view, I particularly object to the roasting of the high-life-force foods, such as nuts and seeds, and insistence on cooking all fruits. This essentially total cooked-food diet destructures the food with heat, resulting in a 50% protein loss and approximately a 70-80% loss of the vitamins and minerals, including high losses of vitamin B12. A high-grain diet has a tendency to drive the body toward a more acid state, which for many people is not healthy. Cooked grains also have a tendency to produce excess mucus and destroy enzymes needed to enhance digestion and build the life force.

Although many of the principles of macrobiotics are drawn from age-old health wisdom of countries such as Japan and China, its present form, in actual practice on Westerners, is very new. Although there is some research showing it may be helpful in the healing of certain types of cancer, macrobiotics doesn't have extensive scientific, cultural, or health research in the Western culture to show that it brings about optimal health on a large scale over hundreds of years, as the Airola and conscious eating approach of 80% live food does for the Western body. The use of sea salt, which is hard for the body to metabolize and can contribute to high blood pressure, is another potential health problem in the macrobiotic diet. With its high emphasis on salt and grains, and especially rice, from an Ayurvedic point of view macrobiotics is particularly helpful for people who have a vata constitution and would be most unbalancing for those with a kapha constitution. Due to the above reasons, I am cautious about recommending it beyond the initial transition stage to vegetarianism. In any case, macrobiotics has provided a great service in helping people become vegetarians and making organic food items available in America. I have observed in my clients that the vegetarian macrobiotic diet of Ohsawa and Kushi, as well as Airola's diet, are both supportive for spiritual life.

Fermented Live Foods

FERMENTED LACTIC ACID FOODS, such as sauerkraut and fermented vegetables, are good ways to increase the amount of raw food in the diet and a convenient, viable way to store food during the winter. Dr. James Lind did the first scientific study of raw cultured vegetables—another name for sauerkraut—in the 1700s and found that they prevented scurvy in Dutch seamen. The famous Russian scientist Elie Metchnikoff believed that one of the most important factors in the diet of the long-lived Russians he studied was its richness in lactic acid. Raw cultured vegetables have been used by the ancient Chinese, Romans, and even by the army of Genghis Khan.

Raw cultured vegetables are rich in the lactic acid bacteria *Lactobacillus plantarum* and *Lactobacillus brevis*. These bacteria, via enzymatic processes, convert the sugars and starches in the vegetables into lactic acid and acetic acid. This acid environment is excellent for a healthy colon, where these same bacteria also grow. Because cultured vegetables are slightly acidic, they are a particularly good food for people who tend to be alkaline.

When the conditions for a healthy colon environment are produced, the growth of healthy colon bacteria is stimulated and the overgrowth of candida yeast is prevented. In *The Complete Guide to Raw Cultured Vegetables* by Evan Richards there are many testimonials to the successful use of cultured vegetables to treat candida. Patricia Bragg, Ph.D., daughter of the famous Paul Bragg, in a personal communication claimed that their “research and experiences have shown raw sauerkraut to help alleviate candida problems, digestive problems, ulcers, and in general, helps to rejuvenate and promote longevity.” These claims only apply to raw and not to canned or pasteurized sauerkraut.

One of the most famous medical doctors who used the fermented vegetable approach was Dr. Johannes Kuhl. He regularly used cultured vegetables in his anticancer diet. He claimed that the lactic acid produced by the lactobacteria helps to prevent chronic disease and cancer as well as promote good health. One way that the cultured vegetables are so good for us is that they prevent the yeast, *Albicans candida*, and pathogenic bacteria from taking over the colon and creating endotoxins that suppress the immune system. In essence, the raw cultured vegetables create a micro-ecological balance in the colon that helps us maintain health. The vegetables mostly used in fermented cultures are cabbage, carrots, and beets. These are high in vitamins A and E. Cabbage is a cruciferous vegetable which is also high in vitamin C. The American Cancer Society's epidemiological studies indicate that diets high in cruciferous vegetables are associated with less cancer incidence.

The lactobacilli organisms found in fermented foods are very high in enzymes, which add to our overall enzyme bank when they are taken into the system. These organisms help with the digestion and conversion of starches and sugars in the vegetables to lactic and acetic acid in our colon. This aid to our digestion further supports our overall enzymatic pool because now less enzymes have to be secreted by the pancreas for digestion. The friendly bacteria growing on the vegetables also digest the vegetables during the fermentation process so that they become an easily assimilated, predigested food. The best and most inexpensive way to regularly have raw cultured vegetables in the diet is to make them in one's own home. Please see the recipes in Part IV, The Art of Food Preparation.

Nuances of the Stage-Three Diet

IN STAGE THREE, ONE'S AWARENESS of the acid-alkaline balance, food combining, avoidance of excessive protein intake, and organic foods becomes more refined. As one begins to understand these issues, one then begins to increase sprouting skills and to understand the importance of using more of the rejuvenating foods, such as soaked or sprouted seeds, nuts, grains, and legumes. These types of foods are called biogenic because of their high life-force energy. In the spectrum of the vegetarian diet one may find oneself shifting to 60–80% biogenic and bioactive foods and 20–40% cooked foods. Increased live-food consumption may include soaked and sprouted nuts, seeds, vegetables, fruits, legumes, and grains. In the later part of Stage Three, biogenic foods may eventually reach 30% of the total dietary intake. About 30 to 40% of the diet is fruit. This is also the approximate percentage for vegetables, nuts, seeds, and grains. Over time, the fruits and vegetables become a larger part of the diet, and the grains, especially cooked grains, diminish in quantity. Soaked and sprouted seeds, nuts, grains, and grasses tend to stay about the same. Because the *conscious eating approach* is individualistically attuned to one's own constitutional needs, each person will adapt a little differently to the variations of the seasons and changes in one's lifestyle and environment. The percentages suggested are more to give a general sense of what this stage might resemble.

During the summer, one tends to eat more fruits and less grains. During the winter, the more heating foods, such as seeds, nuts, grains, and legumes, will often be increased. Vata people tend to do better with slightly more grains and soaked seeds. Kapha and pitta people tend to do better with slightly more fruits and vegetables and less oily nuts, seeds, and fruits, like avocados. The cooked foods that are usually part of the 80% raw and 20% cooked diet are potatoes, grains, and fibrous vegetables with much cellulose coating, such as broccoli and cauliflower.

As one progressively adapts to the Stage Three way of eating, one may find oneself losing interest in dairy, even as a condiment, and eating closer to 80% raw- and 20% cooked-food cuisine. The main food groups in the end of Stage Three are primarily nuts, seeds, grains, fruits, and vegetables. Dairy may be totally avoided or slipped into the diet occasionally as a condiment on special, rare occasions. The idea is not to be rigid about live-food percentages or dairy on a daily basis, but to look at an overall average of one's dietary pattern. *This general diet is one that will quite adequately support all one's nutritional needs and provide a gradual detoxification over the years, so one's body will progressively become healthier and be a better superconductor for the cosmic energy passing through. A general guideline of 80% raw, 20% cooked, and 33% biogenic diet will completely support all aspects of one's life, including the spiritual. Such a Stage Three diet can be modified to be building or cleansing, acid- or alkaline-forming, warming or cooling, or more yin or yang. Stage Three is also a diet that can still be comfortably adapted to social situations.*

Preview of Chapter 24

THE STAGE FOUR DIET IS ONE that seems to accelerate sensitivity and the spiritualizing process in many people. It is a diet for spiritual and raw food Olympians. The people who do best on it are those who have reached a certain amount of stability and harmony in their lives and are already experienced vegetarians. It is a 95% or more live-food diet with about 50% biogenic food. Although this is a powerful diet for enhancing spiritual life, diet is still just an aid to receiving and holding God's Grace. This chapter describes how to apply the art of conscious eating in a refined way. Although you may not feel it is time to try a Stage Four diet, its principles are worth understanding and applying to your diet as appropriate for you. Do you feel ready to up the intensity of your diet? Remember, part of being vegetarian and eating live foods is to be gentle and peaceful with yourself. If going to 95-100% raw feels natural and healthy for you, then go for it. If it is a major strain, then it is better to proceed in stages.

- I. Becoming a spiritual and raw food Olympian
- II. One cannot eat one's way to God or personal happiness
- III. Stage Four: high biogenic-food diet
- IV. Developing the intuitive art of conscious eating



Stage Four: Olympic Vegetarian Diet

STAGE FOUR MARKS THE DIFFERENCE between a diet that simply aids health, well-being, and spiritual development and one that positively *accelerates* the process. Stage Four is 95-100% live food with approximately 50% biogenic food, about 50% bioactive food, and 0 to 5% cooked foods, like potatoes, or slightly cooked fibrous vegetables. So far, I have not been able to detect a significant difference between 100% raw and 95% raw in terms of day-to-day health or physical and spiritual energy. There may be a measurable difference in terms of longevity, however. My observation and hypothesis is that getting in touch with just the right amount to eat rather than overeating, even of biogenic foods, plays a more critical role for health than whether one has a 95% or a 100% raw-food diet. That 5% is important because it allows some social leeway, as well as keeps one from getting stuck in a perfectionistic-type thinking and eating.

Stage Four can be likened to the difference between a personal program of jogging, hiking, and aerobic exercises and a program actively training for the Olympics. Those who aspire to the “Olympic diet” in the context of a fully centered and balanced life become spiritual athletes who often participate intensely in the shift of planetary consciousness. This in no way means that anyone who is not living on a Stage Four diet is not participating in the process of planetary transformation—we are all doing so in our own way, just by being alive on this Earth at this time. So being on a Stage Four diet is not a prerequisite for being “on the team.” There are many spiritually active people who are working very hard for the planetary shift in consciousness who are not even vegetarians. In time, for the reasons pointed out in this book, I feel that many of them will eventually make the shift to a vegetarian diet.

Those who choose to adopt a Stage Four-level diet may find it hard to ignore the issues of planetary transformation, such as the ecology, peace, equal rights, and health concerns, et cetera. Their very lifestyle will impel them in life-positive, evolutionary directions where they will want to contribute to the greater good of humanity and all life.

A potential psycho-spiritual danger of the 95-100% raw-food diet is the tendency to follow it as some sort of obsessive, self-righteous, self-centered ritual in the hope of achieving happiness, purity, or God just from the diet alone.

As I've said in earlier chapters, one cannot eat one's way to God or even personal happiness. Happiness and God are never one's own. They are a state of awareness in which there is no “I” to claim ownership. God, when experienced as a state of noncausal happiness, is where the ego self or “I” is not. The “I” ceases to exist. It is a consciousness where polarities and distinctions of “I” and “Thou” end. *Diet is a most important aid to this process, but the stabilized peace and happiness of God-awareness requires far more than just a well-thought-out and executed Stage Four diet.* Intense focus on God with a clear heart and mind, supported by whatever psycho-spiritual tradition one chooses, has been the path for ages. Diet helps one walk more quickly and keep stabilized on that timeless path, but it is not “the path” in itself. I choose to eat at the Stage Four level because it is the diet which most powerfully enhances my communion with the Divine. I am grateful, but not at all surprised, that a diet that most enhances the communion with the One is also the most healthy and ecologically harmonious diet as well. It seems that everything that leads to the Divine inherently creates harmony.

Stage Four begins with a complete nondairy vegetarian cuisine of primarily live, soaked, or sprouted nuts, seeds, grains, grasses, vegetables, fruits, and sea vegetables. It is a 50-60% biogenic diet. As we progress in the process of the Stage Four diet, there is an increase in the amount of life-generating foods, such as all forms of soaked and sprouted nuts, seeds, grains, and grasses, including wheatgrass. There is a progressive decrease in cooked grains, which are acid, mucus-producing, and devoid of life-force-filled enzymes. Eventually, there is very little cooked grain in the diet except on occasion as part of the cooked 5%. Depending on constitutional type, one may vary the percentage of sprouted foods and fruits and vegetables. This diet also can be varied to balance acid-base ratio, yin and yang, and heating and cooling elements. The Stage Four diet can be modified to have a cleansing, rebuilding, or

maintenance effect, depending on how one organizes it based on individual requirements.

Because this diet is a “jet fuel,” high-energy one, to successfully make it work in one's life requires more attention, knowledge, and spiritual maturity. We can no longer afford the luxury of a single theory or understanding guiding us at all times. It is necessary to become, as much as possible, in tune with the “holistic practitioner” within.

To do this requires a certain amount of trial and error experimentation with a variety of live-food approaches, with real attention to acid-base balance and Ayurvedic constitutional type. For example, one of my clients, who tested acidic, was primarily on live foods except for some grain each day. As soon as she stopped eating grains, her health improved considerably and her pH returned to the normal range. She also felt more balanced emotionally and spiritually. Theoretically one might claim that her new diet was incorrect because it was too yin, having eliminated the yang acid-forming grains, but the clinical results over time gave a total picture which goes beyond the limited theory of yin and yang balance in the diet as the only way to look at health.

My own diet is Stage Four with only occasional and incidental intake of raw or cooked grains. My personal and clinical experience is that grains slow down the movement of the spiritual energy in my body and dull the sensitivity to this energy. This may not be true for everyone, but this is the way grains work for me and many people I have observed. Although my diet may be yin, I balance it with the yang-generating heating energy of my physical activities of hatha yoga, fast walking, and pranayama each day; the heating energy of some herbs, like ginger, black peppercorns, cardamom, and cayenne, especially during the winter months; the heating energy of the fire meditation; the yang fire of the sun each day; the grounding nature of my holistic health work; and my full participation in the running of the Tree of Life Rejuvenation Center, humanitarian projects, and my intimate relationships including those with my family. The harmony I experience comes from the balance of the overall net dynamic of yin and yang energies in my total life rather than just the mere summation of the yin and yang energies of my food. This is what I call the wholeness approach.

Diet is an important part of the delicate creation of a total, balanced, harmonious life rather than the focus of ones life in itself The Stage Four diet of 95-100% living food is a powerful, purifying, energizing, and spiritualizing force in one's life. This diet can help to activate or awaken the spiritual energy. It accelerates the detoxification and healing process on the physical, emotional, and mental planes.

The Latin root of the word “vegetarian” is *vegetare*, which means to “enliven.” The Stage Four diet fulfills this definition to the utmost. It is so powerfully enlivening that to balance the energy created by the diet, one almost requires a life built on a spiritual foundation. Such a spiritual foundation may include some level of spiritual outlook or understanding, a supportive social and spiritual environment, a connection with nature, right livelihood, meditation, and love. Without these other supportive activities and structures in one's life, it is easy to get thrown off balance by the intense physical and psychological toxins that are initially released when one is on this diet. Whereas the Stage Three 80%-raw, 20%-cooked vegetarian diet is generally easy to attain for most everyone who is ready and motivated, the Stage Four diet is more intense and more likely to be successful for those who are mature and balanced in all areas of their lives. For most people, it requires several years of experience and self-experimentation to become balanced and grounded with the full life-force power of this diet.

In Stage Four, the practice of self-examination and observation is crucial. At this level of refinement our ability to absorb nutrients is continually improving. As already discussed, the 30-year research of the Wendts, a family of medical researchers, established that a high-protein diet clogs the basement membrane. As the excess protein is eliminated by eating less protein and no flesh food, the basement membrane becomes more and more porous. This allows the nutrients to be more easily absorbed. Using an electron microscope, photographs by the Wendts showed that the basement membrane of babies is very porous. This may be why they can grow so rapidly on a breast milk diet that is only 5% protein. On a 95- to 100%-live-food diet, this process of clearing the basement membrane occurs more quickly than on other diets so that one can eat less and still absorb the same amount of nutrients. Eventually, especially for slow oxidizers, sympathet-ics, and kapha type people, one discovers that one does not need to eat three meals per day. In my own life, I have essentially eliminated the evening meal, except for occasional raw juices or fruit. It was fascinating and exciting for me to be able to comfortably make this switch and discover that my weight remained stable.

How Much Do We Need to Eat?

EATING TWO MEALS PER DAY may be more closely aligned with what a healthy organism actually needs, although this will vary with one's constitution. As a baby, there is an intense growth phase with rapid gain in weight, brain and nervous system myelination, and maturing of organs and enzyme systems. During this time, the baby feeds as much as every two hours. As children undergoing rapid growth and development, three meals per day and frequent snacks seem appropriate. In the teenage years there is another rapid maturational growth spurt in which the teenagers seem to always be eating. Sometime in the early twenties, physical growth of the organism is brought to a close and we shift over to more of a "repair and replacement" metabolism. Much less food is needed to sustain this phase of the life cycle. If one continues to eat like a teenager, the primary physical growth that occurs is sideways! With this overweight condition come those unwanted "spare tires," but even more significant is the fact that waste builds up in the tissues and the circulatory system. When physical growth has reached its peak in early adulthood, for many, two meals per day will be quite adequate to support the physical function of the body.

Although two meals a day may appear to be undereating, it actually isn't because one's rested digestive system is more efficient in absorbing more nutrients from what one eats. If one doesn't eat after 2:30 PM until the next morning, the digestive system gets three-quarters of a day's rejuvenative rest every day. One of the ongoing issues in the Stage Four diet is eating too much based on one's increased ability to almost completely assimilate everything one eats. To clarify this concept, as the basement membrane becomes more porous, less and less food is needed to give the same amount of nutrients. To eat more than is needed to fulfill one's nutrient needs, even if one eats only one-half as many calories as is recommended by government authorities, may still constitute overeating when one's basement membranes are clean.

Eating less is not a back-door invitation to anorexia. It is easy to tell if one is undereating because there will be noticeable weight loss and a lack of vitality and health. My clinical observation of appropriate, healthy weight levels is similar to the 1959 weight standards for health set by Metropolitan Life Insurance Company and the weight chart for optimal longevity designed by Stuart Berger, M.D., in his book *Forever Young*. Dr. Berger's chart reflects the approximate weights that longevity researcher and professor at UCLA Medical School, Roy Walford, M.D., suggests with his calorie-limiting diet approach to maximize a healthy longevity. These weight levels are approximately 20% less than what Americans normally think of as an acceptable body weight. In looking at Drs. Walford and Berger's data on longevity, I was delighted to find that my stabilized weight was precisely what they recommended. My focus, however, has never been on weight charts or calories. It has been on *developing the art of conscious eating which is eating just the right amount of food to be totally functional for every aspect of one's life and to enhance communion with the Divine*.

Another factor to consider on a live-food diet is the improvement of the metabolic enzyme function as health improves. I have observed that some people initially need supplements, but after a while they need less and less. It seems that as health improves, enough life force is created to regenerate damaged and exhausted enzyme systems or even develop new enzyme systems. Dr. Kervan, in his classic book called *Biological Transmutation*, cites twenty-five years of research that shows how the body can make specific enzymes that can actually transmute one mineral into another. Biological transmutation is one explanation for how some people are able to live without food. They have created the prerequisite enzymes to biologically transmute the basic minerals and other substances to make what the body needs. Obviously, not everyone is able to do this at present, but everyone theoretically has the capability.

There are several examples of people who have been observed to live on water alone. There is a Buddhist monk living in the Himalaya who was continually observed by medical researchers for forty-three months. During this time he only drank water. Theresa Neuman, a devoted Catholic peasant, is another individual who was observed to live just on water except for her once-a-week communion wafer. She too was observed continuously by researchers who acknowledged the veracity of her ability to live without food. The Taoists in China also mention certain masters who have achieved this ability to live on just air and water. Although living on water is not even a spiritual goal, it hints at our incredible potential as humans.

These stories are not told so that we should aspire to learn how to live on just water, especially since the water these days is not so reliable. The point is that our enzyme systems are constantly improving so one needs to eat less and less in order to assimilate the same amount of nutrients. Because of our different attachments on many levels to

eating three meals including snacks, it is not necessarily so easy to give up these patterns. The secret to making these changes is to go slowly, patiently, and with a great gentleness on oneself. Make changes that are comfortable. Forcing changes in diet too quickly often results in reversals that are self-defeating.

On a living-food diet, I have personally found that it is easier to experience an extraordinarily exquisite, gentle, eternal flow of the Divine energy coursing through the physical and subtle bodies. The more we experience this energy, the more we are filled with it. The more we experience ourselves permeated with this Divine energy, the more we experience the truth of our existence as “That,” and know that this divine experience is our primary identity. This profound and continual experience is not the same, however, as awareness of the One, which is a totality beyond any experience of time, space, senses, and energy, and especially beyond words to describe it. The experience of Divine energy helps us feel connected and a part of the flow of the universe. It is the reflection of the One in the mirror of the human body. It is a constant reminder of our eternal nature, of our Divinity. To me, this is the great blessing and grace of a living-food diet. *If we are to be in this body, why not live in a way that helps us feel connected to the Divine energy? Why not live in a way that has us experiencing the grace of God's touch?*

BLACKBOARD FOOD FOR THOUGHT

*One cannot eat one's way to God
or even to personal happiness!*

Diet is a most important aid to spiritual life; the stabilized peace and happiness of God-awareness requires far more than just a well-thought-out and executed vegetarian diet.

It is aided by balanced lifestyle, healthy relationships, right livelihood, support from your spiritual friends, praying, meditation, grace, and devotion to God.

Preview of Chapter 25

SAFE AND HEALTHY WATER is becoming increasingly difficult to obtain because of the high degree of water pollution throughout the world. In this chapter we discuss this issue and the ways we can create healthy water for ourselves. You will also get a chance to play biochemist again as we consider a new biological energy associated with water colloid systems. It is called zeta potential. Are you ready to consider the seriousness of our water problem? Are you ready to do something to protect yourself and your family?

- I. How did all of this water pollution begin?
 - A. The origins of our tainted water supply
 - B. Cancer increase related to water consumption
- II. Finding or making healthy water
 - A. Bottled, mineral, filtered, distilled water advantages and disadvantages
 - B. Charcoal filtering
 - C. Reverse osmosis
 - D. Water distillers
- III. Structured water and zeta potential
 - A. Liquid crystals in water—what they do
 - B. Surface tension of water
 - C. Our blood's colloid system and water
- IV. Factors that decrease zeta potential



Safe and Healthy Public Water, A Nostalgic Wish

JUST AS CONSUMING ORGANIC FOODS IS A WAY to avoid ingesting toxins, becoming aware of the quality of water one drinks and uses is increasingly essential in today's polluted world, since water can be a major source of toxins. According to *Diet for a Poisoned Planet*, less than 1% of the Earth's surface water is safe to drink. In some places in the United States and other countries, the term "drinking water" for tap water should be considered nothing more than a nostalgic euphemism. In order to best understand which water is safe to drink, bathe in, and prepare food with, one needs to know more about water pollution, how to purify water to make it safer for use, and also what form of water is healthiest to drink.

Second to oxygen, water is our most important nutrient. Without it, we would not be able to survive. Water comprises 90% of a baby's body and around 65-70% of an adult's. According to Patrick and Gael Crystal Flanagan, authors of *Elixir of the Ageless*, our muscles are composed of 75% water, our brain is composed of 90% water, our liver is 69% water, and even our bones are 22% water. They point out that in a lifetime people drink an average of 7,000 gallons, or 58,333 pounds of water. Water is a major component of all our foods. Cooked grains are 70% water.

In general, fruits contain the highest amount of structured water, approximately 85%, and vegetables contain slightly less, although some vegetables, like carrots, contain 88% water. The water in the cell structure of raw plant foods is the most biologically active available. This biologically active water is termed "structured" water. Structured water either already contains, or has the capacity to contain, more energy than unstructured water, such as distilled or spring water. Researchers have found that in structured water the angle of the molecular bonding between the hydrogen and oxygen atoms is different than uncharged, unstructured water. One can unstructure water simply by heating it (more on structured water in a later section of this chapter).

The problem of water pollution is very much in many people's awareness today. Since one can often smell, taste, and see water of questionable quality, the water problem is harder to ignore than invisible poisons in the food. Water that is visually oily, has a smell, or has an oily taste may be polluted with industrial wastes. If water smells like rotten eggs it may be intermingling with sewage. A metallic taste in water may indicate high lead or manganese levels. If the water is cloudy, it may indicate too much potentially dangerous organic matter or that the water is inadequately purified. A blue-green color may suggest a high copper level. If there is too much chlorine, one's stainless steel sink may become pitted or turn black. Color, taste, odor, and stains on fixtures indicate a high level of contamination. Lower yet still very toxic levels of contaminants are often colorless, tasteless, and odorless. A complete water analysis for microbial, inorganic, and organic contamination may be the only way to find out the quality and safety of one's water.

Radiation is one of the more deadly contaminants in water. Naturally occurring forms of radiation that are found in water supplies around the country come from uranium, radium, and radon in contact with the ground water. According to *Diet for a Poisoned Planet*, radium in the drinking water is one of the most important causes of birth defects and a cause of increased cancer rates. In Florida, elevated radium in the water has been associated with increased rates of leukemia. In Iowa, an increased rate of cancer of the lung and bladder among males, and breast and lung cancer among females, was discovered in population centers where the radium in the water supply was greater than five picocuries per liter of water (the federal standard for maximum allowable radium in the water). Childhood leukemia rates were found to be nearly double in North Carolina and Maine in areas where the drinking water had high radium concentrations.

Maximum radon levels in the water should not be greater than ten picocuries per liter. Since radon will leave water as a gas, an aeration unit to remove the dissolved radon gas from the water before it enters the home is an effective solution to the problem of radon contamination. Reverse osmosis water purification systems can remove uranium and radium. Activated carbon filters will remove radon. We will discuss these and other water purification

methods later in the chapter.

In addition to naturally occurring radiation, the public now has to contend with radiation spills from several food and medical supply irradiation plants that have been built in this country. For example, in Dover, New Jersey, in 1974, the International Neutronics Irradiation Facility had a cobalt-60 spill which they tried to “clean up” from their radiation plant by dumping 5,700 liters of cobalt-60-contaminated water down the bathroom drains into the public sewer system.

The water that the general public uses comes from two sources: underground sources, such as springs and wells, and surface water, such as rivers and lakes. Presently, both these sources are becoming more and more polluted as toxic chemicals, acid rain, raw sewage, agricultural herbicides, pesticide runoff, chlorination, fluoridation, sewage landfills, and radioactive wastes are either dumped into or seep into these two types of water sources. One of the best-known examples of toxic water pollution to date is the infamous Love Canal, where according to *The New York Times* in 1984, thousands of tons of toxic chemicals were dumped, including 60 pounds of the deadly poison dioxin.

How Did This All Begin?

THE TRADITION OF PUTTING ADDITIVES in water by dumping questionably safe chemicals in the water started unwittingly with the addition of chlorine to water to protect us against waterborne diseases such as cholera, typhoid, dysentery, and hepatitis. Unfortunately, chlorine is a volatile chemical that likes to combine with the various industrial pollutants dumped into waterways. When chlorine combines with certain other chemicals it forms a class of toxic chemicals called tri-halo-methanes (THMs). Some examples of THMs are carbon-tetrachloride and chloroform. If this were not enough, the dumping and washing off of pesticides from the land brings many other chlorinated hydrocarbons into our waters, such as DDT, PCBs, and dioxin.

The pollution situation is so out of control that in monitoring cancer rates in Philadelphia, one researcher was able to correlate the different rates and types of cancer in the population with the specific river the people lived near. According to Steve Meyerowitz, in his book *Water*, the Environmental Cancer Prevention Center found that residents drinking from the west side of the Schuylkill River had 67% more deaths from esophagus cancer than those on the east side. Those drinking from the Delaware River on the east side suffered 59% more deaths from cancer of the brain, 83% more malignant melanoma, and 32% more colorectal cancers than those on the west side. This is just one of many studies linking specific water pollution to an increase in cancer rates.

The increase in specific cancers, and cancer in general, to epidemic proportions in the United States and other industrialized countries is not a question of mere negative psychological “cancer-producing attitudes” held by isolated individuals. It is difficult to assess the precise degree to which our polluted waters are causing disease, genetic mutation, developmental abnormalities, and birth defects; however, no one today could coherently argue that this isn't a frightening and very real problem.

An herbalist friend of mine once said, “*Pay attention to your elimination or it will eliminate you.*” Unfortunately, we are barely paying attention to our collective process of elimination. Even when the Environmental Protection Agency (EPA) sets standards of quality to protect our drinking water (as it did in 1979 by limiting THMs in drinking water to 0.1 parts per million), according to *Water*, the waterworks operators sue the EPA to rescind its protective standard. Meyerowitz points out that a congressional study in 1982 showed that many waterworks operators simply ignore the standards anyway. It seems that whenever the question of health versus profit comes into play, the choice by those in charge of disposal and storage of toxic wastes seems to be profits over health. For example, *The New York Times*, in October 1984, described one congressional survey in 1983-84 on the disposal of toxic wastes that concluded that less than 20% of 6,500-plus disposal and storage sites were actually in compliance with the law, and that the EPA had been deficient in upholding standards for protecting underground water supplies. Another *New York Times* article in November 1984 described a General Accounting Office investigation in 1983 that found 146,000 violations of the 1980 Safe Drinking Water Act. *The New York Times* article pointed out that the EPA had only referred 21 cases for enforcement in the history of the Act. The Natural Resources Defense Council, in a letter from its executive director, John Adams, reported that one-third of the United States' large wastewater dischargers were in violation of the Clean Water Act.

The point of this information about unrestrained water pollution becomes obvious. Since governmental agencies are not able to, or are unwilling to, enforce the laws to protect the quality of our water, and business people are choosing not to act responsibly for the greater public health and well-being, it follows that *we need to take individual responsibility to protect ourselves from polluted and toxic water*. The best way to do this is to take control of your own drinking and cooking water, and if you can afford to, your own bathing water as well, since toxins can be absorbed into the body through the skin.

The book *Diet for a Poisoned Planet* mentions a water testing company that I also recommend for a complete analysis of your water supply: Watercheck National Testing Laboratories, Inc., 6555 Wilson Mills Road, Cleveland, Ohio, 44143, phone: 216-449-2525. They can test for the following contaminants: microbiological, coliform, inorganic chemicals-metals, inorganic chemicals-other, organic chemicals-trihalomethanes, organic chemicals-volatiles, pesticides, herbicides, heavy metals, and PCBs.

When someone asks if it is worth it to pay attention to water, I cite a California Department of Health Study that showed that California women who drank bottled water or filtered water had significantly lower rates of spontaneous abortions and babies with significantly less birth defects than those who drank tap water. Though there might be other factors responsible, who wants to take a chance when life itself is at risk?

Finding Healthy Water

ALTERNATIVE SOURCES OF WATER are bottled, spring, and mineral water; filtered water; distilled water; and water purified by various types of purifiers, such as ozone purifiers, carbon block purifiers, and reverse osmosis systems. Each has its advantages and disadvantages. Bottled, spring, and mineral water that is packaged in plastic containers absorbs chemicals from the plastic into the water. The plastic taste in the water can be detected without much difficulty. If one is going to buy water from stores, it is much better to purchase water in glass bottles. Mineral water and spring water differ in that the mineral waters often come from therapeutic springs and generally have more minerals than spring water. Water that has 500 parts per million dissolved solids is defined as mineral water.

Some of the mineral waters are naturally carbonated and others are synthetically carbonated with carbon dioxide. In the human body, carbon dioxide is a waste product of cellular metabolism which, when combined with water in the system, makes carbonic acid. This carbonic acid makes our system more acidic. For some people it also creates gas and bloating. In other words, carbon dioxide in water is not particularly healthy, although it is considered fashionable.

Some mineral waters may be extremely high in a particular mineral or several minerals that could potentially create an imbalance in some people if consumed in sufficient quantity over time. One of the biggest problems with bottled water is that one really doesn't know what's in the bottle or if the bottle has been mislabeled to appear as if it is spring water. Some bottlers treat their water with ozone, deionization, or even chlorine in order to purify it. Some "spring water" is simply purified, city tap water. In India, I stopped drinking bottled water because, as a physician, I saw too many people who got sick after drinking bottled, "purified" water, which in some cases was just untreated water put into a clean bottle. Trying to stay with more well-known name brands is a good idea, but not a 100% guarantee of anything. In the mid-'80s, Perrier caught some unscrupulous individuals bottling New York City tap water and selling it as Perrier water. It is best to read the label and choose a company with a solid reputation. Brands labeled "drinking water" may be just tap water, although almost all bottled water is highly filtered. Look on the label to see if the water has been drawn from a spring or an artesian well.

BLACKBOARD FACTS

1. In your lifetime you are going to drink 58,333 pounds of water—that comes to 7,000 gallons.
2. Water comes from two sources: underground water and surface water, such as rivers and lakes. For years thousands of tons of toxic chemicals have been dumped into our fresh water supply. Now much of our water is polluted.
3. Make sure the water you drink is pure by filtering it at the tap.

Compressed, activated, charcoal block filters are an inexpensive way to get protection from the carbon-based organic pollution, pesticides, herbicides, insecticides, PCBs, cysts, heavy metals, asbestos, VOCs (volatile organic chemicals), and THMs in our city water. They also eliminate chlorine and foul odors. They do not, however, absorb inorganic mineral salts such as chloride, fluoride, sodium, nitrates, and soluble minerals. For this reason, they are best for city water systems but not for well water systems, which have a potential to be polluted with high amounts of nitrates from agricultural wastes. A concern regarding granular charcoal filters is their tendency to be a gathering ground for bacteria, yeasts, and molds, and their inability to remove pollutants found in some drinking water. Some of the more sophisticated charcoal filters do have a reverse wash system in an attempt to compensate for this. Another problem with charcoal filters is that the charcoal can break down with age or from hot water and release the

contaminants back into our drinking water. The best way to avoid this is to pay attention to any change in taste, smell, or color of the water, or a reduction in water flow rate. Duane Taylor, a water expert from North Coast Waterworks in Sonoma County, California, suggested in a personal communication that the main problem with charcoal filters is that the user does not replace the filter often enough. He recommends purchasing a filter unit that will stop the flow and make the user change the filter when its filtering capacities are used up. If one does not have such a filter, then he recommends changing the filter at 75% of the manufacturer's suggested lifetime. If one waits until there is a taste change, decrease in rate of flow, or smell to the water, the filter may already be dumping contaminants back into the water. Activated carbon is rated on its ability to remove iodine and phenols. The iodine number should be greater than 1000 on the measuring scale, and the phenol number should be 15 or less. Another important consideration for carbon filter effectiveness is the contact time of water with the filter. The slower the flow rate and the more carbon there is in the filter, the better job the filter does.

Reverse osmosis (RO) is one of the best systems to get pure water without using up a lot of energy. Reverse osmosis units (ROs) are able to remove bacteria, viruses, nitrates, fluorides, sodium, chlorine, particulate matter, heavy metals, asbestos, organic chemicals, and dissolved minerals. They do not remove toxic gases, chloroform, phenols, THMs, some pesticides, and low-molecular-weight organic compounds. When combined with an activated carbon filtration system, however, they can remove the entire spectrum of impurities from the drinking water, including organic and inorganic chemicals. Many RO units now have pre- and postfilters which take care of any residual impurities that the RO unit does not take out.

In RO, the water to be filtered is forced through a semipermeable membrane by the moving elements from more concentrated to less concentrated solutions. The membrane is permeable to pure water but not to most of its impurities. If conditions are right for sufficient water pressure and the water is not excessively hard, almost no energy is needed for the operation of RO systems. A pressure pump is needed if the total dissolved solids are greater than one thousand parts per million. The water is as pure as distilled, yet it is not heated as in distilled water and therefore not destructured, which is a great advantage. Sometimes a pressure pump is needed for extremely hard water, and this does require electrical energy. The main problem with an RO unit is the fragility of the semipermeable membrane. Some membranes can be destroyed by chlorinated water, highly alkaline water, or temperatures over 100 degrees Fahrenheit. If the water is chlorinated, a cellulose membrane is needed. A polymer membrane can be used if the water is not chlorinated.

In my home we use an RO unit, and we have had the membrane break in less than the expected three years. For this reason, it is good to check the water supply regularly. Newer and stronger membranes are now available on the market, but we are still in the habit of checking the water purity every four months and/or whenever there is a change in the taste. While RO units are similar in appearance and claimed performance, there are many complex, interdependent choices regarding pretreatment, membrane selection, and post-treatment systems. To select a system that fits your water filtration needs and to develop the best maintenance plan, it is best to talk with someone who has some in-depth knowledge of the many factors involved. If properly done, an RO unit may be the most energy-efficient and best way to protect your water. In the past, RO units required a lot of water to work properly, which is a disadvantage, particularly during times of drought. Some of the newer models have now been designed to operate with a minimal water usage.

Water distillers, although generally more expensive, remove most everything from the water, including bacteria, fluoride, nitrates, radionuclides, and organic and inorganic toxins; heavy metals, such as lead, mercury, and cadmium; and soluble minerals, such as calcium and magnesium. Some toxic organic compounds, such as THMs and dioxin, have the same as or a lower boiling point than water and therefore are not filtered out by the distillation process. Some of the more expensive distillers have built-in pre-boiler or postboiler filters as options which eliminate this problem. There are two major drawbacks to water distillers. One is that they are energy-intensive and expensive unless one has a solar water distiller. The other problem is that distilled water is dead, unstructured water so foreign to the body that one actually gets a temporarily high white blood cell count in response to drinking it. It is, however, possible to revive this dead, destructured water by the use of a product called Crystal Energy which will be explained below.

Water Ionization

ALTHOUGH WATER IONIZATION is not necessarily a filtering system for toxins, the water ionization technology based on Japanese research is a revolutionary health breakthrough. The ionized water replicates the “living qualities” of high-altitude mountain spring water. Water ionizers perform three functions: (1) They micro-cluster the water molecule complexes into smaller units, which increases water intake into the cells by six-fold. (2) They separate water into alkalized water for drinking and acid water for washing skin and hair and wound healing. (3) The ionized alkaline water is filled with billions of -OH ions that act as powerful anti-oxidants that destroy free radicals. Japanese and some American hospital research has found ionized water useful for the treatment of cancer, diabetes, intestinal problems, liver problems, and other chronic diseases. Alkalized ionized water can play a powerful role in reversing the chronic degenerative results of an acid system. Some ionizers have charcoal filters built in for removing toxins; others don't. I am presently researching the least expensive and most powerful home system. (Please see our website for updated information.) Water ionization could be one of the most important health breakthroughs in our era.

Structured Water

A KEY TO UNDERSTANDING WATER is the concept of structured water. As was well-documented in *Spiritual Nutrition and The Rainbow Diet*, the more structured water there is in one's biological system, the better the enzyme systems carry out their metabolic processes and the easier it is for vitamins and minerals to be assimilated into the cells. Another way to understand the concept is that the more structured the water is, the higher its SOEF energy.

Structured water means that the molecules in the water are more fully organized. When the water becomes structured, individual water molecules become grouped into high-energy, liquid crystalline units or crystal-like shells. In structured water, the actual bond angle of the two hydrogen and one oxygen atom in a basic water molecule is different than unstructured water. According to Patrick and the late Gael Flanagan, the most stable water crystal cluster has eight molecules. Intermixed with these liquid crystal structures are free, individual water molecules that are not bound to any other water molecules. When water is highly structured, it contains a high percentage of these liquid crystal units. Most water in healthy biological systems is highly structured. In lakes, streams, and oceans we have mostly unstructured or bulk water. As water is cooled to the freezing point, the number of liquid crystals is increased and it becomes so structured that it forms an ice crystal.

The general findings of several researchers suggest that the more structured the water, the more life energy it can hold. The more structured the water in a biological system, the better the individual cells function. This seems to be true for all levels of our biological systems where water exists, such as in the blood and in interstitial and intracellular fluids. The research cited in *Spiritual Nutrition and The Rainbow Diet* suggests that the more structured, intracellular water there is, the more balanced and concentrated intracellular ions there are, such as calcium, potassium, and sodium. Nuclear magnetic resonance studies reported by Carlton Hazelwood have shown that the intracellular water of cancer cells has significantly less structured water than normal healthy cells. Norm Mikesell has reported that when there is a decreased amount of intracellular structured water, the healthy intracellular ratio of sodium to potassium is disrupted. He concludes, as I do, that a decrease in intracellular structured water is associated with a decrease in the general quality of health.

When the living organism takes in "bulk" water, it must first structure the water so it can be utilized by the system. High-energy colloids, or particles with a high electrical charge, act as "energy seeds" that attract the free water molecules to form liquid crystal hydration shells. There are many types of colloids in nature. The most stable of the colloid systems are those found in living organisms. They are coated by neutrally charged polymers made of albuminoid or fatty acid-type materials. The Flanagans point out in their book *Elixir of the Ageless* that this type of colloid is the same type found in the famous Hunza water, which the local people drink from their natural glacial streams. Some believe that this colloidal water of the Hunzas, who are known for their life spans of up to 130 years, is the key, or at least one key, to their incredible health and vital longevity.

With precise instruments the Flanagans have verified that water can be structured by sunlight, crystals, magnets, or the energy from our hands. They also found that this structured effect would persist as long as the water was not disturbed in a turbulent way such as pouring into a glass to drink or by actually drinking it. Fortunately, they were able to invent a colloid solution, based on their understanding of the Hunza water, that would structure water in such a stable way that it would not be disrupted by various forms of mechanical means, electrical disruptions, or even microwave ovens.

In their research the Flanagans also found that the surface tension of the water was an excellent measure of the free energy of the water molecules. The more zeta potential, or free energy, a liquid has, the lower the surface tension. Unstructured water, such as distilled water, has a surface tension of 73 dynes/centimeter. Carrot juice, which has the lowest surface tension of all the juices (no data is available on wheatgrass), has a surface tension of 30 dynes/centimeter. After sitting overnight its surface tension rises to 68, and after 24 hours it reaches the 73 dynes of unstructured dead water.

The most healthy liquids are those which have the highest zeta potential or free energy. They are the most structured. A high concentration of anions (negative ions) in water is also associated with health because anions increase the zeta potential of the blood, the interstitial fluids, and the intra-cellular fluids. In *Elixir of the Ageless*, research is presented to show that when cations (positive ions) are introduced into fluid systems, this diminishes the activity and function of our biological colloids, and hence decreases the zeta potential. When this zeta potential is decreased, our biological systems, which depend on the integrity of the fluids, begin to function sub-optimally. In

carrot juice, when the zeta potential is decreased and the colloidal particles lose their charge, the carrot colloidal system loses its integrity and collapses. The physical evidence of this collapse is the “goop-jell” that we often see in carrot juice several days after it has been made. When we talk about the blood's colloid system collapsing, one can visualize this carrot juice goop as an example. A colloid collapse in the cells and extracellular fluids impairs the transfer of nutrients into the cells and the excretion of toxins from the cells.

When the zeta potential decreases in the blood, the red blood cells tend to aggregate, blood viscosity or thickness increases, and the red blood cells lose their discreteness. This process can readily be seen with a special microscope known as a dark field microscope. This sludging effect has been associated with general poor health and lack of oxygen in the tissues. In summary, what decreases biological colloid activity, and therefore zeta potential, also seems to be associated with a lower energetic cellular functioning of the living organism. This obviously creates a lower quality of health.

Factors That Decrease Zeta Potential

THE NEXT STEP IN OUR DISCUSSION is to use our understanding of structured water, biological colloids, and health to determine what factors decrease biological colloid activity, and therefore zeta potential. The Flanagans have found that ELF (extremely low frequency) signals from hair dryers, TV sets, computers, washing machines, and clothes dryers all decrease colloid stability. They have also found that any type of food processing, such as cooking, microwaving, and food irradiation, breaks down the protein coatings of the biological colloid particles in the fluids of the food. The result is the destruction of the zeta potential of the foods. The zeta potential may be referred to as the “life force” in enzymes and live foods, as well as a measure of their SOEFs.

Cooking foods causes a destructuring of the biological fluids in our food. In essence, cooking causes a death of the colloid energy system in the food. Devoid of its colloidal life force, the food is essentially dead. Live food, on the other hand, has a high zeta potential and colloid structure.

It is important, then, to be aware of what factors can destroy the zeta potential of our biological colloidal system. According to the Flanagans’ research, aluminum can cause severe destruction of the colloidal property of our biological fluid systems. Aluminum is used in some baking powders, antacids, deodorants, cookware, and canteens. The aluminum cans used in the soft drink and beer industries may leach aluminum ions into the liquid, despite the plastic lining inside. Aluminum silicate, as found in natural clays such as bentonite, is the only aluminum that the Flanagans found to be safe. Perhaps the biggest problem associated with aluminum is its use in water purification plants. According to the Flanagans, most purification systems add too much aluminum. The result is that the excess aluminum ions end up in tap water. The municipal water systems also routinely add cationic mineral salts which show up in the tap water. A high amount of cations (positive ions) in the water of any sort also destroys zeta potential. Aside from the aluminum cans, beer itself, because it contains large amounts of cationic minerals, drops zeta potential. Although beer is the worst offender of the alcohols because it is packaged in aluminum, even small amounts of alcohol will cause a coagulation of the liquid colloid system in our body. A high-salt diet will also diminish the zeta potential of our blood and other biological fluids.

The best approach to maintaining a high zeta potential in our fluid colloid system so that our life fluids stay in a highly structured, high-energy, healthy state is to take in fluids and foods that increase the zeta potential rather than decrease it. The best diet for this is one abundant in live foods, especially if they are high in structured water (high zeta-potential colloid liquids) and anionic electrolytes. Raw fruits and vegetables and fruit and vegetable juices fulfill this prescription.

After this brief but involved survey of colloidal chemistry, one begins to see that there is a natural order to things that makes life simple and healthy. *If we choose to live according to the natural laws of nature, a high zeta potential is maintained without having to be biochemistry experts. One who eats raw foods and drinks structured water doesn't have to worry about zeta potential.*

The Flanagans developed a stabilized, high-zeta-potential liquid crystal colloid product. Because it is made of microscopic-sized crystal colloids, they call it Crystal Energy. With eight drops per glass of water, this product reestablishes the zeta potential of the liquid, even if it is dead, unstructured, distilled water. I recommend adding this product, at one teaspoon per gallon, to distilled water or reverse osmosis water to restructure it. The Flanagans’ research using a dark field microscope showed that within five minutes after drinking a glass of this liquid crystal water, red blood cells will unclump.

By maintaining a high zeta potential in our blood, our interstitial fluids, and our intracellular fluids, we are less likely to have the zeta potential of our biological colloid systems disrupted or destroyed by the myriad of zeta potential destroyers to which we are exposed in our environment. The more energy in our system, the higher are the SOEFs, and the better organized and therefore healthier are all our biological systems. This is true on the level of DNA/RNA replication as well as for all the cells, tissues, organs, and organ systems of the body. Even the cellular mineral balance becomes more ideal.

Preview of Chapter 26

ENZYMES ARE ONE OF THE MOST IMPORTANT health factors in our foods. The preservation of our enzymes is associated with better health, vitality, and longevity. In this chapter you will learn about food enzymes and how to preserve your own enzyme reserve. If you accept the importance of enzyme preservation, are you ready to change your dietary patterns to conserve them?

- I. Enzymes: a secret of health and longevity
 - A. Enzymes are chemical protein complexes and bioenergy reservoirs
 - B. Three main types of enzymes: metabolic, digestive, and food
- II. Importance of enzyme preservation
 - A. Our bodies only secrete enough enzymes for each food we eat
 - B. Enzyme energy is linked to SOEFs
 - C. Enzymes decrease with age
 - D. Animal research and enzymes
- III. The role of food enzymes in digestion
- IV. Enzymes for health
- V. Enzyme-deficient is a hard way to start life
- VI. How do we preserve our enzymes?
 - A. Eating raw foods
 - B. Live enzyme supplements
 - C. Fasting
- VII. Not overeating
 - A. Animal life extended by underfeeding
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- VIII. Enzyme supplementation: live plant digestive enzymes
- IX. Reasons to use enzymes
 - A. Enzymes lost or destroyed in cooked foods
 - B. Enzymes decrease with age
 - C. Enzyme depletion during illness
 - D. Digestive disturbances

E. Enzymes help detoxify

X. Food enzymes: a new perspective on food combining



Enzymes: A Secret of Health and Longevity

ACCORDING TO MY NEW PARADIGM OF NUTRITION set forth in *Spiritual Nutrition and The Rainbow Diet* and elaborated in this book, whenever we process foods in any way, we disorganize the SOEFs of the food, and hence, lower the life force. This manifests on the physical plane in a variety of ways. Enzyme destruction is one. According to Dr. Howell, whom many consider the father of food enzyme research in the twentieth century, *enzymes are both chemical protein complexes and bioenergy reservoirs*. In the physical body, as bioenergy reservoirs, they are analogous in their patterning to SOEFs. I think of them as high-energy vortex points which step down the cosmic SOEF energy into the body.

Dr. Robert G. Denkwalter, one of the first to synthesize an enzyme protein, says that enzymes are “*embarrassing because they can do at body temperatures and in simple solution what we organic chemists can do only with corrosive agents and at high temperatures and with laborious processes.*” Dr. Troland, from Harvard University, one of the first scientists to put forth a living theory for enzymes, said, “*Life is something which has been built up about the enzyme; it is corollary of enzyme activity.*” Chemists concede that only the living organism makes active enzymes. Dr. Howell points out that *enzymes are not simple chemical catalysts, but have this vital life force that initiates biochemical interactions*. He also notes that the capacity of an organism to make active live enzymes depends on the available life force of the organism. The corollary to this is that the enzyme activity of an organism is a way to measure the life force of the organism. Ann Wigmore, the mother of the raw-foods movement in America, says that “*enzyme preservation is the secret to health.*”

Howell taught two key concepts: (1) enzymes are living, biochemical factors that activate and carry out all the biological processes in the body, such as digestion, nerve impulses, the detoxification process, the functioning of RNA/DNA, repairing and healing the body, and even thinking; and (2) the capacity of an organism to make enzymes is exhaustible. Therefore, on the biological level, how we utilize and replenish our enzyme resources will be a measure of our overall health and longevity. By understanding how enzymes work, we will understand why it is best to eat a higher percentage of Mother Nature's offering “*au naturel.*”

There are three broad categories of enzymes: **metabolic**, which activate all our metabolic processes; **digestive**, for the digestion of food; and a relatively newly conceived category called **food enzymes**. Food enzymes are present in all live foods and serve the function of specifically activating the digestion of those foods in which they occur. Live foods contain a variety of metabolic enzymes as well, such as superoxide dismutase (SOD).

There are an estimated 50,000 enzymes active in the human organism. Approximately 2700-3000 enzymes and their functions have been identified. Each organ has its own set of enzymes. Of the 50,000-plus enzymes, about 24 of them are digestive enzymes. The three main types of digestive enzymes are proteases, which digest proteins; amylases, which digest carbohydrates; and lipases, which digest fats. Mother Nature works in conjunction with us by adding what we call from our human-centered point of view “*food enzymes*” to each living element of nature. These food enzymes have the exact ratio of proteases, amylases, and lipases required to begin the digestion of the food for the body.

Importance of Enzyme Preservation

THE RELEVANCE OF THIS GIFT OF MOTHER NATURE becomes more obvious when we explore what Dr. Howell called the Law of Adaptive Secretion of Digestive Enzymes. Based on research at Northwestern University and confirmed by many other researchers, the Law of Adaptive Secretion proposes that *the living organism will secrete no more enzymes than are needed for digestion of a particular food*. This means that if a food from Mother Nature comes into our system in its live form, filled with exactly the right proportion of food enzymes to begin digestion, then it will result in less digestive enzymes being secreted by our organism for the digestive process. Researchers found that when dogs were given cooked foods, after a week the enzyme content of the saliva greatly increased in order to digest the cooked foods. When the dogs were put back on their normal diet of raw foods, within a week the enzyme content of the saliva went back to its normally low level. The implication of these studies is that since the raw food contained the self-digesting food enzymes, the dogs did not have to use up their own enzyme reserves to digest it as they did with the cooked food.

Human research as far back as 1907 has shown that the type of enzymes secreted in the human system also depend on the type of diet. In that year Simon showed that the starch-digesting enzyme amylase in human saliva increased with a high-starch diet and decreased with a high-protein, low-starch diet. In 1927, Goldstein showed that the content of fat-digesting lipase, protein-digesting trypsin, and starch-digesting amylase in the pancreatic secretions of humans varied in direct relation to the amount of fats, protein, or complex carbohydrates in the diet. The implication of this and the dog research is that by taking in foods high in live enzymes, less of our own digestive enzymes need to be used, so we are able to conserve enzyme energy. Enzyme energy is linked to our vital force and therefore the energy of our SOEFs. The higher our vital force, or SOEFs, the better our health.

The significance of enzyme preservation and the Law of Adaptive Secretion becomes even clearer when we see how much our enzyme level is linked to chronological age and disease. For example, Dr. Meyer and his associates at Chicago's Michael Reese Hospital found that the amylase in the saliva of young adults was thirty times greater than in people with a chronological age of 69. Dr. Eckardt in Germany found that young people had 25 units of amylase in their urine as compared to 14 in older people. Other researchers have found that the amount of SOD in an 80-year-old person is 57% of that of a newborn and 61% of that of a 10-year-old child. In a 40-year-old person, the SOD was found to be 84% of a newborn and 87% of a 10-year-old child. Individuals 27 years of age have been found to have twice the amount of lipase as 77-year-old people. A lower enzyme content is also found in people with chronic diseases. In Japanese patients with tuberculosis, 82% had lower enzyme contents than normal. In 40 patients with liver diseases, all had lower levels of amylase. In diabetes, it has been found that 86% are lower in amylase. Researchers have also found a lowered lipase level in people with obesity, arteriosclerosis, and high blood pressure. Directly and indirectly, we can see how important enzyme preservation and harmonious utilization are to health and vitality.

This same sort of enzyme decrease with chronological age happens in the animal kingdom. Researchers have found the enzyme content of younger *Daphnia* insects, potato beetles, grasshoppers, fruit flies, fire flies, and rats to be significantly greater than for their older counterparts.

The above findings may be connected with the research of Dr. Kollath of the Karolinska Hospital in Stockholm, who found that when he put animals on a diet of cooked and processed foods similar to the regular Western diet, they initially appeared to be as healthy as animals on live foods. As the animals reached adulthood, those on the cooked and processed foods began to age more quickly. They also developed chronic degenerative disease processes at an earlier age. The animals' degenerative diseases resembled the very human diseases common in the Western industrialized world, such as osteoarthritis, osteoporosis, and constipation, et cetera. He called the state of health of these animals "meso-health," a sort of half-health. Those animals raised on raw foods did not suffer from these problems.

The good news was that the meso-health of these animals could be reversed. It couldn't be done with megadoses of vitamin or mineral supplementation, however. The only thing that worked to reverse the aging process and bring the animals back to a normal state of health was to give them raw foods. Dr. Kollath called these heat-sensitive, unknown factors in the raw food "auxones." Most likely what he termed auxones were enzymes. There are many other factors in raw foods that also support health, but the enzymes are probably the most significant.

Similar animal research was done over a ten-year period by Francis Pot-tenger, M.D., using 900 cats. He gave

half of the cats raw milk and raw meat and the other half pasteurized milk and cooked meat. In the first generation, the cats on the cooked food developed a pattern of degenerative disease similar to what we see in humans. In the second and third generations of cooked-food-eating cats, he observed the onset of congenital bone deformities, hyperactivity, and sterility. The cats became so dysfunctional that plants would not even grow on their manure. The conclusion he made was that some critical, heat-sensitive factor was missing from the cooked food. The main factors known to be completely destroyed by heat are enzymes. The Pottenger Cat Study is discussed in detail in Chapter 8, "Deficient Diet: A Cause of Physical and Mental Degeneration."

According to Dr. Howell, temperatures of 118° F applied for one-half hour will destroy all the food enzymes in a particular food. This is a temperature that is sensed as warm to the hand. One can see that any kind of cooking, boiling, baking, or frying destroys essentially 100% of the enzymes, as does canning, food irradiation, and microwave cooking. Dr. Howell points out that boiling food for three minutes will kill all the enzymes. His research shows that at 145° F, the temperature for pasteurization, 80-95% of the enzymes are destroyed after one-half hour.

The Role of Food Enzymes in Digestion

TO DEVELOP AN OVERVIEW, we need to dissolve some false concepts about the process of digestion and understand how food enzymes work in our total organism. Contrary to the myth that our stomach is simply one big container for the digestion of protein, researchers have conclusively shown that there are two distinctly different digestive sections of the stomach. There is an upper part which retains food for 30-60 minutes while salivary digestion continues. There is no peristaltic action in this part of the stomach, and there are no enzymes secreted from its walls. The second part of the stomach is the lower part, called the pyloric stomach. This is where the hydrochloric acid and pepsin are secreted and considerably more protein digestion carried on. During the first 30-60 minutes in the upper stomach, digestion takes place primarily by the food enzymes released from the raw foods. The digestive process actually starts in the mouth, where the ptyalin in the saliva begins to digest the carbohydrates. In the process of chewing, the cell walls of the plant food are broken down and the food enzymes begin to get released. Most green foods are covered by a thin layer of cellulose for which humans have no digestive enzymes. For this reason, it is important to chew our food well, because when the cell walls of the plant are opened up by the action of chewing they release cellulase in the food itself, which helps to digest this cellulose. It is my impression that some of the green plants that are more difficult to digest in their raw form, such as broccoli, have a thicker layer of cellulose, and the problem is that we do not chew it well enough to break open the cell walls and release the plant cellulase.

Given this new perspective on the upper part of the stomach, which is anatomically known as the cardiac area, we will now call this the "food enzyme stomach." A food enzyme stomach is found in many animals. Cattle, sheep, whales, dolphins, and chickens all have them, although often called by different names, such as the rumen in cows and crop in chickens. Support for this idea of two distinct parts of the stomach is also found in one of the medical school anatomical classics, *Gray's Anatomy*, which terms the first part the upper, or cardiac portion. The lower, "pyloric stomach" has a pH of 1.6-2.4. The upper stomach has a pH that ranges from 5 to 6. This is important because the food enzymes are still active in this 5 to 6 pH range. They are temporarily inactivated in the 2.4 or lower range. A number of researchers show that the food enzymes again become active in the alkaline pH of the small intestine, where they complete their work.

Although this seems like a new concept, research by a variety of people shows that digestion does occur in the food enzyme stomach. Dr. Beazell reported in the *Journal of Laboratory and Clinical Medicine* that 20% of starch was digested in the stomach, and only 3% of protein, in this first hour of digestion. Olaf Berglim, a professor of physiology at the Illinois College of Medicine, found that 45 minutes after giving his subjects mashed potatoes and bread, 76% of the starch in the mashed potatoes and 59% in the bread was digested. Other researchers have found similar results. This research was most likely done with cooked foods and so probably only the ptyalin (amylase) from the saliva was active in the food enzyme stomach. Dr. Howard Loomis, who is considered to be Dr. Howell's successor, estimates that *an average of 60% of starches, 30% of protein, and 10% of fat are digested in the food enzyme stomach.* We can only assume that considerably more would be digested if it were raw food because the raw food would have its own digestive enzymes that would be released. The point is, as with the rest of nature's animals, the food enzyme stomach is where all the food enzymes in the raw foods are engaged in active digestion, along with our own ptyalin and amylase secretions from our saliva.

The result of this digestion in the food enzyme stomach is that the pancreas is not forced to work so hard to secrete so many enzymes. This conserves the body's enzymes for use toward nondigestive, metabolic purposes such as detoxification, repair, and the health and proper functioning of the endocrine glands and other vital organs. Because eating raw foods liberates enzymes for use in other parts of the body, the importance of making a high percentage of our diet biogenic and bioactive is obvious.

Evidence compiled by Dr. Howell strongly suggests that eating foods devoid of enzymes as a result of cooking, food irradiation, and microwaving causes an enlargement of the pancreas and also stresses associated endocrine glands, such as the adrenals, pituitary, ovaries, and testes. In all of nature, the human pancreas is three times larger, as compared to total body weight, than that of any other animal. What is interesting is that when mice are fed cooked foods, the ratio of their pancreas weight to total body weight becomes approximately that of a human's. When they are switched back to a raw-food diet, their pancreas shrinks back to normal size. The most obvious conclusion is that the pancreas becomes hypertrophied, or enlarged, because it is forced to keep up a high digestive enzyme output.

A great deal of the body energy goes into the process of digestion. Sometimes so much energy is needed for

digestion that we tend to become sleepy after a meal. This increased amount of energy implies that a large input of enzymes is used up in the digestive process. Some theorize that in order to keep this enzyme production up, the pancreas has to draw enzymes from other bodily glands. This forces these other glands to overwork and eventually enlarge to compensate for the demand. This hypertrophy primarily starts with the endocrine glands. Hypertrophy of a gland eventually leads to its early exhaustion.

Perhaps associated with the phenomenon of increased enzyme secretion by the pancreas due to cooked-food eating are the startling findings mentioned earlier of a Swiss physician, Paul Kouchakoff. In 1930, he showed that the eating of cooked foods caused leucocytosis, which is an increase in white blood cells. This even occurred when water was heated above 191° F. There are two hypotheses to explain this. One is that the white blood cells, which have a similar lipase, protease, and amylase ratio as the pancreas, are actually taking enzymes to the pancreas to boost its supply. The second explanation is that when food is cooked and water boiled, the body recognizes it as foreign and has an immune response to it. Both explanations may be true simultaneously. In any case, the repeated leucocytosis with every meal certainly puts a strain on the immune system. Kouchakoff also found that when subjects started a meal with raw foods which equaled more than half of the meal, they were able to have some cooked foods and not produce a leucocytosis. When people ate biocidic, highly processed, or junk foods, not only did they get leucocytosis, but the normal white blood cell ratios became deranged to the extent that they resembled the pattern one sees with blood poisoning from contaminated meat. From the point of view of the SOEFs, one can see how eating biogenic and bioactive foods brings SOEF and enzyme energy into the system, and eating biostatic (cooked foods) or biocidic foods requires SOEF and enzyme energy to complete the digestion, and therefore depletes the SOEFs and enzyme reserves.

Enzymes for Health

IN ORDER TO UNDERSTAND THE IMPORTANCE of enzymes for our health, it would be useful to understand how they specifically affect our health. For example, a doctor at Tufts Medical School found that in 100% of the cases of obesity he studied, all had lipase deficiencies. The implication was that these people had a decreased ability to assimilate fat properly. The fat ended up being stored as fatty tissue rather than being broken down.

Cooked food seems to stimulate the craving for food because the organs are not getting the nutrients they would normally get in uncooked food. The body naturally craves more nutrients, which may translate into an uncontrollable appetite and lack of willpower. Farmers have long known that if you give raw potatoes to hogs they will not gain weight, but if you give them cooked potatoes they gain weight. In my clinical practice, I often see people lose weight readily when they go on a raw-food diet. Many times this is all that is needed to help people lose weight.

As pointed out in an earlier chapter, cooked fats are missing lipase and have significantly less biologically active cis fatty acids. The difference in the digestive pattern of the raw versus cooked fat may also be important. The raw fat begins its digestion with its own lipase in the food enzyme stomach under slightly acid conditions. The cooked fat, without its own lipase, doesn't begin a significant digestive transformation until it is in the highly alkaline pH of the small intestine. When they both reach the small intestine, the predigested raw fats or oils are already beginning the next step in the digestion, while the undigested cooked fats are just starting their digestion. This may result in a slight shift in how the fat is metabolized and could cause some altering of the cholesterol. This interference with the fat digestion sequence may be another reason a high cooked fat intake is so deleterious to our health. The other reason is that eating cooked fats or oils causes an eventual lipase deficiency in the system. For these reasons, a deficiency of lipase may have a profound metabolic effect on both obesity and cholesterol disorders. It will be interesting to see what the researchers discover in the next few years about this important health question.

Enzyme-Deficient Is a Hard Way to Start Life

BABIES WHO ARE NOT BREAST-FED are immediately forced to deal with a lipase and amylase deficiency in their food because they get almost no enzymes at all in pasteurized milk. In a study of more than 20,000 babies, the rate of illness was compared between completely breast-fed babies and bottle-fed babies. Pasteurized milk-fed babies had a mortality rate 56 times greater than breast milk-fed babies. The general rate of sickness was nearly double for the pasteurized milk-fed babies. Although there are other factors involved with breast feeding that make it desirable for health, it is very important to realize that babies who are not fed with breast milk are being short-changed by enzyme-deficient foods. This is probably true for the majority of our children in America who have become addicted to enzyme-less junk and fast foods. We are paying the price for altering the way Mother Nature presents us with her gifts. By cooking food we contribute to the loss of our health at an earlier age.

For diabetics and hypoglycemics, it seems that whether food is cooked or raw is very important for their well-being. In research at George Washington University Hospital, when 50 grams of raw starch was administered to patients, the blood sugar only rose 1 mg in one-half hour before it began to decrease. With the cooked starch there was a dramatic average increase of 56 mg in one-half hour and then a 51-mg average drop by one hour. This is quite a significant shift in blood glucose. The major difference between the raw and cooked is the raw starch came with its own amylase and so was able to be predigested in the food enzyme stomach. Raw food and low-fat diets, with the use of added food enzymes, have been found to be a very effective treatment of adult-onset diabetes. On such a diet, if properly managed by a physician, adult-onset diabetics can actually stop needing insulin injections or oral medications.

How Do We Preserve Our Enzymes?

EATING RAW FOODS IS THE NUMBER-ONE ACTIVITY which preserves enzymes and maximizes health. It is the diet of choice of all the rest of Mother Nature's children that dwell on this planet. Animals that live in the wild do not suffer from chronic degenerative diseases as do humans and domesticated animals. It is a striking fact that all other species, without exception, eat their foods raw, whereas the overwhelming majority of humans do not. When animals are fed cooked foods, they too begin to suffer chronic degenerative diseases.

The foods with the highest amount of live enzymes are biogenic, predigested, and fermented foods. Seeds that have the highest enzyme content are those with a ¼-inch sprout. Some have estimated that the enzyme content is ten times greater at this 1¼-inch sprouting stage. In Asia, the idea of fermenting soybeans by exposing them to the enzymatic action of fungal plants has been practiced for thousands of years. The fungal plants not only add enzymes to the food, but predigest the protein, carbohydrates, and oils. Miso, a fermented soybean product, and tempeh, a soy product with a cultured fungus, are examples of this. One can also make enzyme-rich, fermented, raw seed and nut cheeses through a fermentation process (see recipes section).

Although all live foods are high in enzymes, there can be a tendency for some people on a live-food diet to become too thin if they eat just vegetables, fruits, and sprouts. Through self-experimentation, I found that on a vegan diet of 99% live fruits, vegetables, seeds, and sprouts, with occasional sprouted or cooked grains, I am able to maintain my weight. By adding certain foods that not only are high in enzymes, but also high in carbohydrates or lipids, I am able to increase my weight at will. These foods primarily are bananas, avocados, and soaked or sprouted raw seeds and nuts. Other foods that are high in enzymes as well as calories are: grapes, mangos, dates, raw honey, raw butter, and unpasteurized milk. Though raw dairy products are high in enzymes, I do not necessarily endorse their consumption.

Fasting is another powerful way to conserve and redirect enzyme potential. During a fast, we stop producing digestive enzymes and the enzyme energy is diverted to the metabolic sphere of operations, which includes an increased rate of autolysis (breakdown of old cells), as well as a breakdown and elimination of fatty deposits, incomplete proteins, and other toxic material in the system. The enzymes become a rejuvenating power for us. Raw-food expert and author of *Survival into the 21st Century*, Victoras Kulvinskis, suggests that during a fast, our natural body bacteria have an opportunity to add a great deal more of their enzymes to our system and thus increase our total enzyme force. My observation in guiding many individual fasts and running several spiritual fasting retreats per year is that fasting is an incredible way to rejuvenate our total life force and SOEFs. When we fast on water or juices, we are giving a substantial rest to our digestive enzyme systems, and this takes the burden off our enzyme pool.

Not Overeating: The Secret to Health, Longevity, and Enzyme Preservation

NOT OVEREATING RAW FOODS is itself another way to conserve enzymes. It is different from an obsessive undereating, which can result in a physical and mental deprivation syndrome. *Not overeating is what I call the art of conscious eating. It is learning to take just the right amount of food and drink to support our individual needs on every level of our spiritual and worldly functioning* Researchers have shown that not overeating increases longevity. World-famous nutritionist Paavo Airola, Ph.D., has proclaimed that under-eating is the most important health and longevity secret. He believed that overeating of even health foods was one of the main causes of ill health.

Jesus, in *The Essene Gospel of Peace, Book One* (p. 31), said,

And when you eat, never eat unto fullness.

Moses Maimonides (1135-1204), one of the most celebrated of all Jewish healers and spiritual teachers, taught in his Mishveh Torah:

Overeating is like a deadly poison to any constitution and is the principal cause of all disease.

Animal research by Dr. Clive McKay of Cornell University showed that when food intake was halved, the life span of rats was doubled and they were healthier. The rat's life span increased to the equivalent of approximately 170 human years. At Brown University, 158 animals were overfed and another group was put on a near-starvation diet. Those on the sparse diet lived 40% longer. For those who might be concerned that they have been irreversibly overeating to the detriment of their health, research by Roy Wal-ford and Richard Weindruch showed that one could extend the life of even middle-aged animals by underfeeding them. Some of their mice lived 40% longer, and fish lived three times longer, on a sparse diet. Researchers also noticed that degenerative diseases such as cancer and heart and kidney disease occurred less frequently, and the onset of these diseases occurred at a later age in the underfed mice. These researchers even discovered that the mice's immune systems were rejuvenated. For example, underfed mice had only 13% spontaneous cancer as compared to 50% for mice on the same type of foods, but with no limits on the food intake. Kidney disease was 25% in underfed mice versus 100% in the mice with an unlimited diet. There was 26% heart disease for the underfed mice versus 96% with heart disease for the overfed. Other animal research has now confirmed these findings. The underfed animals stayed physiologically younger for a longer time.

Animal research in both the US and Germany has also shown that rats fed once per day had higher enzyme concentrations in the pancreas and fat cells and a 17% increased life span over that of frequent eaters. It seems that if the enzymes are only secreted once per day, there will not be as many of them used up as with frequent meals. *The evidence of the effects of not overeating is that it is actually a method for life and vitality extension as well as prevention of degenerative disease.*

Research suggests that excessive eating causes oxidative stress to the system, which results in free radical damage to the tissues and an increase in cross-linking of the active protein in the tissues and cells so that they no longer function properly (a sign of aging). Free radicals are harmful molecules that can be generated by poor nutrition, emotional and/or physical stress, environmental pollution, surgery, radiation, food irradiation, bacterial and viral illnesses, and the aging process in general. These free radicals have a free electron that disrupts the integrity of cell membranes. They are quenched and neutralized by molecules called antioxidants.

Eating a dietary program that is low in protein and total calories helps the body fully assimilate what is eaten. This way of eating creates a minimum of metabolic by-products such as free radicals. Eating less food and increasing the quality of food is something everyone can do if they put their awareness on this aspect of a balanced life. Not only will this approach cut down on the rate of aging, but unlike most medical approaches, this way of living will actually save money by not having medical problems to begin with.

Not overeating results in optimal health and not malnutrition. *Not overeating in our society is eating what we need rather than what we desire or that to which we are addicted.* This is not so easy for most of us. We live in an environment of excessive stimulation from empty calories and negative thoughts. We are undernourished from the insufficient nutrients in all our processed foods, and we are overfed with junk in an effort to compensate for the lack

of true nourishment.

Not overeating is a part of conscious eating. It means eating what is appropriate to our health, vitality, and longevity, and what will bring us into harmony with our body and the planetary body. This understanding of the importance of not overeating has inspired me to switch in my own life to two meals instead of three meals per day.

Historical and Cultural Evidence for the Benefits of Not Overeating

CULTURAL EVIDENCE SUPPORTS THIS NOT-OVEREATING APPROACH. The cultures in which people live long and healthy lives, such as the Indians of the Vilcabamban region of Ecuador, the Hunzakuts of West Pakistan, the Tarahumara Indians of Mexico, and the Abkhazians of Russia, all consume a low-protein, high-natural-carbohydrate diet that has about one-half to one-third the calories and amount of protein that the average American eats.

Historical cases of longevity have been associated with eating less. Saint Paul the Anchorite lived to be 113 on dates and water. Thomas Carn, born in London in 1588, lived to be 207 on two vegetarian meals per day. This health wisdom has been with us for thousands of years, but few really put it into practice. On a 5000-year-old Egyptian pyramid, an inscription of this wisdom was found: “Man lives on one quarter of what he eats, on the other three quarters, his doctor lives.”

One of the most famous of the “non-overeaters” was Luigi Cornaro, a Venetian nobleman who lived from 1464 to 1566. By his late forties, he had become deathly sick from overeating. A doctor, Father Benedict, who had been trained in the Essene health philosophy, explained to him about eating less. Cornaro simplified his diet to 12 ounces of solid and 14 ounces of liquid food per day and recovered to live to be 102. He went on to teach many people about this Essene way of health, including the Pope. His writings on not overeating are summed up in two statements:

The less I ate, the better I felt.

Not to satiate oneself with food is the science of health.

From what we now know about the importance of enzyme preservation, not overeating, especially of raw foods, less frequent meals, no snack-ing between meals, and fasting are effective ways to conserve enzymes and thus build and maintain a high quality of vitality and healthy longevity. The idea of not overeating may be threatening in the US, where we have more than 80 million people who are considered overweight. We are a country of overabundance in which overeating has become a major way of avoiding unwanted feelings such as intimacy, sexual desire, loneliness, feeling unloved, and anger. It can also be a form of self-sabotage and self-abuse, as well as a slow form of suicide. Overeating food has become one of America's most serious addictions.

Enzyme Supplementation

IN ADDITION TO EATING LIVE FOOD and not overeating, the use of exogenous enzyme supplementation is another way to build up enzyme reserve. Since 1949, enough research has thoroughly documented that these enzymes are not only active in the digestive system but will increase in concentration in the blood after being taken orally. For example, researchers who fed raw soybean lipase to rabbits demonstrated that the blood serum lipase was elevated in response to the oral administration of lipase. Work by Peter Rothchild, M.D., Ph.D., found that in a double blind study using the antioxidant enzymes from a wheat sprout matrix, there was a 70-90% increase in blood levels of serum glutathione peroxidase after giving these oral wheat sprout concentrates. In another similar wheat sprout enzyme study, he found a 40% increase in SOD and a 60% increase in serum catalase. The fact that we can absorb these enzymes through our digestive tract is important because it means we have a way of correcting some enzyme deficiencies. Of course, it is a lot easier and less expensive if we do not create the deficiencies by not eating cooked foods in the first place.

Live plant digestive enzymes may be the best source of enzyme supplementation. They seem to be active at a much fuller pH range than animal enzymes. These plant enzymes show some activity in the stomach, especially the enzyme stomach, and become immediately active in the small intestine. One study, reported in the *Journal of Clinical Nutrition*, found that 70% of plant amylase is active in the small intestine after being ingested orally. Because of these facts, I recommend that people consider using plant digestive enzymes for their digestive supplementation. They are actually concentrated food enzymes from nature. This is welcome news to those who feel they need digestive enzymes but who do not like to eat animal pancreas products taken from slaughterhouses.

Animal enzymes, such as pepsin, only work in a moderately strong acid environment such as the stomach. Trypsin only works in a slightly alkaline environment, such as in the small intestine where it is secreted. Because of the versatility of its activity, plant digestive enzyme supplementation can take the stress off the entire digestive enzyme system. Some pancreatic animal enzyme tablets have an enteric coating which protects them from inactivation in the stomach. These enzymes require the pancreas to secrete enough enzymes to digest their enteric coating before they start to operate. Thus, they do not give the pancreas a chance to conserve its digestive enzyme power for use in other places in the body like the plant enzymes do.

Another form of enzyme supplementation is produced by growing and harvesting wheat berries that are specifically cultured to be high in antioxidant enzymes. These antioxidant enzymes neutralize free radicals throughout the system at the cellular level. In addition to the medical use of these enzymes, we live in such a toxic environment that most everyone needs to maintain proper antioxidant enzyme levels as a critical protection barrier. Preliminary research has suggested that once optimal blood levels of these antioxidant enzymes are obtained, they do not go any higher by increasing the dosage. This suggests the possibility that some of these live enzymes might be converted to other types of metabolic enzymes in the system. Thus, the use of these enzymes affords an opportunity to protect against free radicals as well as to increase general enzyme reserves.

Reasons to Use Enzymes

1. Anyone eating cooked, microwaved, or irradiated food should take food enzyme supplements to compensate for the lost and destroyed naturally occurring food enzymes that were previously in the food. This approach is still not the same as eating the food in its active, live state. Even if a person eats 90% live food, if they still have imbalances in their health, they would do well to take enzyme supplements.
2. Since age correlates with a decreasing enzyme reserve, enzyme supplementation should theoretically slow down the aging process by building up the enzymes and quenching free radicals. For this reason, I now recommend that everyone use enzyme supplementation, including those who are eating 100% live foods. These live food enzymes can be found in any health food store.
3. During acute and chronic illnesses, there is often an enzyme depletion that can be alleviated by enzyme supplementation. In my clinical observations as well as those of others, enzyme supplementation seems to increase the rate of recovery.
4. I have found that people with digestive disturbances, endocrine gland imbalances, blood sugar imbalances, diabetes, obesity, cholesterol excesses, stress-related problems, and arthritic inflammations all seem to benefit from enzyme supplementation. Dr. W.W. Oelgoetz has shown that partially digested fats, protein, and carbohydrate molecules get into the blood system when the blood enzymes become too low. He observed that when he gives clients oral supplements of amylase, lipase, and proteases, the allergies which seem to be associated with these incompletely digested molecules subside. Thus, enzyme supplementation can be a support to the immune system.
5. Enzymes help the detoxification process because they free up more metabolic enzyme energy for this work.
6. Health-promoting use of proteolytic enzymes.

Summary of the Importance of Enzymes

AT THIS POINT A SUMMARY ON THE IMPORTANCE OF ENZYMES would be helpful. Enzymes contain the power of the life force itself. Eating a live-food diet helps to maintain the quality and quantity of our enzyme pool and therefore maintain our health and longevity. Enzymes are not simply catalysts that make digestion and all metabolic processes work; they are living proteins that direct the life force into our basic biochemical and metabolic processes. They even help repair our DNA and RNA. Enzymes help transform and store energy, make active hormones, participate in their own production cycle, dissolve fibrin and thus prevent clotting, and have anti-inflammatory effects, anti-edematous effects, and even analgesic effects. The research suggests they also balance and enhance the immune system; help to heal cancer, multiple sclerosis, rheumatoid diseases, and arthritis; minimize the effect of athletic injuries; decrease injury recovery time; and aid with digestion.

Many enzymes work within the cellular structures, such as in the cell nucleus with the DNA/RNA or mitochondria (the energy factories in the body). Some enzymes move freely within the body fluids, such as during digestion or in the serum of our blood. Many of the free enzymes, especially proteases, are bound to transport proteins in the serum. These binding proteins, alpha globulins, transport the enzymes and other molecules to various parts of the body to regulate all body processes.

I divide enzymes into seven major biochemical classes. One class is oxidoreductases, needed for biological oxidation and such processes as the making of ATP and protection from free radicals. Some members of this class include dehydrogenases, oxidases, and oxygenases. A second class is called transferases, which transfer chemical groups from one molecule to another. A third class is called hydrolases. They cleave chemical bonds and add water in the process. They catalyze the breaking of ester bonds in fatty acids, split amino acid bonds in proteins, and cleave glycoside bonds. These include proteases, glycosidases, and esterases. A fourth class is isomerases. These help to rearrange chemical groups within the same molecule. A fifth class is lyases, which cleave double bonds between two atoms. The sixth group is called ligases; they catalyze the formation of a bond between two molecules. These include DNA ligase, synthetases, and carboxylases. The seventh class of enzymes is digestive enzymes. These include proteases, which digest proteins, amylases, which help digest carbohydrates, and lipases, which digest fats. They are made up of enzyme types from some of the other classes.

With age, under stress, or after illness, the amount of enzymes decreases in our bodies. Enzymes are critical for our health. As they diminish, our ability to perform the tasks which keep the body healthy also diminishes. Aging happens when enzymes decrease in concentration in the body. Some enzyme researchers and live-food teachers like Ann Wigmore believe that enzyme preservation is the secret to longevity.

One way to preserve the body's store of enzymes is to eat living or raw foods because foods in their natural state are loaded with digestive and other enzymes. Another way to enhance the enzyme pool is by adding natural digestive enzymes to support digestion and create even less of an enzyme drain on the system. One may also take proteolytic enzymes which break proteins down into free amino acids. These include protease enzymes, bromelain, and papain between meals on a regular basis, or certain mixtures of enzymes therapeutically. Over time, I have become more impressed with the effectiveness of adding enzymes to the system as a natural anti-aging, preventive measure and/or for therapeutic reasons. This includes digestive enzymes in general and proteolytic enzymes specifically

Origin of Enzyme Therapy

THE ORIGIN OF ENZYME THERAPY can be traced back to the indigenous peoples of Central and South America, who used the leaves and fruit of papaya and pineapples therapeutically for thousands of years. Enzymes were used in Africa and India. The Bible mentions the use of figs, which are high in enzymes, for healing. A specific example was the prophet Isaiah's use of figs and blessings to help heal King Hezekiah. The curative effect of many plants and fruits used in the Middle Ages was due to the proteases in them.

In 1900, the Scottish physician John Beard began to treat cancer patients with enzymes of plants and enzymes from the pancreases of freshly killed animals. Following him was Max Wolf, an Australian-born physician who is considered the father of systemic enzyme therapy. He, along with Helen Benitez, a cell biologist, was able to explore and develop proteolytic enzyme preparations for therapeutic uses, especially for the treatment of cancer.

Wolf also believed that premature aging, with all its secondary symptoms, is based on a deficiency of these enzymes. Wolf theorized that the key element of most aging processes is a disturbance in physiological and regulatory mechanisms of the body. He understood that enzymes are critical for the proper functioning of the body's regulatory mechanisms, including the immune system. In 1960, enzyme combinations were introduced in Germany to help with the body's regulatory and immune system. Building up the enzyme reserve for health and anti-aging effects is not a new concept. The benefits of the live-food lifestyle are supported by this scientific research. I am not just talking about enzymes as a metaphor.

The main enzymes involved in these regulatory functions are called proteases. These enzymes cleave proteins and are technically called proteolytic hydrolyses. Wolf's work was initially done with selected animal and plant proteases. Today, enzyme combinations based solely on high concentrations of plant proteolytic enzymes are available. Each protease has its own general specialty because each works on different protein complexes. For example, bromelain from pineapple is better than papain from papaya and trypsin and chymotrypsin from animals for reducing swelling and edema. Bromelain is not as good as papain for breaking up antigen-antibody complexes, or for cell receptor modulation. Protease function in the body is controlled by sequences of connecting enzymes. For example, at least five enzymes are needed for blood to clot, and five other enzymes are needed to dissolve the clotted blood.

Enzymes are directed by carrier molecules that transport the enzymes to where they are needed in the body and regulate their activity. The two most common of these enzyme carriers are alpha-1 anti-trypsin and alpha-2-macroglobulin (A-2M). These proteins' globulins are called anti-proteases because they temporarily bind these enzymes and keep them inactive. These protease and anti-protease complexes have their own particular functions.

Enzymes taken orally have been shown to absorb directly through the GI tract. Research over the past three decades around the world has definitively proven that specific enzymes administered orally are absorbed through the gastrointestinal system and have systemic effects throughout the human body. This understanding is widely accepted in Europe, Japan, and China, but unfortunately, most American physicians are not aware of this. Researchers have found that there are even special regions in the small intestine such as Peyer's patches where some of the largest enzymes are absorbed more rapidly than smaller enzyme molecules. Approximately 6% of papain and 38% of bromelain taken orally is found to be active in the blood and lymph. If they are to be effective, large amounts of protease enzymes need to be taken. At least 12% of the proteolytic enzymes are absorbed. They are best taken one hour before or two hours after meals with eight ounces of water. In 1992 in Germany more than 1.4 million prescriptions of enzyme combinations were made with no side effects reported, with the exception of rare allergic reactions. Some changes in bowel movement smell and consistency, nausea, or gas may occur until the proper enzyme intake level is found.

There are conditions and times when it is best *not* to take enzyme therapy:

1. Before going into surgery, which might involve blood loss because of the anti-clotting power of enzymes.
2. People with congenital disturbances in blood coagulation, such as hemophilia or coagulatory disturbances secondary to liver or kidney disease.
3. People taking anti-coagulants or thrombocyte aggregation inhibitors such as acetylsalicylic acid.
4. During pregnancy.
5. People with allergies to proteins.

Enzymes seem to be effective in the prevention and treatment of cancer, auto-immune diseases, vascular diseases, inflammations, injuries, infections, stress, and rheumatic diseases. Research to show their effect against cancer existed as early as 1907. Research showing their effectiveness for inflammations, joint pain, and edemas started in the sixties.

Enzymes Are Effective Immune System Modulators

THE CENTRAL UNDERSTANDING about why enzymes can help with so many imbalances is that they are immune modulators or biological response modifiers. They help control the regulatory mechanisms of the immune system. They can stimulate the immune system if needed, regenerate the immune system, or even act to inhibit an overactive immune system such as what we see with auto-immune disease. In other words, enzymes act to normalize the immune system in a variety of ways. For example, they help to regulate the anti-protease globulin system, which includes A-2M, involved in the regulation of the cytokine function of the immune system.

Proteolytic enzymes are able to stimulate the mononuclear phagocyte system (MPS) by bonding to A-2M globulins. When proteases are added to the system, the cells of the MPS are stimulated. The MPS cells protect the mucous membranes of the small intestine, vagina, the eyes, and skin, and as macrophages they can travel on their own through the tissues, engulfing and destroying foreign material.

According to research reported in *Enzymes: The Fountain of Life* by Lopez, Williams, and Miehle, proteolytic enzymes increase the activity of macrophages by up to 700% and natural killer (NK) cells by 1300% in cell culture within a few minutes. This activation effect has also been found in human experimentation. Proteolytic enzymes have been found to stimulate the peripheral blood mononuclear cells (PBMC), which include the precursors to macrophages, part of the scavenger process of the immune system. These enzymes also stimulate the PBMC cells to secrete cytokines, which help to enhance the immune system.

Proteolytic enzymes are important for the degradation of immune complexes as well. These immune complexes are often associated with inflammation and swelling in rheumatism. The vegetarian enzymes—lipases, papain, amylase, and proteases—and the animal enzymes—pancreatin and trypsin—all help protect the body from an overactive immune system. They also prevent worn-out cells from being treated as foreign cells, as in auto-immune disease settings.

On the surface of cells is a variety of receptor sites that affect intercellular communication. Various immunological reactions can be modulated by changing the receptors. An excess production of these cell receptors or an underproduction of surface receptors can unbalance immune system communication. Enzymes, depending on the need, can increase or decrease the amount of these cell surface receptors and thus balance the immune system. The cell surface molecules are important in cancer metastasis, because cancer cells make use of specific adhesion molecules or receptors to migrate into the surrounding tissues. Proteolytic enzymes inhibit the function of these adhesion molecules so the rate of metastases is inhibited. Research has shown that proteolytic enzymes inhibit the CD44 cell surface receptors that are found to be responsible for enhancing the metastasis of cancer of the breast and large intestine. Proteolytic enzymes have also been shown to inhibit the adhesion molecule vitronectin that supports the metastasis of malignant melanomas.

Research has shown that when certain cells in the immune system are treated with enzymes, they make more cell messenger substances or cytokines, which play an important role in the regulation of immunological reactions. About twenty different cytokines have been identified so far. They include tumor necrosis factor (TNF), interleukins, monokines, and interferons. These cytokines are very important for the proper functioning of the immune system.

Because proteolytic enzymes are so critical in the regulation and normalization of the immune system, they are important not only for the prevention and treatment of cancer, but also auto-immune diseases, rheumatological problems, multiple sclerosis, skin diseases, and allergies. Enzymes are critical for the maintenance of all systems effective in defending the organism.

Therapeutic Uses of Proteolytic Enzymes

ENZYME THERAPY HAS MANY OTHER HEALING EFFECTS in addition to its effect on the immune system. It improves blood circulation in a variety of ways. It makes the red blood cells more flexible and diminishes their tendency to clump. Fibrinogen increases with age, chronic disease, diabetes, and cancer. An increased fibrin in the blood decreases flow by making the blood more viscous, thereby increasing the potential of clotting. Enzymes decrease the fibrinogen in the blood and therefore improve blood flow. Enzymes also act like aspirin to decrease thrombocyte clumping and therefore the danger of blood clots, strokes, and heart attacks. They are much safer than aspirin, however.

Enzymes have anti-inflammatory effects and so decrease pain. With tissue injury there is a release of inflammation mediators which dilate the capillaries at the injury site. Plasma proteins travel into the tissues and carry water with them, causing swelling or edema. Fibrin formation is also activated, which further slows circulation. Proteolytic enzymes break down the fibrin, plasma proteins in the tissues, and the cellular debris, thereby decreasing swelling and pain and making it easier for the lymphatic system to carry away the debris. The other enzyme mechanism for decreasing pain is through degrading the inflammatory mediators, since active mediators such as the kinins and prostaglandins stimulate a pain response. In this way enzymes are analgesic.

Enzymes have no side effects, stimulate the immune system, and promote tissue regeneration, rather than slow the process like conventional anti-inflammatory medicines. One study of the use of enzymes in sport injuries done with ice hockey players in the German national hockey league by Dr. Sepp Worschauser, a team physician, showed that the prophylactic administration of enzymes helped to heal one-third to one-half more quickly and led to shorter absences from training. The typical symptoms of swelling and pains following usual sport bruises and sprains were minimized as compared to the normal post-injury responses without enzyme treatment. Athletes who used enzymes prophylactically definitely had less muscle soreness. The enzymes were effective if taken one hour before the athletic event.

Proteolytic enzymes minimize a variety of other inflammatory processes. A number of these inflammations even respond better to enzymes than to cortisone and other anti-inflammatory drugs. Proteolytic enzymes have to be rated as excellent for inflammatory swelling and hematomas. They are good for healing inflammation of the respiratory tract, such as with constant bronchitis and acute constant sinusitis. They reduce the swelling of mucous membranes and dissolve micro thrombi and fibrin deposits in the membranes. Proteolytic enzymes help with inflammation of the ovaries and fallopian tubes from external infection or anti-immune causes and thus are good for pelvic inflammatory disease and endometriosis. They are excellent for the treatment of acute and chronic prostatitis as well as infection of the urinary tract. They are even effective in chronic pancreatitis.

Enzymes should not be taken 24 hours before an operation where there could be blood loss, but taken 36-48 hours later they help to speed recovery and decrease swelling and hematomas post-operatively. Perhaps most important is their ability to keep post-operative blood clots from forming or to dissolve them if they have formed.

In dental surgery, enzyme therapy has been quite successful. Proteolytic enzyme treatment should begin 48 hours before and continue until the seventh day post-operatively. One study showed that people were able to eat comfortably within two to three days after a wisdom tooth was pulled as compared to the usual ten or twelve days. In all the studies, there was no excess bleeding during the tooth extraction when the enzyme therapy was begun 48 hours before the operation. They also help protect against infection.

Enzymes are very important in the prevention of blood clots and almost all vascular disease. In a society where over one-half the population dies from atherosclerosis and approximately 50% of the population over age fifty has varicose veins, enzymes used prophylactically make good sense. With age, the plasmin-producing cells in the walls of the arteries that prevent clotting decrease in number. Because of this there is a general tendency for the clotting mechanism to produce more fibrin, a substance that makes the blood more sticky and thus more likely to clot. Clotting is increased by arteriosclerotic changes in the artery wall, increased blood viscosity, decreased blood flow, and increased tendency to make fibrin. Damage to the artery wall is one of the primary causes of arterial clots. Venous thrombosis is more likely to happen from increased viscosity and decreased blood flow and/or hypercoagulability. In arteries, enzyme therapy reduces the tendency to form clots and improves all limitations to circulation. Proteolytic enzymes make the red blood cells more elastic, help keep red blood cells and platelets from sticking together, degrade micro thrombi that may stick to the artery wall, and have an anti-inflammatory effect on

blood vessel walls. Enzymes are far safer and have a greater range of effects than aspirin.

Enzymes have been used to prevent existing vascular disease from progressing. They also help to neutralize the auto-immune aspects of arteriosclerosis by dissolving the auto-antibodies and immune complexes that form against blood lipids that lodge in the artery wall and cause inflammation and atherosclerotic plaque. Enzyme intake on a regular basis prevents an immune reaction inflammation that can damage the blood vessel wall, compared to aspirin that only works to prevent platelet aggregation.

In addition, enzyme therapy seems to increase the healthy high-density lipids and decrease cholesterol and triglyceride levels. For constant venous circulation problems like thrombophlebitis and varicose veins, enzyme treatment improves blood flow, reduces swelling, degrades micro clots, and inhibits inflammation, muscle pain, and cramping pain in as short a time as four weeks. Deep vein thromboses in their acute stage are more safely treated in a medical clinic with bed rest. Sometimes the enzymes urokinase and streptokinase can be injected to dissolve the clot in the acute phase. Oral enzyme therapy by itself is most effective after the acute stage passes. Enzyme therapy also was found to inhibit post-thrombotic syndrome (PTS) pain, swelling, and scarring. In one study of 445 patients done by Dr. Otto Kar Ritansky of Vienna, Austria, in which he used enzymes and ozone therapy, excellent results were achieved for decreasing pain, healing tissue, improving walking distance, and preventing amputation.

Proteolytic enzymes were also found to be helpful in clearing the lymphatic system. One dental study found that post-operative lymph node swelling was significantly reduced in cancer cases. The prophylactic long-term use of enzyme therapy post-operatively was helpful in minimizing constant lymphatic edema following breast cancer surgery.

Proteolytic enzymes seem to be significantly helpful in the treatment of viral infections. Cytomegalovirus, Epstein-Barr, hepatitis, herpes simplex, and acute herpes zoster infections are all diminished with proteolytic enzymes. One of the main reasons proteolytic enzyme therapy is effective is that it stimulates the development of T lymphocytes and macrophages. These two parts of the immune system have specific anti-viral effects. Enzymes also activate NK cells, which destroy the virally infected cells. The proteolytic enzymes help to regulate virally disturbed interrelationships in the immune system. The overall result is that they can even slow down the time between viral invasion and the outbreak of disease.

Research in 1964 by Dr. Dorrer, a senior physician in Prien am Chiemsee, Germany, found that the use of enzymes reduced herpes zoster pain within three days, and the herpes zoster vesicles became encrusted sooner than normal. Post-herpetic neuralgia did not develop in any patients using enzymes. The clinical results with enzyme therapy are equal to those with Acyclovir in the treatment of herpes zoster.

In rheumatoid disease, proteolytic enzymes can decrease inflammation, and mobilize, cleanse, and degrade immune complexes created by the immune response process. In one large study reported in *Enzymes: The Fountain of Life*, depending on the type of rheumatoid disorder, 76-96% of the patients were classified as improved or considerably improved. The condition did not progress in 10%, and 2% experienced a deterioration of their condition. Proteolytic enzyme therapy has been used to alleviate such rheumatoid symptoms as morning stiffness, joint swelling, loss of grip strength, and loss of joint flexibility. In one double blind study by Dr. Klieg of Austria, the course of chronic polyarthritis could be stabilized with enzyme therapy.

Enzymes decrease and minimize the immune-mediated inflammation of joints, while strengthening the immune system rather than weakening it like cortisone. Enzymes have been shown to degrade the inflammatory-causing immune complexes deposited in the joints and even remove them while they are moving in the bloodstream of rheumatoid patients. Another way the proteolytic enzymes work is to dissolve the fibrin mantle which forms around the deposited immune complexes in the joints. This allows these immune complexes to be actively degraded by the immune system as well as the proteolytic enzymes.

As compared to gold treatments, which run about 20% effective over the long term, enzymes have about 1% side effects versus 20-30% for gold. The one drawback to enzyme therapy is that it may take weeks or months to be effective. But once effective it remains so, and enzyme therapy rarely has to be discontinued because of side effects. This is contrary to the case with other rheumatoid treatments, which often have cumulative side effects over time and have to be discontinued. There is a variety of arthritic conditions including arthritis from psoriasis that proteolytic enzymes can help to ameliorate. Enzymes also help in osteoarthritis because of their anti-inflammatory effect, immune-moderating effect, and the general improvement of circulation.

In auto-immune diseases of the nervous system, enzymes break down the immune complement reaction with its destruction of the myelin sheath. By decreasing all levels of inflammation, enzymes protect the myelin sheath and hence slow or neutralize the progression of diseases such as multiple sclerosis (MS). Non-spastic symptoms of his MS patients, according to Dr. Wolf, were decreased 50% with enzyme therapy, and the improvement was maintained over many years. Dr. Ulf Baumhackl, chief doctor at the neurological department at the hospital in St. Polten, Austria, and a full professor named Kretschowa in the department of neurology at the University of Prague

both found that two years of enzyme therapy gave better results than the use of cortisone. In another European study, 80% of patients with episodic progression of MS benefited from enzyme therapy.

Proteolytic enzymes have been proven to play a significant role in the treatment of cancer in several ways. One is to strengthen the immune system to better cope with the cancer. Another way is to dissolve the fibrin cloak which often forms around tumor cells. The fibrin covers the cell surface landmarks of the cancer cells that attract the immune cell response. When the proteolytic enzymes dissolve the fibrin cloak, the immune system is better able to recognize the cancer cells and then destroy them. The proteolytic enzymes also stimulate the anti-cancer macrophages and natural killer cells, so that their anti-tumor capacities increase twelvefold. Proteolytic enzymes help the tumor necrosis factor (TNF) molecules do their job of destroying tumor cells. They do this by keeping the TNF molecules from clumping together in large masses and blocking their own action. Another way the enzymes work is to inhibit the cancer cells' adhesiveness, which is important for their ability to create metastasis.

The adhesiveness of the blood and of cells is increased during chronic diseases and cancer so there is a concomitant decrease in blood flow, especially with age. Proteolytic enzymes increase the blood flow by dissolving excess fibrin and decrease the activity of the adhesion molecules of the cancer cells so it is harder for them to form metastasis. In studying malignant melanoma, Dr. Lucia Desser of the Institute for Tumor Research and Tumor Development at the University of Vienna found that proteolytic enzymes inhibited metastasis formation of the melanoma cells. Dr. Rudolf Kunze of Berlin showed that by blocking the formation of vitronectin, an adhesion molecule on the surface of the melanoma cells, proteolytic enzymes inhibited the adhesion molecule receptor CD44 on colon and breast cancer cells, and thus blocked the metastasis of disease. In general, it seems that proteolytic enzymes act as a prophylaxis to metastasis and are helpful in maintaining cancer recovery.

Proteolytic enzymes plus vitamin E seem to help with breast fibrosis and many cases of early breast cancer. Professor Dittmar of a teaching hospital in Starnberg, Germany, showed in a study of 96 women with breast pain, swelling, and tenderness from nodular and cystic changes in the breast tissue that enzyme therapy significantly improved symptoms. Dr. Wolfgang Scheef of the Robert-Janker Clinic in Bonn, Germany, found that 85% of his patients with benign breast fibromas had no symptoms after six weeks of enzyme therapy.

Enzymes support many aspects of our immune system. They help build immune activation and immunoregulation. Proteolytic enzymes strengthen and potentiate many aspects of the immune system and therefore may help with the healing of the immune and auto-immune diseases. They also serve to protect us from heart attacks, stroke, blood clots, varicose veins, injuries, inflammation, rheumatoid and other forms of arthritis, a range of infective diseases, especially viruses, and from cancer. There are even enzymes which constantly repair mutations in the DNA and RNA. Enzymes optimize and enhance many levels of functioning of the immune system and so counter the potential negative effects of aging on the immune system.

The importance of a high level of enzymes for maintenance of quality of life and rejuvenation is significant. Three of the main symptoms of aging—a decrease in the function and efficiency of the immune system, a slowing of blood flow because of increased fibrin production, and cross-linking of proteins in our connective tissue—are directly improved by maintaining a high enzyme level in our tissues. Proteolytic enzymes fill in for the declining plasmin-producing cells to dissolve fibrin and minimize any clotting phenomena and the progression of atherosclerosis. According to European research, proteolytic enzymes both break down and inhibit the formation of cross-linked protein chains and thus help maintain the elasticity of the tissues, including the arteries and veins.

We can postulate that *the higher we keep our enzyme reserve, the better all aspects of our biological functioning will be, and thus we will minimize the biological aging process.* Eating live and raw foods is one of the best ways to enhance our body's enzyme reserve, thereby minimizing the physiological aging process and maximizing the rejuvenation process. The use of proteolytic enzymes prophylactically and therapeutically is a powerful addition to the live-food lifestyle.

Food Enzymes: A New Perspective on the Theory of Food Combining

THE GENERALLY HELD THEORY OF FOOD COMBINING in some sectors of the vegetarian community is that certain combinations of foods will disrupt digestion and cause putrefaction, fermentation, toxic acids, and heartburn. The combining at the same time of certain foods is said to disrupt digestion—for example, fruits and vegetables; fruits and starches; fruits and protein; starches and proteins; simple sugars, complex carbohydrates, and proteins; fats and protein; acid fruits and proteins; acid fruits and starches; two different types of concentrated starches; two different types of concentrated proteins; and dairy or melons with any other food. These poor combinations are said to take longer to digest and use up a great deal of enzyme energy. Many find these “rules” to be obsessively overwhelming.

The idea of food combining is not new; it is historically recorded in Exodus 16:8, which says, “And Moses said ... the Lord shall give you in the evening flesh to eat, and in the morning bread to the full.” This can be interpreted to mean that we should not combine starches and proteins. Another Kosher food-combining law from the Torah is not to combine flesh and dairy at the same meal.

The general theoretical principle behind food combining is that the different food classes require different enzyme secretions and digestive pHs for their assimilation. They also have different rates of digestion. For example, food-combining advocates claim that fruit digestion requires an alkaline solution that neutralizes the acid medium needed for the protein digestion and, therefore, fruit and proteins are a bad combination. Also, fruit has a faster digestive rate than protein, and if the fruits are held up for the slower protein digestion, they will begin to ferment. This is also why fruits and starches should not be combined. Fruits and vegetables are said to be incompatible because the enzymes required for their digestion neutralize each other and block digestion.

From a live-food perspective, there are some major incongruities in the orthodox food-combining approach that need to be considered. The first is the scientific evidence that live foods bring with them their own active digestive enzymes which digest a considerable amount of the food in the enzyme, or upper, stomach. Therefore, the concept of different bodily enzyme secretions for the different foods cancelling each other is much less an issue, especially in the food enzyme stomach where no enzymes other than saliva and those released by the living foods themselves are activated. It is a proven scientific fact that each raw food comes complete with its own set of specifically combined enzymes to digest that specific food. For example, seeds are made up of primarily oils and protein, so Mother Nature has packaged in the seeds sufficient amounts of lipase for the oils and proteases for the protein. In seeds there is not much amylase present because they do not contain much starch.

Another scientific fact that needs to be considered is that there are two distinctly different digestive stomachs, as discussed earlier in this chapter. There is the pyloric—or primarily protein-digesting—stomach, and the food enzyme stomach, in which all the raw-food starches, proteins, sugars, and lipids are self-digested. We do not have just one stomach in which competing enzymes are poured as if into a bag, cancelling each other out. In the food enzyme stomach, the pH is between 5 and 6, which is a range in which all of the plant food enzymes for all the different classes of food are active. No enzyme of any class of food is neutralized by any other food enzymes in the food enzyme stomach.

A third point involves a set of foods called the predigested foods. This predigestion process happens primarily by soaking or sprouting the seeds, nuts, and grains. In this process, the enzyme inhibitors, phytates, and oxalates are deactivated and almost entirely washed away after 6-24 hours of soaking. During soaking, complex carbohydrates are broken down to simple sugars, oils are broken down into free fatty acids, and proteins are broken down into free amino acids. In these predigested forms, these foods are much easier to assimilate. Some examples of these highly assimilable predigested foods are: raw, soaked, and sprouted seeds, nuts, grains, and legumes; bee pollen; raw nut and seed ferments; nut and seed cheeses and yogurts; and other fermented products, such as sauerkraut, tempeh, and miso. Most of these foods, except the tempeh and miso, which are cooked, can be digested easily with all classes of foods, including fruits.

The ability to comfortably combine predigested protein and fruits is particularly important for people with hypoglycemia. I have found that a great many of my patients who have hypoglycemia become unbalanced by eating just fruit in the morning. By adding the predigested seeds and nuts either directly to the fruit, or blending them into seed sauces, hypoglycemics have stabilized well and improved with this approach. I have also had good results

using these predigested proteins for people with digestive disorders or other forms of malnutrition.

The fourth consideration is that food enzymes are not destroyed in the very acid, protein-digestive part of the stomach. They again resume active digestive capacities in the more alkaline-digestive part of the small intestine. They are also not neutralized by either the acid secretions or the alkaline pancreatic secretions of the small intestine, and so they keep their digestive powers to some extent throughout the full digestive process.

I do not intend to negate the orthodox theory of food combining. It is, however, put into a less urgent perspective if one eats primarily live or predi-gested foods. By presenting this more liberal view, I will be very happy if just one less person doesn't become obsessive about food combining; or if one less person stops breaking down in frustration and being alienated from Mother Nature and his or her own intuition because of intellectual fear of combining the wrong foods. I will be happy if one more person is not psychologically and gastronomically blocked by all the food-combining concepts. Human beings are extremely capable of creating what they believe and expect is supposed to happen. The more we can put orthodox food-combining theory into perspective, the easier it will be to establish our own harmony with the gifts that Mother Nature offers us.

Honor Your Food-Combining Needs

THE SIMPLEST RULE OF FOOD COMBINING is to eat a food, or combinations of foods, that in our direct experience are easiest for us to digest and thereby maintain our life energy and enzyme reserve. If we are eating a primarily live- and predigested-food diet, the food-combining rules are considerably less applicable. If we have a mono diet, but eat too much of that one food, we will still have digestive difficulties because overeating of any food, no matter how well-combined or raw, is still a stress on the digestive system. Overeating is a primary cause of digestive difficulties.

When I was in India in the 1970s, I lived on very little food. Often in the morning, about four hours after getting up, I would have raw tahini mixed with banana on a chapati (a piece of flat bread). Theoretically, this was the worst of three combinations: fruit, protein, and starch. I never had digestive difficulties from this simple meal because I ate so little of it and so little food altogether. If, however, we eat when we are emotionally upset or rushed, we will tend to cause digestive difficulties. Some people, especially pittas, have very strong digestive constitutions and so are less affected by their food combinations. Others have delicate digestive constitutions and need to pay more attention to their harmony with nature. It behooves us to become our own scientists and experiment to discover what are the best food combinations for us. The food-combining ideas can serve as a rough guideline for this.

Now that we have taken a new look at orthodox food-combining rules, we can appropriately consider some ideas of food combining. Whether or not the food-combining rules are based on accurate explanations for why people have digestive troubles when eating certain combinations, there are some combinations of foods, particularly if cooked, that are more likely to create fermentation or putrefaction than others: milk and meat, protein and starches, fruit and vegetables, and melons with any other foods. Eating too many different types of foods, even of the same food class, can also result in disrupted digestion.

Papaya and lemons seem to go well with any type of food. Avocados can also go with fruits or vegetables. A few easy-to-digest combinations are predigested proteins with vegetables or sweet and subacid fruits, sprouted grains with vegetables, or protein with vegetables.

The timing of eating plays a role in digestion too. A little water at meals if one is thirsty is acceptable, but drinking many glasses of liquid at a meal dilutes the digestive enzymes and therefore tends to impair digestion. A good time to drink liquids is twenty or more minutes before meals. If one must have dessert, it is a good idea to eat a fruit dessert one or two hours after a nonfruit dinner. Paavo Airola used to teach that if one is eating a salad and a protein, it is better to eat the salad either with the protein or afterwards. The roughage of the salad may tend to block the hydrochloric acid secretion from reaching the protein if it is eaten beforehand.

The best way to tell if our food combinations and volume of food intake are good for us is through the results. If we get gas, constipation, bloating, nausea, or exhaustion after eating, these are distinct signs that our combinations can be improved and the quantity of food decreased.

In a quote from the Essene Jesus in *The Essene Gospel of Peace, Book One* (p. 38), the concepts for proper food combining are nicely described:

Food Combining Self-Experiment				
Eat only a small combination at a meal and observe.				
What I Ate	When	How Much		
	Breakfast/Lunch/Dinner	Little/Moderate/Too Much		
Grain & Vegetables	_____	_____		
Beans & Vegetables	_____	_____		
Fruit & Beans	_____	_____		
Fruit & Vegetables	_____	_____		
Fruit & Grain	_____	_____		
Grain & Dairy	_____	_____		
Melons & Fruit	_____	_____		
Melons & Anything Else	_____	_____		
Dairy & Fish	_____	_____		
What I Ate	Symptoms after 1, 2, or 3 hours			
	Gas	Bloating	Headache	Feel Full
Grain & Vegetables	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Beans & Vegetables	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Fruit & Beans	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Fruit & Vegetables	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Fruit & Grain	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Grain & Dairy	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Melons & Fruit	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Melons & Anything Else	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Dairy & Fish	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3

Food Combining Self-Experiment				
What I Ate	Symptoms after 1, 2, or 3 hours			
	Feel hunger	Indigestion	Food is a lump	Feel fine
Grain & Vegetables	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Beans & Vegetables	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Fruit & Beans	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Fruit & Vegetables	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Fruit & Grain	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Grain & Dairy	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Melons & Fruit	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Melons & Anything Else	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3
Dairy & Fish	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3	<input type="checkbox"/> 1, <input type="checkbox"/> 2, <input type="checkbox"/> 3

Take heed, therefore, and defile not with all kinds of abominations the temple of your bodies. Be content with two or three sorts of food, which you will always find upon the table of our Earthly Mother. And desire not to devour all things which you see round about you. For I tell you truly, if you mix together all sorts of food in your body, then the peace of your body will cease, and endless war will rage in you.

It is more difficult to enjoy the flow of the cosmic energies and the peace of meditation when gas warfare is raging inside the bowels. In the US, Taga-met, a drug for digestive disorders, is among the number-one-selling drugs. This suggests that people have not yet begun to pay attention to what, how much, and how they are eating. Part of the reason is that the traditional, “home economics, basic-four-food-groups-at-each-meal” concept is still being taught in our schools. It is hard to overcome old food thoughtforms, no matter how unscientific they may be. In general, however, if we eat live food with some degree of awareness of food combining, eating the appropriate combinations will no longer be a big issue and we will not need Taga-met for dessert. The more we become attuned to the laws of nature, the simpler our meals become, with fewer combinations at each meal. Please trust in your own

experience and use some artful intelligence.

1. Shop for organic life in your foods.
2. Smell and touch foods to feel aliveness.
3. As you eat these foods, the memory of soggy, frozen, overcooked, cheesy, goopy vegetables will fade.

Preview of Chapter 27

THE ESSENCE OF THIS CHAPTER is—if it is not broken, don't fix it. Raw foods are the original creation and nutrition gift of God. Do we really think we can improve on them? In the process of trying to “fix” live foods to appease our taste buds, we destroy their SOEFs, deplete and disrupt their bioelectrical energy, disrupt their immune-protecting factors, destroy a high percentage of nutrients, destroy the living enzyme force, and destroy many known and unknown heat-sensitive health factors of the living food. As with the rain forest, there is much we don't even know we are destroying. In this chapter you will also learn about the ancient and modern history of living-food cuisine and health practices, an energy system for classifying foods, and potentially harmful natural factors in foods. For many, increasing the living foods in the diet means letting go of culturally programmed habits of cooking and taste. Are you ready to begin eating more foods for health and learning new tastes?

- I. Live-food nutrition, a gift of nature
 - A. Raw foods as healers
 - B. Energy categories of food
- II. Bioelectric energy of live food
- III. Biophysics of live foods
- IV. Raw food boosts immunity
- V. Cooked foods are damaged goods
 - A. Cooking is a risky business and can transform certain fungicides into cancer-causing agents
 - B. Browned or burned sections of food are mutagenic
- VI. Lesser-known health factors in live foods: wholeness of raw foods is health-producing
- VII. Potentially harmful factors in food
 - A. Oxalates and phytates
 - B. Estrogens in vegetables



Live-Food Nutrition, a Gift of Nature

THE NECESSARY, LIFE-SUPPORTING PROCESS OF NUTRITION starts with suckling at our mother's breast and continues as we draw our life force from the all-giving breast of Mother Nature. Live foods, because of their high energetic structural integrity, give us the healthiest, food-sourced nurturance on the physical plane. Raw foods contribute the most to the energy of our SOEFs. Extensively processed fast foods give the least energy, and may actually serve to disrupt our own SOEFs. In order for us to absorb processed food, energy from our own SOEFs is needed to reorganize the disrupted SOEFs of the food. This means that assimilating processed foods indirectly depletes our SOEFs and accelerates the aging process.

Recent History of Live Foods for Health

THE USE OF LIVE FOODS FOR CREATING HEALTH has had a strong foundation of medical support in the last 100 years. One of the first clinics to adopt a raw-food-for-health approach was the Bircher-Benner Clinic, started in 1897 in Zurich, Switzerland. Its founder, the world-famous Max Bircher-Benner, M.D., discovered the power of raw foods when he experimented upon himself for his own healing. He found that live foods healed his jaundice and inability to eat. Later, he had a patient who was unable to digest anything, including cooked foods, and who was slowly degenerating in health. In his studies, Dr. Bircher-Benner had discovered that the wise teacher Pythagoras, who lived circa 500 B.C. used raw foods to heal people with poor digestion. He applied Pythagoras' cure to the patient and he recovered. This is significant because there was—and still is, in some circles—a myth that live foods are difficult to digest.

What makes the raw foods in fact *easier* to digest is that they have their own digestive enzymes that do most of the work. In my own practice, I often start people with severe digestive disorders on blended raw foods. This approach is very successful, and again confirms that properly prepared raw foods are effective for digestive disorders where cooked, enzymeless foods have failed. When Bircher-Benner began to investigate the properties of live foods, he found that regardless of the seriousness of the disease, the living-food treatment was a powerful healing approach. Based on these principles, his clinic became one of the most respected healing centers in the world. He understood the causative role cooked and processed foods play in the epidemic of degenerative diseases. The tremendous increase in disease that we in the West are today witnessing is not something that has to be. Bircher-Benner wrote: "We are oppressed by an overwhelming burden of incurable disease which hangs over our lives like a dark cloud. It is a burden that will not disappear until men become aware of the basic laws of life."

One of the basic laws of life is to eat our foods whole, organic, and in their natural, raw state.

In the early part of this century another great physician, Max Gerson, M.D., also discovered the healing power of live foods—first for the healing of his own migraines, and then later for the supposedly incurable disease called lupus. He then applied this approach to every sort of medical disease, from clogged arteries to mental disorders. Gerson believed that a live-food and a live-juice diet was more than just a specific cure for certain diseases. He said that consuming raw foods was a way of eating which restored the diseased body and mind's ability to heal itself. Dr. Gerson recognized raw foods as a way to rebuild the vital regenerative force of the total organism. In 1928, he was even able to cure Albert Schweitzer's wife of tuberculosis with this diet. Later, he put Albert Schweitzer on a raw-food diet for his diabetes. As a result of this, Schweitzer was cured of diabetes and was able to stop using insulin.

Dr. Gerson also found that a live-food diet high in potassium restored the potassium-sodium balance and improved cellular respiration as well as enhanced the immune system. He began to apply this principle to the treatment of cancer with great success. This work was highlighted by his extensively documented book, *A Cancer Therapy: Results of Fifty Cases*, which he published in 1958. His cancer treatments using these live-food principles have continued successfully in several locations in California.

Many of the great European healers and clinics advocate the use of live foods for healing and for maintaining high-level wellness. The internationally respected Dr. Paavo Airola, whom I studied with over a period of seven years, recommended a 100% raw-food diet for regaining health and an 80% raw-food diet for maintenance and prevention. During the winter, he recommended a little less raw foods. My personal and clinical experience with raw foods is that after about two years on an 80% live-food diet, the immune system seems considerably stronger and people essentially stop getting colds and the virulent flus that prey on most of the population.

At first, in my transition, I felt colder on raw foods, but by the second or third year, I felt comfortably warm. Now I even go outside many mornings before the sunrise, barefoot in the frost, as part of my way of communing with the earthly and heavenly forces. I just would not have been able to comfortably do that before beginning a raw-food diet. My personal experience was validated by a workshop on spiritual nutrition I gave in Anchorage, Alaska. As I mentioned earlier, I met a wonderful group of people who operated a live-food restaurant called the *Enzyme Express*. All the folks connected with the restaurant have discovered the same thing: that after a few years on a raw-food diet, they actually feel warmer during the cold Alaska winters and generally have a better tolerance for the cold. They shared with me that they also went through a transition where they felt colder in the beginning of their raw-food experience.

My hypothesis for this increased health and vitality is that during the beginning of the 80-95% raw-food diet there

are sometimes mild healing crises. In this stage, one may become more vulnerable and sensitive to the environment since the body's innate intelligence directs its energies inward to cleanse and rebuild the system. Once one passes through this stage, there is a building up of the vital force and the immune system. Once this force has become strong again, no matter what one's body type, one becomes more resistant to all adverse forces, including the cold weather. I find that I am now able to go out without a jacket while it is in the high-thirty-degree Fahrenheit range. My ability to do this is a dramatic contrast to what it used to be like before I switched to primarily live foods back in 1983.

Other physician pioneers have had their own positive healing experiences with raw foods. The Danish physician Kristine Nolfi switched to raw foods to heal herself of breast cancer. Based on her positive experiences with herself and her patients, she started the successful Humlegaarden Sanatorium in Denmark. While doing workshops in Sweden, I had a personal interview with Dr. Aly, who runs a famous clinic there. He has been highly successful with the use of fasting and live foods as a way to restore health.

In the US, Ann Wigmore was an active and successful proponent of live foods for over thirty years. Blossoming out of her work is a variety of live-food centers sprouting up all over the country. Viktoras Kulvinskis, who began his work with Ann, is another well-known proponent of live foods for healing.

Dr. Paul Bragg was one of the original American pioneers of raw foods and natural living in accordance with the laws of nature. His work has reached millions of people in this country. Until he passed away in an unfortunate swimming accident at age 96, Bragg was in vigorous health in large part because of his 80% raw-food, "fresh is best" diet and regular fasting as a way of life.

Dr. Norman Walker, who lived to age 116 and ate primarily raw foods and juices, is another famous raw-food pioneer in the United States with thousands of clinical successes.

One of the greatest pioneers of live foods for maintenance of optimal health as well as for the treatment of disease was Dr. Szekely, who translated *The Essene Gospel of Peace, Books One-Four*, and brought the Essene teachings into the awareness of the twentieth century. Over a period of 33 years, from 1937 to 1970, at his clinic at Rancho La Puerta, Mexico, he established one of the greatest modern human experiments using live foods. He saw more than 123,600 people (approximately 17% of them came with the diagnosis of medical "incurables"), with better than 90% of them regaining their full health. Dr. Szekely's translation of the Essene healing methods into his clinical work highlights the fact that live foods for optimal health and for the treatment of disease is not a new discovery but has been part of the Western and Judaic-Christian tradition for at least two thousand years. The Essenes, who established communities 200-300 years before and during the time of Jesus, were said to eat primarily live foods and were reported by historians to live an average of 120 years.

Based on his study of the Essenes and his own clinical experience, Dr. Szekely developed a useful way to categorize foods according to their energetic and physiological effects rather than their biochemical makeup of calories, protein, carbohydrates, and fats.

To briefly review, foods that have a high degree of life force and, in turn, enhance the human life force (SOEFs), Dr. Szekely called "**biogenic**." Biogenic foods increase the SOEF organization on every level. They help to reverse entropy and the aging process. These are high-enzyme, raw foods that have the capacity to revitalize and regenerate the human organism.

The second category of foods is called "**bioactive**." These are foods capable of sustaining and enhancing an already-healthy life force. They add to our SOEFs. Bioactive foods include fresh, raw fruits and vegetables. They have less enzymes and inherent life force than biogenic foods but are still very beneficial to the system.

"**Biostatic**" is the name of the third category. It includes fresh foods that have been cooked. These foods can be slightly life-sustaining in the short term but are gradually life-force-depleting in the long term, because they require the human organism to give of its SOEFs to reactivate the SOEFs of the cooked foods so they can be absorbed. The end result is a slow depletion of the human SOEFs. Biostatic foods are cooked or minimally processed foods, as well as foods that are raw but no longer fresh.

The fourth category of foods is called "**biocidal**." These are life-destroying foods—foods which without question disrupt and deplete the SOEFs. Biocidal foods have gone through much processing and are full of additives and preservatives. They are the plastic, fast, "convenience foods." Biocidal foods also include all cooked flesh foods because of their rapid putrefaction, unless they have been freshly killed and eaten.

Mother Nature has given us a wide variety of food choices. Ideally we will choose foods that reverse the effects of entropy on our system. To reverse entropy is to help reverse aging and to enhance health. These are the biogenic and bioactive foods. Unfortunately, despite all the information available, most of our population still chooses foods that increase our entropy and accelerate the aging process. These choices are difficult because so many of us are so addicted to satisfying our taste buds and are attached to fixed eating habits and cultural concepts.

Paavo Airola often pointed out that in making the transition to live foods it is important to be sensitive to the type

of foods traditionally eaten by the individual's family of origin and their ancestors, along with considering the genetic background. Sometimes the question is raised as to whether certain ethnic groups without a major live-food tradition, such as the East Indian, Chinese, and Japanese, can, or should, make the transition. In these cultures people had to, and still do, cook their food in order to kill parasites, virulent bacteria, and amoebas. This may be one of the main reasons for cooking food in these cultures, but it does not mean that these individuals cannot make an intelligent and careful transition.

In India, there has always been a tradition of vegetarianism. There is also a history of those who ate very little, or only raw foods, as part of their spiritual development. One of the most famous of these was Shivapuri Baba, who lived to be 137 years old. At the age of 50, after living in the forest on just roots and tubers for 30 years, he went on a 35-year, world walking tour. He spent time with different spiritual, cultural, and political leaders, including four years with Queen Victoria in England. Born in 1826, he left his body in 1963. It was said that he ate raw foods up until a few years before his death, when he began to accept the cooked food of his visitors. It was said that after this he began to lose some of his vitality and to age noticeably. He was, however, quite alert and clear until the time he left his body.

Satya Sai Baba, one of the few Indian spiritual teachers who has transcended his culture's food traditions, gets to the core issue of the resistance to live foods:

Out of all the species ... Man alone tries to cook and change his food. A seed when planted will sprout into life ... but when cooked, the life is destroyed ... it is man alone who is subject to the most health trouble.... The reason is that man does not like to partake of food as God created it. He is the victim of his tongue, which he wants to be satisfied in terms of taste, and so his own likes and dislikes come in the way of what he should eat. Man seeks to change the foods available in nature to suit his tastes, thereby putting an end to the very essence of life contained in them. Because he is exterminating the life-giving forces in the food available to him, he is increasingly subjecting himself to disease. So, it follows, again, that if man were to eat foods in their natural states, he certainly would not be subject to disease.

Cooked Foods Are Damaged Goods

A VARIETY OF RESEARCH HAS SHOWN that a good percentage of nutrients are destroyed in cooking. Viktoras Kulvinskis estimates that the overall nutrient destruction is around 80%. Although there is some variation in research findings, most agree that over 50% of the B vitamins are destroyed by cooking. Thiamine (B1) losses have been recorded up to 96%, folic acid losses up to 97%, and biotin losses up to 72%. Vitamin C losses are up to 70-80%. The Max Planck Institute for Nutritional Research in Germany has found that there is only 50% bio-availability in protein that has been cooked. Cooking alters protein into substances that disrupt cellular function and speed up the aging and disease process. In general, it can be said that cooking also coagulates the bioactive mineral/protein complexes and therefore disrupts mineral absorption, such as calcium in pasteurized milk. Cooking foods disrupts RNA and DNA structure and, as already discussed, destroys most of the nutritive value of fats, creates carcinogenic and mutagenic structures in the fats, and produces free radicals in fats. According to Dr. William Neusome of Canada's Department of Health and Welfare Food Research Division, cooking transforms certain fungicides into cancer-causing compounds. We can assume that with all the potent pesticides, herbicides, and additives that go into our foods, cooking will transform a certain percentage of these into more carcinogenic or mutagenic (producing changes in gene patterns) compounds. Cooking is risky business.

Other research has uncovered the fact that even when cooking organic foods, there is a burned or browned section created by cooking which is highly mutagenic. This results primarily from the heated protein. Some of these chemicals in the cooked protein have been isolated and fed to animals, and they appear to be cancer-causing. The browning that comes from the interaction of caramelizing sugars and amino acids, such as the brown crusts on bread and toast, has also been found to create mutagenic substances.

There is an old saying: *"If it's not broken, don't fix it"* I believe this applies to the way Mother Nature has presented us with her food, in an "unbroken" way. Nevertheless, humans insist on virtually unrestricted use of cooked foods. The message of Jesus in *The Essene Gospel of Peace, Book One* (p. 36), rings as true today as it did then:

For I tell you truly, live only by the fire of life, and prepare not your foods with the fire of death, which kills your foods, your bodies, and your souls also.

Live Food Boosts Immunity

AS DESCRIBED EARLIER, research by Paul Kouchakoff, M.D., in 1930 showed that every time we eat cooked foods, we get an increase of white blood cells in our blood stream. Dr. Howard Loomis has regularly repeated some of Dr. Kouchakoff's results in his clinical work with hundreds of patients. This finding is a potentially significant discovery for helping us learn how to protect and maintain our immune system. Overstimulation of the immune system three or four times a day by ingestion of cooked food is definitely an ongoing stress on the system.

Specific immune factors in raw foods, such as the gibberellins and abscisic acid (found in avocados, lemons, cabbage, and potatoes), help support the immune system. The other major way raw food helps boost the immune system is that it keeps us healthy via its detoxifying properties, "anti-" free radical enzymes, cleansing properties, and physical and energetic enhancement of our total biological organism. When we are healthy, the immune system naturally follows suit. Research at the Linus Pauling Institute found that a raw-food diet in mice had the same cancer-preventing properties as high doses of vitamin C. In general, I have observed that my clients who have been on an 80% or more live-food diet for six months to two years have a significantly stronger immune system than the general population and get significantly less colds and flus than they did previously

Lesser-Known Health Factors in Live Foods

RAW PLANTS HAVE AN INCREDIBLE VARIETY of health-promoting factors such as plant hormones, which help our metabolism, and paciferans, which are antibiotic substances. They are loaded with a variety of bioflavonoids such as rutin, hesperidin, vitamin P, flavons, flavonals, and methoxylated bioflavonoids, including nobelitin and tangeretin. Nobelitin and tangeretin have more cortisone activity per weight than injectable cortisone. These two bioflavonoids have been found to remove heavy metals, drugs, and hydrocarbons from our bodies. They also have been found to decrease red blood cell clumping. In one experiment, three to four oranges or five tangerines decreased blood viscosity by 6%. In beet roots there are anthocyanins which have been shown to be helpful in treating cancer and leukemia. There is also a variety of plant fibers that completely fulfill our need for fiber in the diet. Some plants have bitters which help our digestive secretions. Plants contain essential oils, saponins, and also chlorophyll, which is so important for our health.

Researchers have found that some factors in raw foods stimulate production of the healthy bacterial flora. This is significant because healthy colon bacteria protect against candida overgrowths, the growth of numerous pathogenic bacteria, constipation, and colon, blood, and tissue toxicity

The myriad health-restoring components contained in the unbroken wholeness of raw foods are partially or completely destroyed by cooking. Trying to list them all is like trying to list all the known and unknown herbal medicines in the rain forest.

I want to expand on the concept that the wholeness of a food is crucially important. *It is the wholeness of raw foods which is health-producing and nonreproducible by science.* We do not fully understand why a raw-food diet is so effective, but it is clear that the whole is greater than the sum of the parts. *Cooking or other forms of processing destroy qualities and components of our food for which the significance is not yet, or perhaps never will be, known in its totality.*

We do know that live foods have been used as a powerful healing treatment primarily in Europe, but now also here in the US. A live-food diet has been used with great success to heal arthritis, high blood pressure, menstrual difficulties, obesity, allergies, diabetes, ulcers, heart and other circulatory diseases, hormone disturbances, diverticulosis, anemia, weak immune system, and other degenerative diseases or poor states of health. Many people have found a live-food diet an excellent aid for improving the brain/mind function. The research on animals, as well as longevity studies in human cultures around the world, all suggest that a high percentage of live food in the diet plays an important part in creating a healthful longevity. A group of ancient Greeks, the Pelegasians, were said to eat only raw fruits, nuts, and seeds and lived an average of two hundred years according to Herodotus, the "father of history."

Some Food Factors with Bad Reputations

WITHIN ALMOST ALL FOODS exist some factors that may be toxic in high concentrations. According to research compiled by the Food and Nutrition Board of the National Academy of Sciences National Research Council, these factors are not significant if taken in moderate amounts and if one's general health is good. Research into the question of the goitrogenic (antithyroid) effect of eating raw cabbage and other members of the *Brassica* family and their seeds, as well as peaches, pears, strawberries, spinach, carrots, soybeans, and peanuts, has found that "The goitrogenic effects in man of edible portions of *Brassica* other than rutabaga and white turnips are not regarded as firmly established." The research has found that most of the goitrogenic factors of the *Brassica* family are in the seeds rather than the edible portions. It has also been suggested that some of the goitrogenic factors in rutabagas or white turnips could be transferred through cow's milk. It is generally thought that even these effects can be offset by increasing one's intake of high-iodine foods, such as kelp or dulse.

Another concern is the effect of naturally occurring oxalates in spinach and rhubarb. Many researchers believe that it would take eating almost nine pounds of rhubarb to get any acute poisoning, and that the oxalate content of vegetables has no significance in causing acute poisoning. The research on problems of chronic oxalate intake suggests that it would be impossible, with an adequate calcium intake, to have a problem with calcium deficiency from a normal oxalate intake from vegetables. One two-year study on rats showed that with a diet of 0.1% to 1.2% oxalates there were no abnormalities. In one extensive study on children put on a high-spinach diet and other high-oxalate foods, no evidence of any alteration of calcium, vitamin D, or phosphorus metabolism was found. It is possible, however, if a person has a low calcium intake or poor calcium metabolism, that a high-oxalate diet could cause a calcium deficiency.

One way to avoid the oxalate issue in nuts and seeds, such as sesame and sunflower seeds, is to soak them overnight and rinse several times in the morning. By this process much of the oxalates are washed out and therefore do not pose a problem. *In general, unless one has a low-calcium problem, one need not be too concerned about a moderate intake of oxalate foods.*

Phytates are another natural substance in some foods, especially grains such as wheat, rye, and oatmeal. They occur in some nuts and seeds as well. They form a complex with calcium that keeps the calcium from being absorbed. Fortunately, a normally functioning intestinal tract produces an enzyme called phytase which releases calcium from its phytate-bound complex when it is transiting through the intestinal tract. The calcium is thereby freed up to be absorbed. Unless we take an excess amount of phytates into the system, there is usually enough phytase to keep them from having any effect on our calcium absorption. By soaking and rinsing nuts and seeds, we wash out the phytates as well as the oxalates. *The way the body eliminates phytates seems to mirror the general way the body handles most of these naturally occurring seemingly adverse factors in our food. If they are taken into the system in small enough quantities, our bodies usually have the enzymatic systems to protect us from these substances potential negative effects.* For more on oxalates and phytates, see Chapter 23.

We should also be aware of naturally occurring estrogens in carrots, soybeans, wheat, rice, oats, barley, potatoes, apples, cherries, plums, garlic, sage, parsley, licorice root, wheat bran, wheat germ, rice bran, and rice polishings. Estrogens are also found in edible oils such as cottonseed, safflower, wheat germ, corn, linseed, peanut, olive, soybean, and coconut. In a publication put out by the Food and Nutrition Board of the National Academy of Sciences, researchers concluded that:

... the consumption of any food product in a quantity sufficient to cause a physiologic effect due to estrogens it contains seems remote.

On the other hand, someone with an estrogen-sensitive cancer should be aware of these naturally occurring estrogens.

There is a variety of toxins in some of our naturally occurring foods. In some aged cheeses there are high concentrations of histamine, tyramine, and tryptamine, which are normally detoxified by an enzyme in our system called monoamine oxidase. Some people under psychiatric treatment are given drugs that are monoamine oxidase inhibitors. If these people eat these cheeses, they may get severe cases of acute high blood pressure. These substances are not a problem, however, as long as the body biochemistry is functioning in a normal manner and we

are not taking any antidepressive drugs.

In nutmeg and mace there are high concentrations of a toxin called myristicin. Carrots, parsley, celery, and dill have a little myristicin also. In small amounts myristicin has been noted to be helpful for toothaches, dysentery, diarrhea, rheumatism, and skin problems. *In large doses, such as one ounce of nutmeg or two whole nutmeg nuts, it may cause shock, stupor, acidosis, and/or intoxicating symptoms with euphoria for up to 24 hours after ingestion.* As in most cases, a little is okay, and a lot may be dangerous.

Another poison is thujone, an oil of wormwood; it is mentioned in the Bible nine times. It is the primary flavoring of the liquor called absinthe. In high doses it may produce convulsions. A muscle weakness and paralysis of the lower legs, called lathyrism, can occur when eating various types of vetch. Some people can develop favism, an anemia in which the red blood cells break down from eating uncooked fava beans. It occurs primarily in Mediterranean cultures and is transmitted by a sex-linked gene of moderate dominance. In brown mustard, horseradish, broccoli, cabbage, and arugula, there is a substance called isothiocyanate which acts as a mucous membrane irritant.

Some beans eaten in their raw form such as soybeans, lentils, black-eyed peas, partridge peas, and mung beans, as well as peanuts and vetch, have trypsin inhibitors which block this class of digestive enzymes. The trypsin inhibitors cause poor protein digestion and result in putrefaction and gas. Research on raw soybeans shows that their trypsin inhibitors decrease growth in chickens. Researchers have also specifically found that the trypsin inhibitors are a major cause of the poor utilization of raw soybeans. Kidney soy and lima beans are the highest in trypsin inhibitors and have the best improvement of digestibility after heating, which destroys this inhibitory enzyme. The other beans and peas do not show such a dramatic improvement in digestibility after heating. Trypsin inhibitors were found in **23** of **26** pulses in India, as well as in wheat and guar gum. They are also found in egg whites. Much of the trypsin inhibitor is found in the seeds before they sprout. When the seeds are sprouted much of the trypsin inhibitor is washed out as a result of the sprouting process. My observations and reports from others indicate that there is some improvement with sprouting, but that even sprouted beans and peas are still not so easy to digest. *I do not recommend more than occasional use of even sprouted beans or peas for those on a live-food diet because of this research and my personal observations. This is especially true for those with a vata constitution.* In earlier chapters when I refer to legumes as part of the diet, I am referring to cooked legumes as part of the traditional vegetarian diet. They are especially important for fast oxidizers who need a higher protein intake.

Raw soybeans, kidney beans, and other legumes such as peanuts, groundnuts, jack beans, sword beans, horse beans, sweet peas, lentils, common vetch, and mung, green, lima, navy, kidney, pinto, French, black, white, casto, and horse beans also have factors called hemagglutinins. When **1%** of the diet is raw soybeans or **.5%** of the diet is raw kidney beans, growth in rats is suppressed. The theory is that the hemagglutinins line the intestine and block fat and protein uptake. *All edible legumes that contain hemagglutinins are poorly absorbed unless they are cooked thoroughly (until the hemagglutinins are destroyed).*

Sprouts are a wonderful, healthy, biogenic food; yet even alfalfa sprouts eaten in excess and harvested before they are mature contain a small percentage of an amino acid analog called canavanine, which has been reported in several individual cases to cause a worsening of symptoms of people suffering from systemic lupus erythematosus (SLE). The canavanine concentration is highest in alfalfa seeds and decreases in concentration after the third day of sprouting. Because canavanine is water-soluble, rinsing the sprouts each day also decreases the concentration. Alfalfa sprouts are best to eat when they are fully mature. This mature stage is their nutritional peak, when they are a rich green in color and have their first leaf division. At this stage they have minimal canavanine and do not cause any problems. This is usually around day seven. For several years, I have advised my SLE clients and others with rheumatoid-like diseases about these considerations when using alfalfa sprouts. As yet, no one following this advice of selecting mature alfalfa greens and not eating them in excess has suffered an exacerbation of their symptoms. Some research shows that canavanine has anti-tumor and anti-leukemia effects.

Buckwheat sprouts require some moderation also. I have found two people who developed what seemed to be cold sensitivity, allergic symptoms, and painful skin nerve sensitivity worse with sunlight after eating the super-nutritious buckwheat sprouts in amounts equal to **20%** of their dietary intake for six months. Prior to this extended excessive intake, these two people had eaten buckwheat in moderation without developing any symptoms. Their symptoms almost all went away upon limiting this excessive amount of buckwheat sprouts. I have heard several secondhand reports of similar symptoms in others who have eaten an excess of buckwheat sprouts. Again, all the symptoms immediately went away on the cessation of excessive intake of buckwheat sprouts. The message is that almost any food, no matter how biogenic and healthy, may have small amounts of hidden toxins that can cause symptoms if eaten in excess for a long enough period of time.

Another enzyme class found in plants are cholinesterase inhibitors. Cholinesterases are enzymes that play an important role in nerve impulses. Raw potatoes had the highest concentration of these inhibitors among **17**

vegetables studied. The fruit of eggplants has some of these cholinesterase inhibitors, as do roots and leaves of tomatoes. There is a small amount in asparagus, Valencia oranges, turnips, radishes, celery, and even carrots. In potatoes exposed to sunlight, there is a buildup of cholinesterase inhibitors called solanin alkaloids, particularly in the eyes, skin, and sprouts of the potato. This alkaloid buildup can be toxic. A potato in which these alkaloids have accumulated will have a green tint to it. The way to prevent this sunlight-activated alkaloid buildup is to store potatoes away from the sunlight. Putting potatoes in a brown paper bag is one way to shield them from light. Researchers have not detected harmful effects from any other vegetables because the cholinesterase inhibitors occur in such low amounts. These *green potatoes with solanin are still poisonous even when cooked*. One way to protect yourself and others is to tell produce markets and health food stores about the danger of potatoes exposed to sunlight. The potatoes should be stored in a covered bin.

Although it is useful to be aware of the little-known potential toxins in fruits and vegetables, it is important to maintain the larger perspective that sprouts and other live foods contain many antioxidants, anticarcinogens, live enzymes, electromagnetic energies, a high zeta potential, and high levels of minerals, vitamins, nucleic acids, paciferans (plant antibiotics), aux-ones (beneficial plant hormones), and other factors, the health benefits of which far outweigh the potential dangers of naturally occurring toxins. A healthy body has a sufficient defense to metabolically detoxify the naturally occurring toxins as long as we are not eating them in excess. Although excess is hard to define, I eat two to four ounces of mature alfalfa sprouts almost every day as part of my sprout salad. I consider this a moderate amount. Part of being a conscious eater is to have a holistic perspective about these issues and to eat in a moderate way using a variety of sprouts and live foods in the diet. Seeds that can be sprouted are broccoli, alfalfa, clover, radish, fenugreek, chia, buckwheat, wheat, rice, millet, and a little mung seem fine. The rest of the beans—aduki, lentil, and soy—are best minimally or none at all. In this way, Mother Nature's gifts of food can be eaten with love and not fear.

The Bioelectricity of Live Foods

THE ELECTRICAL POTENTIAL OF OUR TISSUES AND CELLS is a direct reflection of the aliveness of our cells. Live foods enhance and maximize the electrical potential in cells, between cells, and at the interface of cells with the micro-capillary electrical charge. The proper microelectrical potential gives cells the power to rid themselves of toxins and maintain the selective capacity to bring in the appropriate nutrients and oxygen supplies. In *Spiritual Nutrition and The Rainbow Diet*, I describe a model for how this selection process works on the electromagnetic level. Researchers have discovered that with disease there is a decrease in selective capacity of the cells to absorb and excrete. This results in a buildup of toxins in the cells and a decrease in efficiency of cell metabolism. There is also a weakening of cell membranes of tissue cells and blood capillary cells through which nutrients and oxygen are selectively filtered in, and toxins filtered out.

I am particularly interested in this lowering of electrical potential effect because many of the people I see are just not feeling well, but all the lab tests they have had with other doctors show that they are not overtly, clinically diseased. The drop in the electrical potential is the first step in the disease process. These are people in a state of meso-health, or subclinical “disease.”

Professor Hans Eppinger, chief medical doctor at the First Medical Clinic of the University of Vienna, found that a live-food diet specifically raises the microelectrical potentials throughout the body. He discovered that a raw-food diet increases selective capacity of the cells by increasing the electrical potential between the tissue cells and the capillary cells. Raw foods significantly improved the intra/extra-cellular excretion of toxins and absorption of nutrients. Dr. Eppinger and his co-workers concluded that *live foods were the only type of food that could restore the microelectrical potential of the tissues once their electrical potential and the ensuing subtle cellular degeneration had begun to occur*. This correlates with the research by Dr. Kollath that raw foods alone, and distinctly not vitamins and mineral supplements alone, were able to restore his animals to full health from the half-health condition of meso-health. Their research findings that live foods have a regenerative power and ability to restore orderly functioning on the cellular and electromagnetic level of the organism support my own clinical observations over the last **19** years. In essence, we can say that *by restoring the electrical potential of the cells, raw foods rejuvenate the life force and health of the organism*. A live-food cuisine is a powerful, natural, healing force which gradually restores the microelectrical potential and overall functioning in every cell in our body. Eating primarily raw foods is a gentle, delicious, nature-oriented, and gradual way to restore health. Eating live foods means that one is paying attention to Mother Nature and accepting her gifts the way she gives them to us. It is a specific way to commune with Mother Earth daily.

Kirlian photography has been a useful tool to validate our understanding of the bioelectric effect of live foods on the health of the human organism. Kirlian photographs by Harry Oldfield and Roger Coghill, in their book *The Dark Side of the Brain*, reveal electroluminescent fields (natural radiation fields) surrounding living organisms that take the form of a coronal discharge. It is thought that what is seen in the photographs is the electrical conductivity of the skin cells as they are influenced by the cellular radiations of the rest of the cells of the body. From the point of view of the SOEF theory the strength of these fields indicates the SOEF strength of the cells. Oldfield and Coghill believe these actual electrical fields maintain the integrity of the biological system. According to them, if these fields have more energy, they better maintain the physical structure and function. If the fields are depleted, they are less able to maintain both structure and function. They hypothesize, as I do, that human beings and all living organisms are ultimately made up of patterns of resonant energy. This energy is reflected in the functioning of each cell. The actual molecular structure of the cells is guided by DNA, which acts as a resonant receiver of the different resonant frequencies of the body and also as a transmitter of a specific resonant frequency. The stronger the resonant frequency of the cell, the stronger the natural radiation field. *In other words, the electroluminescence is a measure of the life force of the cell*. The stronger the life force of each cell, the stronger the electroluminescence of the total Kirlian photographic field, which is the sum of the electrical potential of each cell.

By using this system, these researchers were able to understand how the life force of people and foods is affected by various conditions. One of their photographs shows a person who had been eating junk food for **24** hours. It reveals an absence of any electroluminescent energy. This picture is typical of **12** subjects who were put on junk food. It is juxtaposed with a picture of the electroluminescence of a man who had been eating whole foods for **40** years. There is a dramatic difference between his highly charged field and the junk-food absence of any field.

Another photographic comparison was made of the electroluminescence of the same cabbage live, and then cooked in a pressure cooker for ten minutes. The live-food cabbage had a significantly brighter and larger electroluminescent field than the cooked cabbage.

They also applied this technology to assessing storage techniques and effect of different processing methods on foods. They found that the natural radiation of the processed food varied with the cooking method. The results of food processing, in order of highest natural radiation, were:

1. raw
2. wok cooking
3. steaming
4. microwave cooking
5. pressure cooking and prolonged boiling
6. deep frying
7. barbecue and grilling
8. oven baking

The results with food storage, in order of highest natural radiation, were:

1. Fresh raw food had significantly the most energy.
2. Raw food stored in the refrigerator for four hours was the next highest.
3. Freeze-drying showed 75% of the original energy.
4. Freezing showed 30% of the original energy
5. Gamma radiation leaves almost no natural radiation, and in the case of avocado, the Kirlian field was totally obliterated by the gamma radiation.

Biophysics of Living Foods

THE NEW SCIENTIFIC MODELS developed by the brilliant minds in sub-molecular biology and quantum physics have made it possible to develop corresponding scientific models in the biophysics of nutrition. This broadened conceptual understanding helps us better comprehend the importance of living foods and the rainbow diet, and gives us an expanded knowledge of multi-energetic, nonmaterial aspects of nutrition. In the future, the bioelectric energy of food may become one of the most important considerations in the field of nutrition.

Nobel laureate Szent-Györgyi describes the essential life process as a little electrical current sent to us by sunshine. He is referring to highly charged single electrons that are involved in transferring their energy to our own sub-molecular patterns without changing our molecular structure. These wandering sunlight electrons belong to the electron clouds of the submolecular world described by quantum mechanics. These quantum physics models begin to validate our more intuitive model of vegetarian food as condensed sunlight energy which is then transferred to our human organism.

Another little piece of the biophysics of live foods is the theory of John Douglass, M.D., Ph.D., who says that live foods have a higher energy ability to awaken relatively inert molecules in our system by either taking an electron or giving them one. This high-energy, electron transfer ability is described as the “high redox potential” of a particular molecule. Vitamin C has this property of a high redox potential, as do raw foods. Dr. Douglass believes the high redox potential of raw foods, which is destroyed by cooking, is an important factor in their healing power.

There is some interesting original work by the German fatty acid and light researcher, Dr. Johanna Budwig, with what she calls the sun-electron or biotron. Dr. Budwig hypothesizes that the biotron “guides” the Krebs cycle, one of the bio-electron cycles involved in the production of cellular energy. The biotron is also thought to be directly absorbed into our brain from the sun. Some theorists think that the biotron supplies up to one-third of our energy directly into our system from the sun. Dr. Budwig believes that several tablespoons of flaxseed oil per day will enhance this biotron energy absorption. The concept of the biotron is in the initial stage of exploration, but worth contemplating.

The sunlight energy, when transferred to us indirectly through our food, is almost completely lost to us if the transfer of the vegetarian nutrients is second-hand through animal foods. The Kirlian photography studies suggest that the sunlight energy in vegetarian food is also significantly lost if the bioelectric, resonant energy patterns are disrupted by cooking or processing our foods. Another message, then, which comes through when we think of food and the human body in terms of bioelectric energy, is that *foods in their live state pass on the bioelectrical energy from the sun directly and maximally to us.* The plants store it for us in the process of photosynthesis. Then, as I have suggested before in a more metaphoric way, they release their stored light into us. One ramification of this is the plants transfer their bioelectrical energy into our cells in a way which increases the individual electrical potential of each cell, and therefore enhances the health and bioelectrical energy of our whole living organism. This is one of the secret stories of live foods and even the rainbow diet. *Our biological lives and health are dependent on the electric radiation of the sunlight. This bioelectric radiation stored in the plants, as nature's gift to us, is lost or greatly diminished when live foods are cooked, irradiated, or even stored for more than a few days. By increasing this bioelectrical energy in our cells, we increase our health, vitality, and longevity.*

Biophotons

IN 1984, THE GERMAN RESEARCHER DR. POPP wrote a scientific paper pointing out the existence of biophotons. Biophotons are the energetic phenomenon of ultra-weak photon emission from living systems. Popp showed that DNA was an important source of photon emission. He was able to measure this emission with a device that he created called a bio-photon meter. It seems that 97% of the DNA is filled with areas called entrans which give off this photon emission, and only 3% is filled with genetic information. He found that this “ultra-weak” photon emission from living cells and organisms differed from the phenomenon of bioluminescence.

This biophoton emission has several characteristics that are generally accepted in the scientific community. One is the intensity of continual luminescence, which is a few thousand photons per square centimeter. The spectral range of the biophoton emission is from the infrared to ultraviolet. Proliferating cell cultures were found to radiate more intensely than those in which growth has ceased. Dying cells will give off an intense photon emission just before they die no matter what the cause of death. Photon emission can be influenced by almost any agent. Dead cells do not have any biophoton activity.

These characteristics have certain implications when applied to live foods. The existence of biophoton emission is an important aspect of understanding why it is crucial to have an abundance of live foods in one's diet. Biophoton emissions are given off by cell DNA, RNA, and other forms of macromolecules including enzymes, viruses, chlorophyll, and hemoglobin. Popp has stated that biophotons are vital indicators of the state of health-giving qualities of foods. The higher their biophoton emission, the more health energy they have. He also found that the biophoton energy of healthy people was much higher than the biophoton emission of people in poor health. It then becomes obvious that the more foods we eat which have macromolecules that are actively emitting biophotons, the better it is for our health. He found that wild organic foods gave off twice as much bio-photons as cultivated organic foods. He also found that organic foods gave off five times more biophoton energy than commercially grown foods. Cooked and irradiated foods gave off almost no biophoton energy. The scientific and health message here is obvious.

One of the reasons for their importance for our health is that biophotons are theorized to be light particles which relay cell regulatory and metabolic information both intracellularly and between cells. In my book *Spiritual Nutrition and The Rainbow Diet*, I theorized a specific form of communication between the cell nucleus, where the DNA is located, and the cell wall, which controls the entry of nutrients into the cell and the release of toxins. The biophotons seem to be important in regulating all metabolic processes in the body. This finding supports Dr. Bircher-Benner, who at the turn of the century called the light in our foods the most important vital factor. It fits with my work and theories about the importance of live food. Food affects us on all levels of our existence; it is not simply calories for the physical body. We are light beings. When we eat foods that are filled with light, we bring that light into our bodies. This biophoton research shows that these foods not only supply light to uplift our spirits, but they supply the necessary energy for the regulators of metabolism of our cells via the directed exchange of biophotons.

Taking in the biophoton energy through the active enzymes and other live macromolecules in live foods is the main way we can bring biophoton energy into our cells. This means that the quality of our food depends on the amount of light energy it has stored. The more biophotons we take in through our foods, the better intra- and extracellular communication we have and the better our health.

Eating the Wild Electron

LIGHT IS THE BASIC COMPONENT from which all life originates, evolves, and is energized. *Light and health are inseparable.* Because we have managed to disconnect ourselves from the natural sources of light with our fluorescent tubes, indoor lifestyles, glasses, contact lenses, sunglasses, tanning lotions, flesh foods, processed foods, and even cooked vegetarian diets, many of us suffer from chronic “mal-illumination.” Like malnutrition, “mal-illumination” deprives us of a level of nutrients and rhythmic stimulation that is essential for living as fully healthy humans.

It is worth repeating Dr. Szent-Györgyi's description of the essential life process as a little electrical current sent to us by the sunshine. Without light there is no health. This statement is a key to understanding the importance of vegetarian live foods and other ways of bringing light into our organism. *We are human photocells whose ultimate biological nutrient is sunlight.*

The exciting breakthrough for me is the conceptual synthesis of how our food brings the photon energy of sunlight into our body and how our bodies utilize this energy. I alluded to these concepts when I discussed the research by Dr. Hans Eppinger, who found that all cells are essentially batteries that appear to be charged up when people are healthy. He found the cells of sick people to be in a discharged state and poorly functioning.

The significant finding is that only uncooked foods were able to increase the cell battery potential.

The next step is understanding cellular metabolism as a battery. The positive pole is energetically fed by oxygen. The negative pole is fed by the high-electron photon energy collected from the sun and stored in our vegetarian live food. This high-electron food releases its energy across the cytochrome oxidase system, which acts as a step-down transformer to turn the electron energy into adenosine triphosphate (ATP). ATP is the basic energy storage molecule of biological systems. The biochemical releases of energy from ATP are the fuel for all energy-requiring processes at the molecular level in our biological systems.

The electrons are essentially drawn across the cytochrome oxidase system by the oxygen at the positive pole of the intracellular battery. The more oxygen in the system, the stronger the pull. Breathing exercises, eating high-oxygen foods, and living in atmospherically clean, high-oxygen environments increase our overall oxygen content. The key understanding is that the cytochrome oxidase system exists in every cell and requires electron energy to function. This electron energy comes from plant foods as well as what we directly absorb from the sun and other stars. When food is cooked, the basic harmonic resonance pattern of the living electron energy of the live food is at least partially destroyed. Once one understands this scientific evidence, the logical step is to eat high-electron foods such as fruits, vegetables, raw nuts and seeds, and sprouted or soaked grains.

Dr. Johanna Budwig from Germany holds degrees in physics, pharmacy, biochemistry, and medicine and is one of the first researchers to combine an in-depth knowledge of quantum mechanics and physics with an in-depth knowledge of human biochemistry and physiology. She has concluded that not only do electron-rich live foods act as high-powered electron donors, but *electron-rich foods act as solar resonance fields in the body to attract, store, and conduct the sun's energy in our bodies.* She asserts that the photons of the sunlight are attracted by the sun-like electrons resonating in our biological systems, especially in the double-bonded electron clouds found in our lipids. These sun-like electrons are termed pi-electrons. This pi-electron system within our molecular structure has the ability to attract and activate the sun photons. She believes the energy we derive from these solar photons acts as an “anti-entropy factor.” Translated into biological terms, entropy means aging. Anti-entropy is associated with the reversal of the aging process. From a quantum physics point of view, photons never become old; they have the same quickness as time. Sun photons transfer a high degree of order (anti-entropy energy) into the pi-electrons of our biological system. The more light we absorb into our system, the more health-restoring and anti-aging energy we bring into our human organism.

Therefore, people who eat refined, cooked, highly processed foods diminish the amount of solar electrons energizing the system and the amount necessary to create a high-electron solar resonance field. According to Dr. Budwig, processed foods may even act as insulators to the healthy flow of electricity. The more we are able to absorb solar electrons as a result of our dietary intake, the better we are able to resonate, attract, and absorb solar electrons in direct resonance from the sun, other solar systems, and even other galaxies. On a skin-deep level, the more we are able to absorb solar electrons, the less sunburn and theoretically, the less skin cancer there will be.

Perhaps the two highest solar electron-rich foods and foods which have the capacity to absorb solar electrons are

spirulina and flaxseed in various forms, including flaxseed oil. Dr. Budwig has reported cases of general ill health and even cancer which have been reversed through the use of large amounts of flaxseed oil, which increases the amount of electron energy in the system and therefore creates enough energy to heal the system.

Because spirulina grows at high altitudes in high-temperature environments, it has increased beta-carotene, other carotenoids, enzyme systems, and other biological components to better absorb the intensified solar and cosmic radiations. I discovered that by ingesting spirulina and applying the product called Phycotene Cream (developed by Dr. Christopher Hills at Light Force), I, other members of our staff, and volunteers did not seem to get sunburned working long hours under the sun-filled skies at our Tree of Life Rejuvenation Center in Patagonia, Arizona.

Research has shown that spirulina and Phycotene Cream have been successful in reversing squamous cell skin carcinoma and dissolving pre-cancer squamous cell carcinoma. Other research has found that three-fourths of the people who were hypersensitive to sunlight (suffering from erythro-poetic protoporphanaria) were able to increase their exposure time in the sun. Three-fourths of those who improved their tolerance were able to be exposed to sunlight four times longer than before. For those of us who understand that we are human photocells who often suffer from mal-illumination, this is an extremely exciting finding.

Dr. Budwig also found that when flaxseed oil is combined with highly charged sulfur-containing protein, the three double-bonded electron clouds available in the raw flaxseed oil and the protein make a bi-polar capacitor grid which even better absorbs, stores, and transmits the exchange of solar electrons and enhances the solar resonance. She often uses a type of cottage cheese as a high-protein food to combine with flaxseed oil. As a nondairy vegetarian, I find that bee pollen and spirulina are perfect high-protein concentrated foods to combine with flaxseed oil.

The discoveries of modern physics and quantum biology, according to Dr. Budwig, suggest there is no other living thing in nature that has a higher accumulation of the sun's electrons than human beings. Humans seem especially aligned with the sun's light. By the same solar electron resonance, our connection to the stars is enhanced by our ability to take in the gift of their light energy and process it biochemically. Light is our umbilical link to the universe.

Our ability to enrich ourselves with solar cosmic energy depends on eating foods with a high solar electron content that resonates with and attracts solar and cosmic rays. Our health and consciousness depend on our ability to attract, store, and conduct electron energy, which is essential for the energizing and regulation of all life forces. *The greater our store of light energy, the greater the power of our overall electromagnetic field, and consequently the more energy available for healing and the maintenance of optimal health.*

A strong solar resonance field promotes the evolution of humanity to reach our full potential as human "sun beings." Light supports evolution, and a lack of photons in our bodies hinders it. Light and consciousness are interconnected. As far back as the turn of the twentieth century, Rudolf Steiner, the founder of the Waldorf schools, Anthroposophical Medicine, and biodynamic gardening, taught that the release of the outer light into our systems stimulates the release of an equal amount of inner light within ourselves. The more we increase our ability to absorb and assimilate light, the more conscious we become. The more we transform ourselves by enhancing our absorption of light, the more we become that light. This is the subtle secret of "conscious eating."

Preview of Chapter 28

TRAVELING IN THE UNITED STATES and many countries around the world is not always easy for an inexperienced vegetarian. One of the main challenges is that most of the world is not vegetarian and may have some difficulty understanding your needs. If it's your family who is not vegetarian, they may even feel a little threatened by your new change. This chapter addresses the challenge by explaining how you can tactfully and gracefully maintain dietary and health patterns almost anywhere. The real challenge is whether you are willing to exert the extra effort to make it happen. Are you?

I. Traveling in the raw

A. Bring along whatever you need to restaurants or on trips

B. Use the Yellow Pages to find health food restaurants and stores

II. Dinner invitations

III. Camping



Traveling in the Raw

PEOPLE FREQUENTLY ASK ME how they can best eat vegetarian, and particularly raw foods, while traveling. There are a few tips I would like to share from my own travels that may be helpful. The first point to remember is that when one travels, one might face social pressures to conform, as well as be subtly ridiculed for “being different.” In these situations, one should remember that one eats vegetarian or live food not to please others but because it is the healthiest diet for our species. Once outside the home, overcoming shyness about eating differently is an important challenge to face. On some level, many people intuitively know a vegetarian and/or live-food diet is healthier than the standard American diet. Despite this unconscious inner knowing in some folks, they still consciously might feel threatened by it. By being firm about one’s dietary needs, without adopting a “holier than thou” or a “self-righteous crusader” attitude, one can travel almost anywhere and manage to get one’s dietary needs met.

One of the best ways to get one’s culinary needs fulfilled is to take care of them oneself For example, when going to a potluck, don’t depend on someone else to make something that you can eat. To play safe, bring one dish that supports your own dietary needs. If you are going out for a meal with a group of friends and don’t know much about the menu or have much say in selecting the restaurant, upon arriving order a small salad but bring your own supplemental sprouts, avocado, sunflower seeds, or whatever else you might want on a salad. Since most salad dressings in restaurants have a lot of pesticides, preservatives, and cooked oils in them, it is a good idea to also bring a homemade salad dressing.

More and more restaurants nowadays will prepare a vegetarian plate or salad if they are specifically asked, so bringing extra backup foods isn’t always necessary. While traveling on the road, there is usually a salad bar somewhere that will have enough healthy items to eat. One might still want to bring one’s own salad dressing because the salad bar dressings are often high in synthetic or regular dairy, fats, preservatives, additives, and color dyes. The foods of choice to eat in a salad bar are sprouts, dark green vegetables like spinach, and sunflower seeds. Avoid the white-colored head lettuce (iceberg) since it is a nutritional waste of time (and stomach space).

Eat the simple, fresh foods and avoid the foods with lots of sauces. Sometimes these sauces sit around for a long enough time that bacteria begin to grow in them. It is also a good idea to ask if any items have monosodium glutamate (MSG), a harmful additive that causes a violent reaction in some people. Salad bar items are sometimes sprayed with sulfites to help preserve the appearance of the displayed foods.

The best policy when taking car trips of a few days is being prepared. Our family often takes an ice chest filled with several days’ food when we go traveling. We periodically get ice refills along the way to keep the food cold, as well as stock up whenever we need to from local health food stores that we pass. Looking in the Yellow Pages under the category “Health Foods” is a good way to find out if there is a health food store in the area.

It is relatively easy to find health food stores or health food restaurants in large cities to supply vegetarian needs while traveling in the United States or Europe. A thorough examination of even a standard restaurant may yield something. For example, our relatives in England took us to a fancy traditional restaurant in London. Sitting next to the roast beef was one of the best salad buffets I’ve ever experienced in a restaurant anywhere. In traveling throughout Mexico, Canada, Europe, India, and the US, I have always seemed to get by with little difficulty finding vegetarian and primarily live foods.

One compromise that I’ve noticed in my travels is that I have not always been able to find organically grown foods. Admittedly, unless there is a health food store with organic produce or someone’s organic garden that one stumbles upon, organically grown foods are harder to find. However, eating a limited amount of nonorganic foods for a short while is not going to hurt one’s health unless one’s immune system and general health are already very run-down. In places like India or Mexico, plenty of raw foods are available if one likes fruits with a hard outer covering, such as bananas or papayas. The covering gives protection against parasites and pesticides.

It is possible to maintain a live-food diet while traveling if one carries one’s own extra supplies. For example,

sunflower seeds, almonds, pumpkin seeds, alfalfa seeds, dried fruit, and dried vegetables work well. Taking along a light-weight, portable water filter to purify drinking water and for soaking the dry foods overnight is a must. With the purified water one can even have sprouted seeds the next day. Fresh fruits and vegetables are usually available in most countries during the summer.

There are several excellent foods to take when traveling. One is spirulina; another is a new class of products called flash-dry vegetable, grain, and fruit concentrates. I suggest only getting ones that are organic. If I had a choice of one food to bring with me on a desert island, it would be spirulina. Gram for gram, spirulina could be the most nutritious and well-rounded food on the planet, which stores almost indefinitely. It is about 70% assimilable protein. The following properties make spirulina a number-one food choice: it has all the essential amino acids in correct proportion; it contains the needed omega-3 and omega-6 fatty acids; it has 14 times the daily dose of human-active B12 (per 100 grams); it contains glycolipids, sulfonolipids, vitamins, 17 different beta-carotenoids, and over 2,000 enzymes; and it contains a full spectrum of well-assimilated minerals, especially iron and magnesium. Spirulina is the only substance that contains phycocyanins, and it is second only to mother's milk in concentration of natural gamma linolenic acid (GLA). Spirulina is 0.5% glycogen, which is a ready-made glucose energy in a stored form. It contains 9% rhamnose, which is a biologically active and unique sugar important for transporting essential substances across the brain barrier as brain food.

Unlike other algae, the cell wall of spirulina has high concentrations of mucopolysaccharides, which are easily digested and form glycoprotein complexes that are important in the formation of protein and the building of cell membranes. Primitive foods such as spirulina contain the highest food energy, the highest nutrient value, and use up the least amount of the planet's resources. Spirulina is also a powerful alkalizing and healing food. It is an excellent support for the healing of hypoglycemia, diabetes, chronic fatigue, anemia, ulcers, and for boosting the immune system. It has been shown to repair free radical damage. Researchers have found it to contain a tumor necrosis factor. The anti-cancer power of spirulina is significant enough that at Harvard Medical School they found extracts of spirulina were extremely effective in treating cancer in hamsters. In my preliminary personal and clinical research, I have found spirulina and Phycotene Cream (a skin cream produced by Light Force, Inc., and made of the phycotene extract of spirulina) effective in preventing sunburn, while actually helping to absorb the sun's solar photon energy.

In 1977, I, my family, and others who were on prolonged stays in India began to use spirulina. It was my impression that those who took one tablespoon of spirulina a day maintained their health better in India than those who did not use it.

Other excellent foods for travel are dried vegetable, grain, and fruit concentrates. You can make them yourself by sun-drying and grinding organic ingredients into a powder. Pure Synergy is an excellent combination. I recommend Pure Synergy as perhaps the best single all-around food to take camping. Its sixty-two different ingredients represent some of the finest and most potent superfoods in the world. All the ingredients are organically grown, vegetarian, seasonally harvested, and go through over two hundred tests for purity and potency. There are no fillers, artificial preservatives, coloring, or flavorings in it. It contains eleven different algae including spirulina, Klamath Lake Blue-Green, chlorella, Australian Dunaliella Salina, Longicrusis and Digitata Kelp, Irish moss, dulse, and alaria. It also has seventeen Chinese rejuvenation herbs. It has a green juice powder made from seven different grasses including wheatgrass, barley grass, Green Kamut, and spinach octacosanol. The nutrients provided by this green juice powder alone are equal to those of a fresh garden salad. Pure Synergy contains ten Western herbs used to cleanse, regenerate, and revitalize the body, as well as an Asian Mushroom powder made of five rejuvenative and life-preserving mushrooms, including Reishi, Maitake, Shiitake, Tremella, and Cordyceps. This amazing product also has a natural enzyme powder, lecithin, royal jelly, and a natural anti-oxidant powder which help to keep the Pure Synergy fresh for traveling. One of the main advantages of Pure Synergy as a food is that it is a balance of approximately 50% protein and 50% carbohydrate so it can be used by all constitutional types. It is one of the general natural food concentrates that I most frequently recommend to my clients, and it is a nourishing and rejuvenating food that is ideal for a camping trip. Pure Synergy can be ordered through the Tree of Life Rejuvenation Center, 520-394-2533, or by email at healing@treeoflife.nu.

Part of the adventure of traveling can be exploring the open markets or health food stores in a town or city. This becomes an interesting way to learn about a culture. I once attended a seven-day program where there was no health food store produce available. However, I was able to procure fruit, avocados, and sprouts at the local market and was able to pick fresh, organic vegetables from someone's garden. I completely enjoyed my meals that week despite the initial paucity of health food outlets.

I don't want to make it sound too simple; I'd be the first one to admit that in this society eating vegetarian, and particularly live food, on the road is not always easy, but with a little creativity and effort one can make it work. While one is traveling there is no need to give in to the momentary conveniences that are always tempting us away

from a healthy diet.

Dinner Invitations

DINNER INVITATIONS ARE SOMETIMES TRICKIER. It is advisable to tact-fully ask the host ahead of time what might be served. If nothing the host mentions is considered healthy for the stage of diet that you are in, confide in the host that you are a vegetarian. Sometimes they will be very glad to make a little side dish on your behalf. If your host still somehow doesn't get it or is unreceptive to hints, remember that the main purpose of the gathering is to socialize and not to eat. With close friends it is often possible to be so informal as to bring a salad or some "special dish" that just has to be shared as part of the meal for everyone to enjoy.

If one is visiting relatives, volunteering to help prepare the food is both a nice offering and a way to help steer the meal toward including at least something live. Sometimes one can have fun preparing the whole meal. Preparing food in a fun way allows relatives to enjoy the special offering. If they don't want the type of food you offer to prepare, then take everyone out to dinner. If nothing works, the art of delicately and lovingly making one's boundaries clear, without confrontation, is sometimes necessary. The bottom line for a successful friendship or family relationship is love. While it is important to be loving, it is also important to be truthful and to maintain one's integrity. Just because a relative thinks one should eat meat does not mean one has to please them by eating flesh foods. This is more likely to create a resentment that ruins the digestion of the whole meal, as well as alters the relationship with the relative.

BLACKBOARD FOOD FOR THOUGHT

New eating habits thrive best in the company of friends who understand and appreciate your motive for change.

Find a supportive friend or group with which to discuss your ideas and with whom you can share food.

Recreational Camping

CAMPING TRIPS REQUIRE a different sort of creativity. Although I do not generally recommend dehydrated food as a regular part of one's diet (because its SOEF energy is depleted as compared to fresh foods), dehydrated foods are very handy on camping trips. Dehydrated foods are also good to take traveling in cars and on airline trips. Foods dehydrated at 118° F are the closest to live foods in energy. Once these foods are exposed to water, the enzymes are often reactivated with a minimal loss. In the recipe section, there is a variety of soups, snacks, crackers, and cookie preparations of organic foods that are dehydrated in a way which maximally preserves the enzymes. Dehydrated food is also the best way to store food with the minimum amount of enzyme and energy loss.

On a camping trip, a good water filter that is able to filter out bacteria is important. No commercially available filter works for viruses. If one is concerned about hepatitis and other viruses in the water, there are oxidative preparations, such as stabilized oxygen solution by the brand name of Aerobic 07 and its associated product called Flocc, which interact with the oxidized viruses so they clump and can be filtered out. The makers of Aerobic 07 claim this combination completely sterilizes and purifies the water. Boiling the water for twenty minutes and reactivating it with the product called Crystal Energy is also a good way to have safe drinking water. I personally am using a high-tech portable filter system called Earthcrew from WETech Associates that is a 2-micron absolute (nothing larger than 2 microns) porous plastic filter impregnated with powdered activated carbon and other absorbing media that filter out giardia, cryptosporidium, cysts, spores, pesticides, detergents, industrial and agricultural wastes, lead, aluminum, cadmium, copper, mercury, nickel, zinc, and other heavy metals, chlorine, PBCs, DDT, THMs, VOCs, synthetic organic compounds, and Radon 222. I take it wherever I go as it guarantees clean water, even from contaminated streams, or for emergencies like floods and earthquakes. We carry it in our Tree of Life internet catalogue.

If while traveling one is unable to find acceptable food to eat, one can either decide not to eat or remember that eating some nonorganic food for a short period of time will not cause great harm. The biggest problem I often see with traveling is not the food people eat while traveling, but figuring out how to return and successfully re-establish a nonsugar or sweets program, or a newly started live-food or vegetarian program. If one is not careful, it is easy to slip back into old patterns and start feeling bad about oneself. What helps this tendency is to understand that this is just a temporary situation and not take it as if it is the end of all of one's good progress. This is the time to get some positive social support and maybe fast for a couple of days to clean out and then start again on one's health program. Sometimes reexperiencing how poorly one felt on one's old diet is a blessing in disguise and may reinforce the desire and fortitude to proceed in making the necessary dietary changes in the future. The usual process to a healthy diet and lifestyle is an up-and-down "sine wave" rather than a straight-line graph going upward to a "perfect" diet. By not holding oneself to unrealistic standards, a failure and discouragement syndrome is avoided. At all times during the transition to a healthier dietary practice, be gentle on oneself.

Preview of Chapter 29

ONE OF THE MOST ALARMING and pernicious threats to our health is radiation. Everyone is exposed to it. In this chapter you will understand the sources of radiation to which we are exposed, the ways in which they are dangerous to us, general dietary adaptations that can be made to help protect you and your family, and specific nutrients and herbs that offer protection. The good news of this chapter is that the general conscious eater's diet I recommend is basically the best diet to eat for radiation protection. Isn't it interesting that a conscious vegetarian diet is good for preserving health in so many different ways? Do you think the source of the Divine inspiration for the dietary blueprint given in Genesis 1:29 knew about this potential use?

I. Major sources of radiation exposure

II. A nuclear blast is not the most serious radiation threat unless it lands on your head

III. Yes, something can be done—four principles of protection

A. Selective uptake

B. Chelation

C. Antioxidant nutrients and enzymes

D. Certain foods and special herbs

IV. Summary of the conscious eater's radiation protection diet: a low-fat, high-natural-carbohydrate, high-fiber, high sea vegetable, 80% live, vegetarian cuisine optimizes radiation protection



**How Diet Can Protect You
from the Dangers of Radioactive Radiation**

Major Sources of Radiation Exposure

EXCESSIVE RADIOACTIVE RADIATION EXPOSURE comes from: 1) radioactive fallout from nuclear testing; 2) major nuclear power plant accidents, such as Three Mile Island and Chernobyl; 3) accidents at sterilization and food irradiation facilities; 4) unreported minor radioactive leakage from smaller mishaps at nuclear plants; 5) routine leaks and emissions from common devices and products that use nuclear technology; 6) radiation from medical radiation techniques such as X-rays, fluo-roscopy, mammography, and C.A.T. scans; 7) military nuclear activity, such as nuclear weapons plant site accidents, storage difficulties, and nuclear submarine accidents; 8) radon gas; and 9) cigarette smoking.

Accidents at nuclear plants occur more frequently than one would ever expect. The *Radiation Protection Manual* points out that there were 2,974 reported mishaps at nuclear plants filed in the records of the Nuclear Regulatory Committee in 1985 alone. According to the September 1985 report released by the US General Accounting Office, there were 151 “*significant nuclear safety incidents between 1971 and 1984 in fourteen Western countries.*”

The lack of civilian regulation of military nuclear facilities adds an additional danger. The General Electric contract-managed Hanford facility in Washington state is a good example of a health threat stemming from a military-run operation. In the 1940s and ‘50s the Hanford weapons plant exposed people to the radiation equivalent of 3,000 chest X-rays per year, without reporting it or warning the one-quarter of a million people who were exposed. Regularly occurring nuclear submarine accidents are also a hazard.

Radon gas is another source of radiation exposure. Radon is a radioactive byproduct of naturally occurring uranium decay which is often found in granite deposits, shale or phosphate rock, concrete made with uranium-containing phosphates, gypsum, or brick. The radon gas is released from these sources and seeps up from the ground, where it may accumulate in unventilated basements and other rooms of the home. According to Dr. Steven Schechter, the author of *Fighting Radiation and Chemical Pollutants with Foods, Herbs, and Vitamins—Documented Natural Remedies that Boost Your Immunity and Detoxify*, the National Cancer Institute officials now say that radon gas may be responsible for at least 30,000 lung cancer deaths each year. According to 1988 Environmental Protection Agency (EPA) estimates, approximately 20% of all homes in the US contain potentially toxic levels of radon gas. Good ventilation and sealing off the cracks in the basement floor can help protect against radon gas seepage through the floor.

Although it may be a surprise, cigarette smoking is another significant source of radiation. Dr. Schechter points out that with the inhaling of cigarette smoke comes two radioactive particles: polonium-210 and lead-210. These are breakdown products of radium-226. Radium-226 is found in the phosphate fertilizers used in commercial tobacco farming. Cigarette smoke has also been found to contain radioactive radium-226 and potassium-40. In an article published in the *American Scientist* entitled “Tobacco, Radioactivity, and Cancer in Smokers,” Dr. Edward Martell points out that when tobacco smoke is inhaled, these radioactive elements create an alpha radiation exposure that is hundreds of times greater than naturally occurring background radiation. He also points out that large amounts of polonium and lead-210 are found in the lung tumors of smokers and in their adjacent lymph nodes.

A Nuclear Blast Is Not the Most Serious Radiation Threat

CONTRARY TO POPULAR BELIEF, the most serious threat of radiation exposure is not the big nuclear blast of ionizing radiation that occurs with a nuclear explosion. *Low-level radiation over a long period of time causes the most radiation damage to the cellular structures.* This low-level radiation comes from small amounts of chronic radiation exposures that arise from eating the airborne radioactive particles that have fallen on food, or from the water and soil radiation incorporated in the cellular structure inside the food. The end result of low-level radiation over a long period of time is the production of a great deal of free radicals. This free-radical production causes lethal radiation sickness and contributes to high rates of cancer.

A free radical is created when one molecule possessing a highly reactive electron “robs” electrons from other atoms. Free radicals can be thought of as molecules that are out of electron balance. The way they rebalance themselves is to steal an electron from another molecule, which subsequently unbalances the next molecule in a chain reaction-type fashion. When the electrons are stolen from atoms in biological structures, the structure and function of those biological tissues are disrupted. Free radicals can destroy lipids, enzymes, and proteins and cause cells to die. An especially negative effect of free radicals is the disruption of the function of the cell membrane and the membranes of the intracellular structures. DNA/RNA structure and function are also disrupted, as well as protein synthesis and cell metabolism in general.

Free radicals may also cause cross-linking among tissue proteins. The cross-linking phenomenon involves altering the shape of protein structures such that these protein strands get entangled in each other. When this happens they can no longer perform their normal function and this can contribute to the aging process.

Free radicals can cause inflammations, damage lung cells and blood vessels, produce mutations, and cause degenerative diseases, including cancer. Free radicals disrupt and deplete the immune system. Ultimately, it can even be said that free radicals disrupt and deplete the SOEFs of the organism. Many researchers in the field of aging hypothesize that free-radical destruction is the basis of aging, or at least always accompanies the aging process.

The danger of chronic, low-level radiation exposure was discovered in 1972 by Dr. Abram Petkau, a Canadian physician. He found that the cell membranes were considerably more damaged by long-term, low-level exposure to radiation than by a brief but high-level exposure to radiation of the equivalent total dose. He discovered that the main damage of low-level radiation was not from direct ionizing radiation bombardment of our genes (thereby causing mutations), but from the production of free radicals. According to Ernest Sternglass, Professor Emeritus of Radiological Physics at the University of Pittsburgh School of Medicine, *Dr. Petkau found the free-radical effect from chronic low radiation exposure to be one thousand times greater than from a single large exposure.*

Dr. Petkau's finding represents a significant shift in understanding. Until 1972, the “permissible safe exposure” from nuclear plants, atomic fallouts, and nuclear arms plants was estimated on the basis of experience with brief and intense radiation exposures, such as from a nuclear blast. The implication was that regular and chronic low-dose radiation exposure is relatively “safe.” In physiological reality, the low-level radiation is actually at least a thousand times more damaging to our health than estimated. At low levels of radiation, the free-radical process becomes more efficient. According to Dr. Petkau's observation, the more protracted the radiation dose, the lower the dose needed to break the cell membrane. This helps to explain why leukemia and other cancers are occurring 100 to 1000 times more than the initially predicted rate at Hiroshima. With this finding, one begins to understand that *there is no “safe” dose of radiation since radiation is cumulative.* According to the nuclear physicist John Gofman, Ph.D., M.D., in *Radiation and Human Health*:

Harm in the form of excess human cancer occurs at all doses of ionizing radiation, down to the lowest conceivable dose and dose rate.

Dr. Karl Z. Morgan, after thirty years as director of the Health Physics Division of Oak Ridge National Laboratory, wrote in the September 1978 *Bulletin of Atomic Scientists*:

There is no safe level of exposure and there is no dose of radiation so low that the risk of malignancy is zero ... the genetic risks, and especially those associated with recessive mutations, may be as harmful and debilitating to the human race as the increases of cancer.

According to Lita Lee, Ph.D., in her book *Radiation Protection Manual*, in the late '80s the estimate for the yearly radiation dose received by Americans increased from 170 to 360 millirems. The permissible maximum allowable radiation for the general public is 500 millirems. This dose is not related to safety or health, but to "what those in power can get away with." We are constantly being exposed to radiation. The more serious exposures are often for those living near nuclear plants. For example, the July 12, 1990, edition of the *San Jose Mercury News* reported that Department of Energy (DOE) Secretary James Watson admitted that a study financed by his agency found large radiation releases in the 1940s and 1950s from the Hanford nuclear plant. It is possible that the thyroids and other organs of infants living downwind from Hanford nuclear reactor in Washington state could have received radiation doses of iodine-131 as high as 2,500 rads. This is five times greater than the yearly permissible dose.

Physician and physicist John Gofman was hired by the Atomic Energy Commission (AEC) to investigate the impact of radiation on human beings; *he concluded that radiation exposure produces a direct linear correlation in the increase of cancer incidence*. Gofman's findings in 1985 indicated that the dose of radiation allowable from nuclear plants at that time would result in an additional 16,000-32,000 cancer deaths per year. In *Killing Our Own: The Disaster of Americas Experience with Atomic Radiation*, authored by Harvey Wasserman, it is reported that following the Three Mile Island nuclear reactor accident the cancer rate of those living in the area increased sevenfold and that 58% of the births had complications.

An airplane flight from coast to coast will expose the flyer to several hundred millirads (1/1000 of a rad). The average radiation dose for medical X-rays is 300-500 millirads for pelvic X-rays, 10-500 millirads for chest X-rays, and 100 to 1000 millirads to the face for a full set of dental X-rays. Dr. Gofman, in his book *X-rays Health Effects of Common Examinations*, estimates that more than 45,000 fatal cancers are induced yearly by X-rays. The data are overwhelming that nuclear energy plants, nuclear arms production, irradiation plants for medical instruments and food, and the excessive use of X-rays all constitute a tremendous threat to the health and safety of the human population.

Radiation is far more toxic than chemicals or pesticides. Radioactive isotopes that concentrate in specific organs are very damaging because, according to Dr. Sternglass, each electron emitted by a radioactive nucleus has several million electron volts of energy, which is enough to disrupt millions of molecules in the living cell. These radioactive isotopes emit radiation as they decay. This means that when certain isotopes, such as I-131, concentrate in the thyroid, they give off radiation that causes cellular membrane damage, inactivates enzymes, alters cell metabolism, and may create abnormal cell division. Accumulation of radioactive isotopes in vital organs creates the worst damage because it results in long-term exposure to a particular tissue.

Another problem with radioactive isotopes is they stay around for a long time. Strontium-90 has a radioactive lifetime of 560 years, plutonium-239 has a full radioactive life of 500,000 years, cesium-137 has a radioactive lifetime of 600 years, and I-131 is radioactive for 160 days.

Dr. Sternglass points out that epidemiological studies show mortality rates have started to rise again in population centers near nuclear plants, just as they did at the height of the nuclear testing in our atmosphere in the 1950s. In those states where there are no large nuclear reactors, no nuclear bomb facilities, and no nuclear test sites, Dr. Sternglass finds the total mortality rate is dropping.

Englishwoman Dr. Alice Stewart, a recognized world authority on nuclear epidemiology, discovered that women exposed to diagnostic X-rays during pregnancy had offspring with two times the likelihood of developing leukemia as did children who had not been exposed *in utero*. It seems that just a small dose of radiation, approximately the equivalent of a single year of background radiation from the environment, doubled the rate of cancer for exposed fetuses. She also found that the risk of children developing childhood leukemia was twelve times greater if their exposure to X-ray diagnosis occurred in the first three months of pregnancy rather than at the end of pregnancy.

Dr. Sternglass points out that this discovery of a one-thousandfold radiation sensitivity in the early human embryo could explain his findings of increased infant mortality due to all causes following an exposure to nuclear fallout from bomb testing or nuclear plant explosions like Chernobyl. Sternglass hypothesizes that when the fetus or infant is exposed to radioactive elements, such as strontium-90, the radioactive particles accumulate in the bone marrow, where the cells of the immune system are developing, and disrupt their functioning.

Iodine-131, which is absorbed *in utero* or through the milk of the mother or cow, disrupts the thyroid gland. A poorly functioning thyroid gland affects growth and metabolism of infants. Radioactive decay of strontium-90 creates yttrium-90, which goes on to disrupt the function of the thymus gland. The thymus gland is extremely important for immune function. The yttrium-90 also accumulates in the pituitary and gonads and disrupts the critical secretory and regulatory functions of these glands. All these vital glandular organs affect the birth process and the onset of labor. Their disruption from radioactive particles from fallout may explain the increasing epidemic of spontaneous miscarriages and premature deliveries associated with the onset of nuclear atmospheric testing in

general, and the Chernobyl accident in particular.

According to Dr. Sternglass, the iodine-131 is concentrated one hundred times more in the thyroid of a fetus than in an adult. Since this radioactive poisoning of the thyroid affects the growth and development of all organs, Sternglass believes this helps to explain the epidemic of underweight babies and is also associated with the reported increased incidence of brain damage and dyslexia that began during the time of nuclear testing. In follow-up research on radiation-related brain damage, Dr. Sternglass has noticed a correlation between prenatal radiation exposure and an 18-year follow-up that showed a drop in SAT scores in those who were exposed by living in areas of nuclear testing. According to Dr. Sternglass, as long as unborn children are exposed *en masse* to radiation, there is a possibility of widespread intellectual decline.

The post-Chernobyl statistics in the United States, compiled by Dr. Sternglass and presented at the First Global Radiation Victims Conference in New York in September 1987, impressively convey the seriousness of the radiation problem. The infant mortality rate following the arrival of the Chernobyl fallout in early May of 1986 showed a 54% increase in June 1986 in the Pacific region of the United States. Washington state had the highest rate in the region with a 245% increase in deaths per thousand live births. California was next highest with a 48% increase in infant mortality as compared to June of the year before. These high rates lasted for July and August. Massachusetts led the nation in post-Chernobyl increase of infant mortality rate with an increase of 900% per thousand live births! Massachusetts also had a decline of 70% in newborns. The rate of live births also decreased throughout the country in response to the Chernobyl fallout. The US fertility rate decreased 8.3% in July and August to the lowest level ever observed in United States history. In the eight months following the accident, there was a total decrease of 60,000 newborns in the United States. This was followed by a return to the approximated average rate of live births in September. This suggests that the sharp decrease in live births in July and August 1986, following the arrival of radioactive particles from the Chernobyl fallout, was a result of the fallout, with a sudden increase in miscarriages, fetal deaths, and still-births observed. We are profoundly affected by accidents of our nuclear technology. It is time to move out of government-supported denial and do something about it and at least try to protect ourselves with diet.

In his paper, Dr. Sternglass suggests that this rapid rise in perinatal mortality and decrease in live births was associated with an increase of radioactive iodine in the rainwater in New England, which was the highest in the country at the time. I covered my organic garden with plastic for the first several rains after the fallout from Chernobyl came to California. The rise in iodine-131 in the water correlates with rise of radioactive iodine-131 in milk. The rapid rise and fall of these statistics suggest that it had to be associated with a short-lived radioactive agent, such as iodine-131, which has a half-life of eight days and a radioactive release life of 160 days. Although the developing fetus and infants are the most sensitive to radioactive fallout for the reasons already explained, the post-Chernobyl fallout was associated with an overall rise in mortality for all ages. Massachusetts was the highest, with an increase in total deaths for all ages of 43%, and California and Washington state were next, with an increase in total mortality rates of 39% and 40%. The statistics show 35,000 more deaths for all ages in the US in the eight months following the arrival of Chernobyl radioactivity than would be expected based on the normal rates for this time in previous years. Dr. Sternglass thinks that his Chernobyl accident observations can explain the unexpectedly large increases of infant and total mortality rates in areas located near nuclear reactors. Sternglass further points out that the

... effect of the radioactivity appears to have been similar to that of the intense (radioactive) air pollution episodes of the 1950s and 1960s during the period of large-scale, atmospheric testing of nuclear weapons.

According to *Diet for the Atomic Age* by Sara Shannon, as of 1980, about thirty million Americans live within thirty miles of a nuclear power or weapons plant, and are thus exposed to abnormally high doses of radiation.

Something Can Be Done

SHARE THIS INFORMATION TO ALERT PEOPLE to a situation that the government of the United States apparently wants to ignore or minimize. *On the positive side, there is a lot we can do to minimize the negative effects of radiation.* In addition to the general prescription to live as healthful a lifestyle as is possible, *there is a specific radiation protection diet that maximizes the preservation of health and specifically neutralizes the effects of radiation.*

Decreasing one's susceptibility by improving one's overall health is one place to begin. A person's susceptibility usually is not included in calculating risk factors among radiation workers and those exposed to radioactive fallout by members of the medical profession who use nuclear medicine (including X-rays). Taking the average dose does not allow for the increased danger for those who are not in optimal health or who fall into the more susceptible age groups. This point was driven home by Dr. Stewart's study entitled, "Delayed Effects of A-Bomb Radiation: A Review of Recent Mortality Rates and Risk Estimates for Five-Year Survivors," published in the *Journal of Epidemiology and Community Health* in 1982. She established the fact that *those who were the healthiest were the ones with the best survival rates.* Dr. Irwin Bross, in his article published in the *New England Journal of Medicine* in July 1972, was able to select which children would be twenty-five times more likely to develop leukemia from X-ray exposure. His work reinforces the point that one cannot determine "safe levels of radiation exposure" based on an "average exposure" of "average individuals." This fallacious concept of an "average," safe exposure limit does not provide an exposure limit that protects the most susceptible groups. *There is no such thing as an average or safe dose of radiation.*

Principles of Dietary Protection from Radiation

THE POPULATION GROUPS that are most susceptible to radiation poisoning are those in poor health, fetuses, infants, young children, and older people. The older people are more affected because their immune systems are often weaker and because of a preexisting accumulation of radiation exposure throughout their lives. Whether one is in a susceptible group or even in optimal health, the ability to minimize the effects of radiation can be greatly enhanced by a healthy diet and lifestyle and the inclusion of special foods in the diet known to maximize protection from all forms of nuclear radiation. We have already discussed extensively the meaning of a healthy diet, so now we will explore the use of foods and herbs that specifically minimize the effect of radiation.

The antiradiation diet is built on four principles. The first is the *principle of selective uptake*, which essentially means that if one has enough minerals in the system, the cells become saturated with minerals. Once cellular mineral saturation occurs, there is less opportunity for the radioactive minerals to be absorbed into the system. For example, with such minerals as calcium or iodine, if there is sufficient natural calcium, or iodine in the system, the body will not tend to absorb additional strontium-90, which is a close equivalent to calcium or iodine-131. If the normal mineral levels are low, then strontium-90 and iodine-131 will be more easily absorbed. When any of these radioactive minerals are absorbed into a particular tissue, they immediately begin to irradiate the surrounding cells and tissues. Each element is attracted to the organs in which it is normally utilized. The main radioactive minerals and the organs they specifically target—and therefore irradiate—can be seen on the chart on page 606. Also listed are the healthy minerals that inhibit this cellular damage by the principle of selective uptake.

The second main concept in protection against radiation exposure is that of chelation. This means there are certain foods that will actively draw the radioactive materials to them and pull them out of the body via the bowel excretion process.

The third concept is to keep the body high in antioxidant nutrients and enzymes, which will nullify the free radicals created by the radiation exposure.

The fourth concept is that there are certain foods and herbs that specifically protect against the overall effects of radiation or radiation treatments.

There are other ways to protect against radiation exposure. Research published in the *International Journal of Radiation Biology* in 1980 indicated that the pH of the cellular fluid could influence the cell's response to radiation. *Diet for the Atomic Age*, by Sara Shannon, says that many studies have suggested that a slightly alkaline to middle range of body pH enhances the resistance to radiation.

Stopping smoking is an immediate way to reduce self-induced radiation exposure. Dr. Schechter, in his book *Fighting Radiation and Chemical Pollutants with Foods, Herbs, and Vitamins*, estimates that pack-a-day smokers expose themselves to the equivalent of 300 chest X-rays per year. Avoiding living near nuclear plants and avoiding unnecessary diagnostic X-ray procedures are other ways.

Radiation Protection from Selective Uptake

THE PRINCIPLE OF SELECTIVE UPTAKE gives us specific ways to minimize the dangerous effects of radiation exposure. As revealed in the Chernobyl studies, one of the main causes of radiation sickness and death is radioactive iodine-131. In a November 1987 *East-West Journal* article, Dr. Schechter points out that Dr. Russel Morgan, who served as the chief radiologist of Johns Hopkins University, reported that *one milligram of iodine for children, and five milligrams for adults, per day would reduce the amount of radioactive iodine accumulated in the thyroid by 80% from direct I-131 exposure.* This is the equivalent of five to ten tablets of kelp per day or one to two teaspoons of kelp granules. *For preventative purposes one needs closer to one milligram per day for an adult, which is about one-half ounce of dulse or other sea vegetables per day.* Other high-iodine foods are Swiss chard, turnip greens, wild garlic and onions, watercress, squash, mustard greens, spinach, asparagus, kale, citrus, watermelon, and pineapple. These vegetables may be lower in iodine in the Great Lakes area and the Pacific Northwest of the United States due to a low iodine in the soil.

Too much iodine may cause an overstimulation of the thyroid. If one is being treated for thyroid disease, hyperactivity, or cardiovascular disease, it is important to consult your physician or health practitioner before adding high-iodine tablets or lots of sea vegetables to your diet.

Principles of Selective Uptake

Healthy Minerals	Radioactive Minerals	Organs Protected
Calcium	Strontium-90, Strontium-85 Barium-140, Radium	Bone
Potassium	Cesium-137, -134 and Potassium-42, -40	Muscle, Kidney, Liver, Reproductive Organs
Iodine	Iodine-131	Thyroid and Gonads
Iron	Plutonium-238, -239 and Iron-238, -239	Lungs, Liver, and Gonads
Zinc	Zinc-65	Bones, Gonads
Vitamin B12	Cobalt-60	Liver, Reproductive Organs
Sulfur	Sulfur-135	Skin

An additional approach to radiation exposure is to avoid eating foods high on the food chain (animal foods), which dramatically concentrate these radioactive minerals. Radioactive particles can originate in the air, such as in fallout, or through water contamination, as has happened with the leakage of cesium-137 at a Georgia radiation sterilizer plant. Statistics adapted from the *Radiological Assessment of the Wyhl Nuclear Power Plant* by the Department of Environmental Protection of the University of Heidelberg, Germany, in 1978, showed that as a result of air exposure to radiation, cow's milk is about fifteen times more concentrated with radioactive materials, and beef is more than thirty times more concentrated, than are leafy vegetables. Root vegetables are about four more times concentrated than leafy vegetables and about three times more concentrated in radioactive material than grains. In the area of radiation exposure from water, fish were the most concentrated on the food chain. They contained about fifteen times more radioactivity than leafy green vegetables. It is also important to note that the concentration of radioactive nucleotides in freshwater fish is considerably higher than saltwater fish because the latter have more minerals and therefore are better protected.

In general, however, foods lower on the food chain have less radiation contamination than those higher on the food chain, such as milk and flesh foods. Milk is the main carrier for strontium-90 and also is a major carrier for iodine-131 to enter the human system. One interesting point about the food chain is that it does not necessarily mean that the concentration of radioactive materials dissipates the farther away one is from the contaminating source. Aside from wind currents, which in the Chernobyl accident carried contaminants in high concentrations to such places as Massachusetts, the concentration of radioactivity up the food chain definitely makes the problem worse. Therefore, *eating low on the food chain is the best way of minimizing dietary-sourced radioactivity*

Chelation Protection

ANOTHER IMPORTANT WAY OF NEUTRALIZING radioactive buildup is chelation. The best chelator for pulling radioactive material out of the system is sodium alginate. According to studies by Yukio Tanaka and other researchers at the Gastrointestinal Research Laboratory at McGill University in Canada, sodium alginate reduces the amount of strontium-90 absorbed by the bone by 53-80%. The sea vegetables containing the most sodium alginate are in the kelp family, which includes kelp, arame, wakame, kombu, and hijiki. Other research reported by Dr. Schechter suggests that sodium alginate not only protects us from absorbing strontium-90, but also helps pull out the existing strontium-90 from our bones. What is especially interesting is that sodium alginate does not seem to interfere with normal calcium uptake. Work by J. F. Sara at the Environmental Toxicology Laboratory of the EPA, and A. Huag, reported in the *Composition and Properties of Alginates, Report no. 30*, showed that the alginate binds other metal pollutants, such as excess barium, lead, plutonium, cesium, and cadmium. Research by Tanaka showed that the alginate decreased the uptake of strontium-90, strontium-85, barium, and radium by a factor of twelve. These radioactive elements are then transformed into harmless salts and excreted by the system. Schechter points out that the different sea vegetables seem to be selective in regard to which radioactive element they tend to bind the most. Brown sea vegetables bind excess strontium and iron. Red sea vegetables, such as dulse, are best for binding plutonium. The green algae bind cesium-137 most effectively.

The United States Atomic Energy Commission, which has recognized the effectiveness of sea vegetables for minimizing the intake of radioactive minerals, recommends a minimum dosage of two to three ounces of sea vegetables per week, or ten grams (two tablespoons) per day of sodium alginate supplements. Dr. Schechter, in his optimum antiradiation diet, also recommends three ounces per week of sea vegetables. During an actual acute radioactive exposure, Dr. Schechter believes the dosage should be increased to two full tablespoons of alginate four times per day, or six ounces per week of sea vegetables.

Fortunately, sea vegetables are great-tasting foods as well as our antiradiation friends. Sea vegetables have all the fifty-six minerals and trace elements our bodies require. This is about twenty more minerals than land vegetables have. They have the highest amounts of magnesium, iron, iodine, and sodium, ranking second in calcium and phosphorus. For example, four ounces of hijiki contain 1,400 mg of calcium. Dulse ranks first in potassium of any plant food.

Sea vegetables are high in vitamin A, chlorophyll, enzymes, all the Bs, some vitamin E and D, and vitamin C content equal to that of green vegetables. They are an excellent source of human-active B12. They have about 25% protein, 2% fat, and are very high in fiber. Laver nori, for example, has approximately twice as much protein as tofu per weight and more insoluble and soluble fiber than oat bran. Because sea vegetables often come with sea salt still on them, I recommend soaking them before using to rinse off the salt.

Another chelating agent that protects the body from absorbing radioactive materials is zybicolin, a fiber that is especially good for drawing out radioactive materials. It is found in miso. Other fiber foods with high chelation properties include the fiber found in whole grains, nuts, seeds, and beans. Fiber contained in pectin, which is a soluble fiber found in fruits and seeds, especially sunflower seeds, also has high chelation properties. Phytates, found in grains and beans, and sulphur-containing amino acids, found particularly in the cabbage family, are also good chelators. Not only do these have a chelating effect, but the sulphur-containing amino acid vegetables prevent the uptake of sulphur-135.

Chelation

Nutrients

Chelation

Agents

Sodium	Kelp—best chelates Strontium-90, Strontium-85, Barium-140, Radium	Dulse—best chelates
Alginate	Plutonium Blue-Green—best chelates	Cesium-137 Other sea vegetables
Pectin	Soy, apples, sunflower seeds	
Zybicolin	Miso	
Phytates	Grains, beans, peas	

Cellulose & Nondissolvable food fibers
Lignin

Special Foods That Protect Against Radiation Exposure

MISO IS A FOOD THAT HAS BEEN ACCLAIMED as a general protector against radiation sickness and chronic disease. Miso is an alkaline-forming, fermented paste made from soybeans which may also be mixed with rice or barley. Unpasteurized miso, which is the only type to eat, has many healthy bacteria and enzymes which help digestion and keep the bowels healthy. Its B12 protects against the absorption of cobalt-60. Miso has many other minerals which protect against the uptake of other radioactive minerals.

The anecdotal evidence that made miso famous as an antiradiation food was the story of Dr. Akizuki of the St. Francis Clinic in Nagasaki during World War II. Dr. Akizuki's clinic was one mile from the blast when the atomic bomb went off in Nagasaki. Dr. Akizuki and his staff, who ate miso regularly, did not suffer radiation sickness as they cared for the victims of the atomic blast in the weeks and years following the event. Unfortunately, according to Dr. Schechter in a personal communication, when scientists such as himself tried to validate this great story, they were not able to find any proof of its veracity or any documentary research.

In *Macrobotics for Personal and Planetary Health*, Autumn/Winter 1990, there is an article that supports the antiradiation power of miso. Scientists in Japan found that laboratory mice who were fed miso daily were five times more resistant to radiation than mice who were not eating miso. One consideration about miso is its high sea salt content. Those with high blood pressure or heart disease should monitor their intake carefully.

Beets are another special food. Not only are they known as a liver and blood detoxifier, but they protect the nervous system and also help to treat anemia. Radiation may cause difficulties in all these areas. Beets are high in iron, which protects against absorption of plutonium-238 and 239, iron-55, and iron-59. The most startling study done on beets was reported in the *Journal of Dental Research* by J. Wolsieffer in 1973. Rats fed a diet of 20% beet pulp had 97-100% less cesium-137 absorption than rats exposed to the same radiation but not given the beet pulp. Work by Dr. Siegmund Schmidt, reported in *Raw Energy* by Susan and Leslie Kenton, indicated that raw beet juice has been successfully used to prevent and cure radiation-induced cancers. The beet juice is particularly high in a specific anthocyan which is active against cancer and leukemia. It must be mentioned that if one lives in an area where the groundwater might be contaminated with radioactivity, beets—since they are below-ground vegetables—may be more exposed to the radioactive water than above-ground types of vegetables.

Bee pollen is another potent antiradiation food as well as a general health enhancer. Bee pollen helps to support the immune system and protects both red and white blood cells against their usual depletion from radiation. Bee pollen is also high in vitamins A, B, C, and E, nucleic acids, lecithin, cysteine, and vital minerals such as selenium, calcium, and magnesium. All of these nutrients contribute in their own way in helping to protect against radiation.

One study—reported in *Fighting Radiation and Chemical Pollutants with Foods, Herbs, and Vitamins* conducted by Dr. Peter Hernuss at the University of Vienna Women's Clinic, showed that bee pollen significantly reduced the usual side effects of both radium and cobalt-60 radiotherapy in twenty-five women treated for inoperable uterine cancer. As compared to the women who did not receive bee pollen, subjects had one-half as much nausea, 80% less loss of appetite, 50% less urinary, rectal, and sleep disorders, and 30% less general malaise and weakness after the treatment. They were given approximately two tablespoons of bee pollen three times per day. Other clinical research has shown similar results. Scientists at Stanford Research Institute found that bee pollen protected mice against X-ray treatments.

Bee pollen has 15% lecithin, which helps to protect the nervous system and brain against radiation. Lecithin is useful in protecting against strontium-90, X-rays, iodine-131, krypton-85, ruthenium-106, zinc-65, barium-140, potassium-42, and cesium-137. Bee pollen specifically protects the gonads against the accumulation of iodine-131 and plutonium-239. It also gives some protection against environmental contaminants such as lead, mercury, aluminum, DDT, nitrates, and nitrites. Bee pollen is high in nucleic acids, which a variety of research has shown to increase survival of mice against radiation. One Soviet study showed a 40% survival rate increase in rats after they received nucleic acids before radiation exposure.

Bee pollen is much more than simply a radiation protection food. It, along with sea vegetables, is a food I recommend taking regularly as part of the *conscious eater's approach* whether or not you are concerned with radiation protection. *Bee pollen is the procreative life force of the plant world.*

Pollen is the finest food and best medicine ever discovered. Pollen contains the richest source yet revealed

of vitamins, minerals, proteins, amino acids, hormones, enzymes, and fats. Pollen also contains other substances which so far defy identification.

This is the opinion of Dr. G. J. Binding, M.B.E., F.R.H.S., a British scientist, author, and world-famous expert on nutrition. Dr. Binding believes that the honeybee pollen has a powerful life force that

... not only builds up strength and energy in the tired body, but acts as a tonic. People have more vigor, vitality, and increased resistance to infection... Honeybee pollen has shown itself to be a complete nourishment in every sense of the word.

The high life force in the pollen comes from the millions of living plant forces contained therein. Each pollen granule contains four million pollen grains. One teaspoon contains about two and one-half billion to ten billion pollen grains. Each of these grains is the male semen, seed, or germ cell of the plant kingdom. Every pollen grain has the power to fertilize and create a fruit, a grain, a vegetable, a flower, or a tree. *Pollen is the ultimate biogenic food.* It is filled with life force of the entire plant kingdom.

The Bible mentions bee pollen sixty-eight times. The Talmud, the Koran, ancient Chinese scriptures, and Roman and Greek civilizations, as well as the Russian and Slavic people, have all praised bee pollen and honey as a source of rejuvenation and health. Many Greek philosophers claimed that bee pollen held the secret to eternal youth. The original Greek Olympic athletes used pollen-rich honey as part of their training diets.

Pollen is said to contain all the elements necessary for the sustenance of human life. The San Francisco Medical Research Foundation estimates that pollen has more than 5000 different enzymes and co-enzymes, which is more than any other food in existence. The high amount of enzymes, such as catalase, amylase, and pectin-splitting enzymes, makes pollen an aid to digestion. Some research suggests that pollen is absorbed directly from the stomach into the bloodstream. Pollen is a vegetarian source of human-active B12, most of the B vitamins, vitamins A, C, D, and E, rutin, all the essential amino acids, the essential fatty acid called linoleic acid, fats, complex carbohydrates, simple sugars, RNA and DNA, steroid hormone substances, a plant hormone similar to a secretion of the human pituitary called gonadotropin, 15% lecithin, and many other unknown factors. According to research by doctors from France, Italy, and the former USSR, pollen is the richest source of protein in nature. Gram for gram, pollen contains an estimated 5-7 times more protein than meat, eggs, or cheese. The protein in pollen is in a predigested form and therefore easy to assimilate. Pollen is also abundant in minerals and trace minerals, such as calcium, phosphorus, magnesium, iron, manganese, potassium, copper, silicon, sulphur, choline, titanium, and sodium. These minerals are highly assimilable because they are bound organically from plant metabolism.

According to Dr. Airola, research in Russia and Sweden has found that bee pollen is both rejuvenating and life-prolonging. Bee pollen seems to improve general health, prevent disease, boost the immune system, and stimulate and rejuvenate the glandular system. M. Esperrois, M.D., of the French Institute of Chemistry, concluded from his experiments that pollen contains potent antibiotics and also reverses the aging of the skin. Research reported by Dr. Airola has found that bee pollen is good for prostate difficulties, hemorrhoids, asthma, allergies, digestive disorders, curing intestinal putrefaction, chronic bronchitis, multiple sclerosis, gastric ulcers, arthritis, and hay fever, and possesses anti-aging properties. According to Dr. Alain Caillais, in *Le Pollen*, 35 grams of bee pollen per day would satisfy the total nutritional needs of the average person. That is about three and one-half tablespoons per day. Dr. Airola believes that it fulfills Hippocrates' requirement of the ideal food:

Let your food be your medicine ... let your medicine be your food.

Pollen is harvested by the female worker bee when she brushes up against anthers of the flower. The pollen sticks to her legs. When she returns to the hive, she passes through a man-made screen that rubs off some of the pollen pellets. Like harvesting fruit, obtaining bee pollen does not require the killing of the plant. Some beekeepers feel that pollen turns rancid in as short a time as one week, even in the hive, if the harvesting is done less than weekly and the weather is hot. Dried pollen is also said to become rancid easily. The best technique for eating pollen, given these possibilities, is to get it from a local beekeeper within a week of harvest and put it in the freezer and not the refrigerator. Curiously enough, pollen doesn't seem to freeze in most freezers. This may be because pollen is only 3-4% water. In the freezer, it goes rancid a lot slower than out in the open or in the refrigerator. Other beekeepers do not seem to think it is necessary to freeze or even refrigerate it. The final test is whether or not it has a bitter, rancid taste. If it does, do not buy it. Research of Haydak, *et al*, reported by the San Francisco Medical Research Foundation, suggests that one-year-old bee pollen loses 76% of its effectiveness when not refrigerated. This organization estimates that after five months bee pollen loses up to 50% of its potency. The implications of these diverse opinions lead me to suggest that one should try to get bee pollen that has been at least refrigerated as soon as

possible after harvest. The best way to do this is to make a connection with a local beekeeper and get it directly from him or her. Depending on one's health, taste, and sensitivities, a good supplemental amount is one teaspoon to one tablespoon per day.

Yeast is another antiradiation food. It is particularly high in selenium, all the B vitamins including B12, and nucleic acids, all of which give protection against the side effects of radiation. A study done at Montefiore Hospital in New York, in which three tablespoons of yeast were given daily for one week before cancer patients received radiation treatments, showed that these patients did not develop any side effects to the administered radiation. The control patients, who were not given yeast, developed severe vomiting and anemia. Although initially there was some confusion about avoiding all yeasts if people had candida infections, it has now become clear that the yeast that causes candida infections is *Candida albicans*, and not *Saccha-romyces cerevisiae*, which is primarily grown yeast and a different genus and species. Unless a person's immune system is so deranged that it begins to cross-react against all yeast in the system, there is no major problem taking yeast. The dosage for radiation treatments is one tablespoon three times per day. Yeast and lecithin are high in phosphorus, so taking a calcium supplement or eating high-calcium foods is a good way to balance the phosphorus excess.

Garlic is another specific antiradiation food. Although garlic has many different health-producing qualities, the properties that may be most active against radiation are amino acid cysteine, the high-quality organic sulphur, and an unidentified substance named vitamin X by the Soviets, which both prevents the absorption of radioactive isotopes and helps to draw them out of the body. Wild onions and wild ginseng also seem to have this vitamin X. The sulphur, which is high in all members of the cabbage family, prevents the uptake of sulphur-135.

Cysteine may be the most active factor in garlic, however. Cysteine is an antioxidant which helps to quench free radical production. Cysteine also binds with, and deactivates, cobalt-60. It also protects against X-rays. Dr. Schechter points out that the Japanese first reported the protective effects of cysteine in 1972 when they found that mice fed cysteine were able to survive 600 rads of radiation, when 70% of the mice who did not receive cysteine did not survive the radiation. This finding of cysteine's protection against cobalt-60 radiation has been confirmed by several researchers.

Foods containing **chlorophyll** have long been known to protect against radiation. Generally speaking, any green foods have chlorophyll. From 1959 to 1961, the Chief of the US Army Nutrition Branch in Chicago found that high-chlorophyll foods reduced the effects of radiation on guinea pigs by 50%. This includes all chlorophyll foods: cabbage, leafy green vegetables, spirulina, chlorella, wheatgrass, any sprouts, and the blue-green algae from Klamath Lake called *Aphanizomenon Flos-aquae* (AFA). This variety of blue-green algae is an excellent antiradiation food because of its high cellular immutability and high regenerative energy, as well as its high chlorophyll content. It should be taken in a dose of four capsules (one gram) four times per day for one week before, and several weeks after, radiation exposure.

One gram of the freeze-dried AFA, taken directly from Klamath Lake and prepared for regular consumption, also contains 0.279 milligrams of the active form of vitamin B12 for humans. Much of the B12 found in other algae, like spirulina or even the various marine algae, are primarily in analog form. This means that it is close to B12 in chemical structure but it is not utilizable in the same way by humans, and actually might compete for receptor sites on the cellular level with the real B12. The implication of all this is that one gram of AFA supplies the minimum daily need of B12 as established by researchers.

AFA also seems to help balance blood sugar and the mood swings associated with glucose fluctuations found in hypoglycemia. With a well-designed diet for hypoglycemia, AFA has been a helpful adjunct. It is important to note that my clinical findings on hypoglycemia and other medical conditions have not been tested by strict research procedures. Further formal research studies need to be done to corroborate my limited clinical findings before a definitive statement can be made.

The most unique property of AFA, however, is its effect on the mind-brain function. In my work with AFA, I have observed with myself and with my clients that it has an extremely high subtle organizing energy field (SOEF) that seems to regenerate mind and body energy I use two forms of AFA. One is a unique, concentrated liquid, which is live and unprocessed until just before bottling. This fresh, liquid preparation is the only one of its kind available today. The other form is freeze-dried, available either in powder or capsules.

I find that the liquid works synergistically with the freeze-dried form. The freeze-dried form is about one hundred times more concentrated than the liquid, live form. The liquid form seems to have more of a pure energetic mind-brain effect. The freeze-dried form adds the energized neurotransmitters, sulfonolipids, and B12.

As I point out in my book *Spiritual Nutrition and The Rainbow Diet*, AFA seems to activate mind-brain function in about 70-80% of those who use it. It has been a blessing for those who do a great deal of mental work. It is also excellent for those doing a lot of high-stress work or for students taking exams. Of course, I do not recommend it as a substitute for healthy living habits or adequate sleep.

I have found that AFA also enhances one's ability to sustain concentration while taking or giving workshops. In my spiritual nutrition workshops, I teach nonstop from 7:30 AM to 10 PM at night. I find AFA to be a tremendously useful adjunct that helps me sustain my energy and mental concentration. It seems to create a subtle clarity of mind that potentiates both creative thinking and deep meditations.

Because of the brain-enhancing qualities I observed with this algae, I became interested in exploring its effect on Alzheimer's disease. In my preliminary research, which was published in the *Journal of the Orthomolecular Society*, Winter/Spring 1985 issue, I reported two cases of people who had been diagnosed as having Alzheimer's disease at two highly respected university medical centers. In one person, the course of Alzheimer's was partially reversed; in the other, a rapidly moving senility was halted.

Along with bee pollen and sea vegetables, I recommend AFA as a wholefood supplement for regular use in one's diet.

Antioxidant enzymes from **wheat sprouts** not only protect against all types of radiation exposure, but protect against the dangerous level of air, water, and food pollution, which also increases our exposure to free radicals. Mental stress and severe viral infections can greatly increase the amount of free radicals in the system. As explained in detail in *Spiritual Nutrition and The Rainbow Diet*, free radicals are intimately connected with speeding up the aging process.

These live enzymes are specially formulated, organic, whole-food supplements which are designed to neutralize free radicals. The entire dehydrated sprout is used in this product so it remains essentially a whole, live food when taken as a supplement. Nowadays, many antioxidant nutrients are offered in a variety of multivitamins. These work to some extent but are usually synthetic vitamins, and thus they lack a wholeness and integrity that is only found in whole foods and whole-food supplements. These wheat sprouts are genetically selected and grown in a way that produces a high concentration of antioxidant enzymes, such as superoxide dismutases, methionine reductases, glutathione peroxidases, and catalases.

The two main enzyme companies that produce these wheat sprout antioxidants are *Bioguard* and *Biotech*. According to Dr. Steven Levine and Parris Kidd, in their book *Antioxidant Adaptation: Its Role in Free Radical Pathology*, antioxidant enzymes are the first line of defense against free radical stress. I also recommend them to protect against radiation exposure in my jet lag program.

These enzymes adequately support the antioxidant systems in the body that protect us from free radicals. It is important to note that the free radicals are most commonly active at the cellular level, but none of the ordinary vitamin-based antioxidants act as free-radical scavengers at the cellular level. The vitamin antioxidants, such as C, A, and E, act primarily as free-radical scavengers in their free form in the blood. The antioxidant enzymes, on the other hand, act as free-radical "quencher" at the cellular level.

The number of wheatgrass antioxidant enzyme tablets one takes varies and depends upon one's body weight and the amount of free-radical exposure to which one is subjected. The maximum number of tablets per day from either of the two main companies presently manufacturing the wheat sprout product is about twelve. For maximum free-radical stress, three tablets taken four times a day at least one-half hour before eating food is optimal. The documented research suggests that as one increases the tablets up to a certain level per day, the enzyme activity in the blood increases. After a certain amount per day, the enzyme activity does not seem to increase in the blood and taking any more is redundant. Those who lead more toxic lifestyles, or who live in more toxic environments, should take close to the maximum suggested per day

Antiradiation Food and Herbs

FOODS

Miso	High Minerals, Zybicolin, 5% Ethyl esters (anticancer elements)
Sea Vegetables, Kelp	Iron, Potassium, Iodine, and the rest of the 56 land/sea minerals, Sodium Alginate
Sunflower Seeds, Apples, and Soy	Pectin
Cereals, Fruit, Vegetables	Fiber, Phytates
Raw Food	Alkalinizes the system and has a general detox effect
Sulfur Vegetables (Broccoli, Cabbage, Cauliflower & Radish)	Sulfur, Cysteine
Bee Pollen	B6, B12, Inositol, Folic Acid, RNA, DNA, and improves survival from X-ray treatment by 40%; contains 15% lecithin which protects nerves, brain, and gonads from radiation
Chlorophyll-Containing Foods	Reduces radiation side effects by 50%

Beets	97-100% protection against Cesium-137
Garlic, Ginseng, and Onion	97-100% protection against mutagenesis, high selenium, anti-oxidative effect
Blue-Green Algae	Protects against Krypton-85, Cesium-137, improves cellular immutability; high in chlorophyll

HERBS

Siberian Ginseng	Adaptogenic, doubles post-radiation lifespan of rats
Chaparral	Potent anti-oxidant NGRA

**Wash and peel produce in bleach—
removes 100% of immediate
radioactive fallout**

Herbs That Protect Against Radiation

SIBERIAN GINSENG, ALSO KNOWN AS ELEUTHERO, or *Eleutherococcus senticosus*, despite its name is not the ginseng we usually associate with the name ginseng. Siberian ginseng comes from an entirely different herbal family and originates in Russia and China. It comes from a bush, unlike *Ginseng panax*, which is a root. Most of the research on it has been done by the Russians.

Siberian ginseng is referred to as an adaptogen because it produces a generalized rebalancing and healing effect on the body from all types of physiological, emotional, and environmental stressors, including radiation. In the book *Fighting Radiation and Chemical Pollution with Foods, Herbs, and Vitamins*, many Russian research articles are quoted which essentially show that Siberian ginseng is one of the best herbs for minimizing the effects of radiation. It has been used successfully in situations of acute or chronic radiation sickness, including the conditions of hemorrhaging, severe anemia, dizziness, nausea, vomiting, and headaches due to X-rays. Siberian ginseng has been shown to lengthen survival time after exposure as well.

In one study, Siberian ginseng given one hour before radiation treatments improved the patient's general state, appetite, and sleep, and normalized unhealthy shifts in the vital signs. Russian medical researchers found that the best post-radiation treatment results were observed when the Siberian ginseng was started two to four days before the X-ray treatment. When two milliliters of the herbal extract was used per day, patients showed almost no usual reaction to the X-ray treatments (such as mental imbalances and irritability, dizziness, nausea, and loss of appetite). Many were able to maintain a state of well-being. Other research has suggested that even when the radiation is combined with chemotherapy, there are minimal side effects when the Siberian ginseng is used. The recommended dosage during the time of radiation therapy is approximately thirty drops of extract, five times per day.

Siberian ginseng seems to enhance the general resistance to all aspects of the toxic side of anticancer radiation and chemotherapy. My experience in using Siberian ginseng clinically for many years is that it boosts almost every aspect of body function. It is especially good in supporting the endocrine and immune systems against physical, emotional, chemical, biological, and radiation stress.

A general dosage to combat stress is 20-40 drops of the liquid extract in room-temperature water three times per day before meals. According to Dr. Schechter in a personal communication, the extracted, organic form of Siberian ginseng is the most potent. For children, give one drop for every year of their age, two times a day. When there is no obvious stress, one can take twenty to forty drops one time per day and also have intervals not taking it at all.

Astragalus and **echinacea** are also very important herbs for supporting the immune system during radiation therapy. These are best taken daily for about one week before and one week afterwards, during the time of radiation. **Ginseng panaxis** an important antiradiation herb, particularly because of its ability to protect the immune system and bone marrow production, as well as its general energizing effect on many organ systems. **Chaparral** is another excellent herb for helping the body resist the effects of radiation.

Summary of the Radiation Protection Diet

ALOW-FAT, HIGH-NATURAL-CARBOHYDRATE, high-fiber, high-sea-vegetable, 80%-raw vegetarian diet shifts the body into a slightly alkaline condition that has the effect of optimizing protection from radiation. This type of diet keeps one eating low on the food chain, avoiding all flesh foods and dairy, which are high carriers of iodine-131 and strontium-90.

The radiation protection diet has more emphasis on sea vegetables. For prevention and buildup of a mineral reserve, three ounces per week is sufficient. As pollution increases in the ocean, it is important to know whether one's sea vegetables are contaminated. There is at least one sea vegetable company that checks their products for potential pollution at each harvest. It is the Maine Coast Sea Vegetables Company located in Franklin, Maine (207-565-2907). All their sea vegetables come from the still-unindustrialized and relatively unpolluted northeastern end of the Gulf of Maine. Their sea vegetables are checked by the Maine Public Health Laboratories for forty-seven different chemical pollutants. These include PCBs, hydrocarbons, nine different insecticides, and thirty-six different herbicides. No traces of any of these pollutants have ever been detected. The University of Maine's Department of Food Science tests the sea vegetables for lead, arsenic, mercury, and cadmium. As can be expected anywhere in the world, there are some trace heavy metals, but they are very low as compared to the United Nations FAO/WHO codex of tolerable daily intake limits. Tests at the University of Maine show that no harmful organisms, including coliform and *E. coli* bacteria, or yeast and molds, have exhibited any unusual microbial activity in the sea vegetables themselves or as a result of the drying, storing, or packaging process.

Antiradiation Supplements

Germanium	Anti-oxidant
Cysteine	Removes free radicals, protects against X-rays, Cobalt-60, Sulphur-35
Vitamin C with Rutin	Reduces radiation side effects by 50% , supports blood vessels
Vitamins A/D	Removes Strontium-90 from bone
Vitamin E	Protects fetus from Cesium-137, boosts immune system, anti-cancer effect, protects from free radicals
Detox Bath	1 lb. Sea Salt + 1 lb. Bicarbonate of Soda

I regularly eat sea vegetables in their raw state and recommend them on almost a daily basis as part of the general diet. Because each sea vegetable helps remove different radioactive particles, I rotate among kelp, dulse, alaria (wild Atlantic wakame), and laver (Atlantic nori). Some folks report that sea vegetables are something for which one has to acquire a taste. See the recipe section in Lita Lee's *Radiation Protection Manual* for a further discussion of sea vegetables. I, too, recommend them. Sea vegetables have many healing qualities and they are high in sulphur. Also see Chapters 5 and 23, as well as the book's index.

Miso is available in an organic and raw form and can be used in soups that are warmed to below 119° F, or in tahini sauces and salad dressings. The sulphur vegetables such as garlic are helpful. For those who are sensitive to raw fresh garlic, there is a variety of sun-dried garlicks that do not have the irritating and activating effect that the fresh garlic oils may have. Live fermented foods such as sauerkrauts and kim-chi are recommended.

Although this radiation protection diet has plenty of chlorophyll, I recommend the blue-green algae from Klamath Lake as a general enhancer of the mind-brain and also as a radiation protector. One tablespoon of bee pollen per day is also excellent.

Siberian ginseng is highly recommended. In addition to its power to help one recover from and withstand radiation exposure, it aids healing from high-stress situations. It is part of my travel and jet lag kit as well.

Yeast is the only food that I do not regularly recommend because it is not a live food, but my impression clinically is that it is useful during times of radiation stress.

Preview of Chapter 30

IN THIS CHAPTER WE DISCUSS preparation for pregnancy, appropriate nutrition for pregnancy, and nutrition for lactation, covering all aspects of the process. Vegetarian, vegan, and live-food pregnancy approaches are all explored. This chapter is dedicated to supporting those parents who are trying to break the cycle of mental and physical degeneration that is happening in our society. It is no guarantee of a perfectly healthy birth and postpartum experience for the mother, but it certainly will help.

I. Holiness of pregnancy

A. Spiritual preparation

B. Emotional preparation

C. Physical preparation

II. Optimal diet for pregnancy

A. General guidelines

B. Pregnancy superfoods

C. Basic nutrients for pregnancy

D. Lactation



Nutrition for Pregnancy

PREGNANCY IS A HOLY TIME. How we prepare for it profoundly affects the life of the wonderful being that is coming into the world. Because of this I am using my broader definition of nutrition as the basis for this chapter. I am including as nutrition all the energies that affect the life of the mother and the emerging fetus. I have explained the importance of healthy germ plasm (sperm and ova) on the expression of heredity in Chapter 8. I have made a strong point that the quality of health of the parents significantly affects the health of the germ plasm and the formation of the fetus. It has become obvious that the health of the mother during pregnancy profoundly affects the health of the fetus. In the Pottenger Cat Study also discussed in Chapter 8, kittens born of mothers with deficient nutrition, even when given optimal nutrition and thyroid and adrenal hormones, and put on the raw-food diet, were not able to develop into a normal cat. Researchers observed that a deficiency produced in a nursing kitten from a healthy mother is not nearly as severe as that produced when a kitten is born from a mother with deficient nutrition during gestation.

The point is clear. What we do as parents profoundly affects the health of our developing babies in a way that can be irreversible after birth. In this chapter we look at how we can fulfill this basic parental responsibility at an optimal level. If in reading this chapter you become aware of things you did not do to prepare yourself for your children, it is important to forgive yourself for what you did not know. If you are having more children, give yourself the opportunity to do it with a higher degree of consciousness and preparation.

Human pre-pregnancy and prenatal nutrition has the potential to minimize the influence of heredity. The will, thoughts, feelings, and desires of conscious parents, and most particularly the mother, may positively or negatively affect the expression of heredity and the consciousness of the child during pregnancy and lactation. In India, people have had this awareness for thousands of years. There are stories of Indian queens and kings playing different music and having different meditations during pregnancy in order to affect the consciousness of the fetus. If they wanted to create a warrior, they played certain war energy music and created certain thought-forms. If they wanted a more spiritual child, they played spiritual music and focused on different prayers and meditations. In our culture, if a mother spends her time watching TV and going to violent movies, it will have a different effect on the fetus than if she spends her time meditating, dancing, and playing loving and spiritually uplifting music to the fetus.

What parents do affects the consciousness of the fetus. In my work as a psychiatrist using the Zero Point psychospiritual process, I have discovered that the emotions of the mother—and even the father, in some cases—have a significant influence on the consciousness of the developing fetus in a way that affects the fetus even after it becomes an adult. These emotional and mental patterns seem to be reversible only when I help the person regress back to the womb to clear the negative thoughtform or emotion that was created there. The need for this type of healing journey arises regularly. One of the most important health-producing experiences of the fetus is to be loved and wanted at all times by both parents. The spiritual, mental, and emotional state of the parents and particularly the mother has the strongest influence on the spiritual, emotional, mental, and intellectual qualities of the developing person. The prayers, meditations, and visualizations of the parents have the potential to instill a moral, intellectual, physical, and spiritual fiber in children that will empower them their whole lives.

The quality of relationship of the parents also plays an important role. My clinical experience over the past ten years of exploring this area leads me to conclude that when parents are loving and respectful to each other and the mother feels loved, respected, honored, safe, and peaceful, the child will come into the world with these feelings. If the mother is in a state of fear or anxiety, and is feeling unloved or unwanted by her mate, the fetus often takes these feelings on as its own and carries them its whole life unless there is a psychospiritual intervention. Sometimes, as part of my pregnancy preparation process, I will do some short-term couple therapy to support prospective parents in enhancing their love energy. Treating the mother as if she is an aspect of the Divine Mother energy—with the holy responsibility of bringing a new being of light into the world—is a powerful practice during pregnancy, if not all the

time. The fetus and the whole family will benefit from this approach.

Preparation for Pregnancy

I LIKE TO SEE PARENTS PREPARE FOR PREGNANCY at least one year before they are ready to actually get pregnant. Getting ready for pregnancy can be a nodal point in parents' lives for looking at their lifestyle and making changes that can bring them to another level of physical, emotional, and spiritual consciousness.

When parents come to me for pregnancy preparation, I recommend that they begin to pray and meditate to enhance inner peace and awareness. Breathing exercises are recommended to increase oxygen content of the blood and to better oxygenate the fetal growth and development. A program of aerobic exercise and hatha yoga improves the flow of the lymphatic system, improves the functioning of all the organs, and tonifies and strengthens the mother for pregnancy and delivery. There are special exercises for pregnant women, but moderate to vigorous walking of at least one-half hour four or five times per week is sufficient. One note about this: Animal studies show that when the internal body temperature rises above 102 F, there is an increase in congenital defects. Extended strenuous exercise like long-distance running on a hot day can elevate your internal temperature to this level, but walking rapidly for one-half hour in the morning probably won't. However, if you are a person with a pitta constitution or you tend to overheat easily, it is best to err on the side of moderation. An early walk for some people is also a good way to relieve the nausea of morning sickness. Yoga classes for pregnant women are available in most parts of the country.

Clean, nonchlorinated water is important for cleansing and rehydrating. Chlorinated water, according to one study at the University of Perugia in Italy may indirectly damage genetic material. I do not recommend distilled water because it can tend to leach out the minerals from the body and it is destructured from heat. We need both organic and inorganic minerals for optimal health.

At least one-half hour of sunlight per day is important for the stimulation of all the organs and most specifically the pineal and the pituitary glands. Sunlight is needed for the proper functioning of the whole endocrine system and for the production of vitamin D needed for the fetus. If one lives in a northern climate with limited sunlight, at least three hours per day of exposure to full-spectrum lighting is helpful.

Adequate sleep, rest, and relaxation are important to recover from the stresses of modern life. From the hours of ten in the evening to two in the early morning the immune system does its most regenerating, while we are asleep.

One of my nutritional mentors, Dr. Paavo Airola, strongly recommends juice fasting as part of the pregnancy preparation. I agree with him that juice fasting is the safest and most effective way to restore health and prevent disease. It is a powerful way to remove toxins. Airola recommends one or two juice fasts before conception. I recommend two one-week juice fasts in the year before conception. I often refer people to my spiritual fasting retreats at the Tree of Life, where they are able to learn many of the lifestyle skills and practices that I recommend. The spiritual fasting retreats provide a safe and inspiring space for people to make and retain the lifestyle changes that can best prepare them for conception and pregnancy. It is generally not recommended that women fast while pregnant.

Pre-pregnancy is a good time to eliminate toxic habits such as smoking, alcohol use, drug use including allopathic drugs (unless considered medically critical for health), excess use of salt, white sugar, and flour, and consumption of coffee, caffeine, cola drinks, and all soft drinks.

Smoking is not only detrimental to the mother's health, but to the health of the fetus. One study at Laval University of Quebec, Canada, found that smoking during pregnancy increased perinatal mortality by **24%**. One Swedish study showed that the incidence of deaths during the first year of life is **60%** higher if the mother smokes during pregnancy. Another study found that maternal smoking during pregnancy increased the risk of childhood cancer by 50%.

Some research suggests that the nicotine goes directly into the blood of the fetus and overstimulates its adrenal glands and thus stimulates the heart rate. The carbon monoxide from the smoking further robs oxygen from the mother and fetus. The increased heart rate and decreased availability of oxygen stress the infant.

Smoking also decreases birth weight. A decreased birth weight is associated with a weaker infant resistance to disease and increased mental retardation, seizures, and vision problems. Harvard researchers reported that the lung size in children of mothers who smoke during pregnancy is 10% less than normal. This may help explain the higher incidence of respiratory disease in babies of smokers. The potential for respiratory disease is increased by the hazards of passive smoking if a mother chooses to start smoking or continues to smoke after giving birth. *The Journal of the American Medical Association (JAMA)* reported that nicotine is found in the breast milk of mothers

who smoke. In 1978, a JAMA summary of forty years of research on the impact of smoking during pregnancy concluded that women who smoke during pregnancy risk the life of the fetus since the incidence of spontaneous abortions, stillbirths, and premature deliveries is so much higher. It also concluded that babies of smokers have retarded growth and an increased incidence of congenital defects, cancer, hypertension, and heart disease.

Even a small amount of alcohol can create a fetal alcohol syndrome. According to Dr. David Smith, professor of pediatrics at the University of Washington, alcohol is the most common cause of birth defects. There is some good evidence that the IQs of the children of mothers who drink during pregnancy are significantly diminished. There also seems to be a higher incidence of mental retardation. A heavy drinker has a 30 to 50% chance of producing a baby with some sort of congenital defect. It does not seem to make a difference if the alcohol is hard liquor, wine, or beer. Some studies suggest that even occasional binge drinking can increase the rate of malformations and other birth defects, with a specifically increased incidence of slight facial, limb, and cardiac malformations. Alcohol decreases the ability of the immune system to utilize the prostaglandins it needs to work optimally. Alcohol does cross the placental barrier and affects the brain development and consciousness of the fetus. The strong reasons for not drinking any alcohol during pregnancy are very compelling.

All drugs should be eliminated during pregnancy including aspirin, especially during the first trimester. Studies at the Center for Disease Control in Atlanta showed that mothers who take Valium in the first trimester have a four times higher incidence of cleft lips or cleft palate in their babies. Aspirin taken in the last trimester can cause premature labor, jaundice, and bleeding in the infant. Acetaminophen drugs like Tylenol can cause kidney problems in infants. Antihistamines can cause seizures. Sulfa drugs may cause jaundice. Bronchial medications may cause goiter. In general, sleeping pills and pain pills are best avoided. Accutane for acne *before* pregnancy as well as during the first three months has been linked with abnormalities of the fetal head and brain. Some herbs can also cause problems. Most often they cause abortions. These herbs include black cohosh, blue cohosh, gold-enseal, cinnamon, hellebore, tansy, pennyroyal, cotton root, cramp bark, and wild yam. Some anti-nausea drugs may also be dangerous. Bendectin, a prescription drug used for more than a decade, was banned by the FDA because it is thought to cause birth defects.

I strongly recommend that mothers avoid all X-rays during pregnancy, including dental and chiropractic. The incidence of childhood leukemia is increased twelve-fold by one X-ray taken in the first trimester. This is discussed in detail in Chapter 29.

Salt is something that should be minimized. Excess salt can cause general swelling, edema, and hypertension, which are common pregnancy complications. Pregnancy actually increases the salt need by one-third, to approximately three thousand milligrams per day. However, most people who add salt to their food take in seven thousand milligrams per day. During pregnancy one should minimize even soy sauce and ask restaurants to prepare food without salt. Some packaged foods like dried soup may have up to eight hundred milligrams per serving, so read all labels. If you need salt, use Celtic salt in moderation, which is a natural sun-dried sea salt.

Pregnancy makes the body considerably less able to metabolize caffeine. During pregnancy, one cup of coffee is the same metabolically as three cups. Tea, cocoa, chocolate milk, and colas are best avoided during pregnancy. Soft drinks are another hazard. They either contain white sugar or aspartame (Nutrasweet). Aspartame, found in diet sodas, has been shown to harm the brains of young animals. Soft drinks often contain phosphoric acid, which blocks the much-needed absorption of calcium and magnesium. Because magnesium helps with the prostaglandin regulation, anything that depletes magnesium harms the immune system.

In addition to lifestyle changes and the avoidance of anything toxic during pregnancy, I recommend that prospective mothers get a full health work-up to clear any imbalances or diseases like candida and hypoglycemia that may affect the pregnancy. I particularly check for weakened immune, endocrine, and neurotransmitter systems. Hypoglycemia or diabetes may affect the health of the fetus because blood sugar swings can affect the brain development of the fetus, and diabetes can be a complication of pregnancy. It is important to treat these conditions even if they are in a subclinical stage so they do not manifest during pregnancy.

Although the pregnancy diet has some general characteristics like an increase in protein need by thirty grams per day, it is important to determine the optimal diet from a fast or slow oxidizer or parasympathetic or sympathetic point of view. I also like mothers to become aware of the flow of their Ayurvedic doshas during pregnancy so they can best work with a changing body. During pregnancy there is a definite increase in kapha. It is important to individualize one's diet and life style to compensate for this increase of kapha.

In our underregulated industrial age there is much environmental toxicity. Heavy metals and chemicals, pesticides, and herbicides need to be removed from the system. This can be done in a variety of ways. Some people may need specific chelating agents. I usually recommend attending one or two of my spiritual fasting retreats, as fasting is one of the most powerful ways to detoxify the system. Some people would benefit from the Ayurvedic panchakarma rejuvenation program to rebalance and detoxify their systems. Others need bowel cleansing programs.

Some need all of these to bring their bodies into health and balance. During the pregnancy I try to take women off all therapeutic herbs or diets and put them on an optimum pregnancy diet with supporting food concentrates and a minimum of supporting supplements.

This may seem like a lot of preparation, but when we look at the statistics it is well worth it. For example, in 1978 there were more than four hundred thousand miscarriages and fifteen million American children with birth defects. These birth defect rates continue to increase. Today one child out of ten has some sort of birth defect, and 126,000 children are born each year with severe mental retardation. There are more than one million children with hyperactivity and ten million emotionally disturbed children. In the mid-1990s two hundred thousand children were on Prozac for depression. Not all of this can be prevented, but a great deal of this needless physical and mental suffering can be alleviated with proper mental, emotional, and physical preparation for pregnancy.

Optimal Diet for Pregnancy

AS I MOVE INTO A DISCUSSION of the optimal diet for pregnancy, I want to remind the reader that from the conscious eating perspective there is no one optimal diet for everyone. The secret to a successful vegetarian, vegan, or live-food diet is understanding your dominant dietary type and Ayurvedic dosha. This applies to everyone at any time and not just during pregnancy.

One additional point is that people often confuse a therapeutic diet with a building or long-term healthy optimal diet. Therapeutic diets such as only fruits for cleansing, less than 10% fat diet for heart disease, or prolonged juice fasting have specific roles and specific effects. For some who stay on them for the long term or for pregnancy, they may actually create deficiencies. Therapeutic diets aim to cure disease and restore health. They are not necessarily the best diets for long-term use or for pregnancy.

Keeping these ideas in mind, I want to state strongly that vegetarian, vegan, or live-food women can continue their basic diets during pregnancy and have very healthy if not healthier babies than if they decided to add red meat, chicken, or fish. There are many reasons for this, such as significant pesticide and radioactive contamination, bacterial, viral, and parasite contamination, and heavy-metal toxicity in the flesh-food diet, all of which I discuss in other chapters in this book. A diet free of flesh foods has produced healthy and strong people for centuries in cultures around the world. A study from The Farm, an intentional community in Tennessee, reported on eight hundred vegan pregnancies. It showed that all had normal pregnancies and bore full-term, normal-weight infants. A healthy pregnancy and infant can be achieved easily even with our modern industrialized and polluted planet. It does require some conscious effort and thoughtfulness.

The first step is to understand and master the basic principles of healthy nutrition and to learn the most important foods for every woman to eat during pregnancy. Depending on one's constitution, the ratios of these foods will vary, but they will still be your main foundation.

During pregnancy there needs to be an increased protein intake by at least thirty grams, to approximately sixty to seventy-five grams per day depending on your constitutional type. A fast oxidizer or parasympathetic type will need to be higher in protein, and a slow oxidizer or sympathetic type will do better on the lesser amount of protein. For the general health of the mother and the fetus, and specifically for the optimum development of the immune system, endocrine system, central nervous system, and brain of the fetus, there needs to be a significant intake of the following: essential fatty acids (EFAs), calcium, magnesium, iron, zinc, manganese, copper, iodine, the full range of the vitamin B complex (especially B6, B12, and folic acid), vitamin A, vitamin C, vitamin D, and vitamin E. All of these can be obtained from the following basic vegetarian foods, food concentrates, and food-grown supplements. Food-grown supplements are organic supplements still in their organic matrix and which are extracted from foods.

The first part of this general approach is to eat whole, organic, natural foods, and primarily living foods. I expand on this in Chapter 13, "General Guidelines for a Healthy Diet." As our environment becomes more polluted and the soils more depleted of nutrients, going 100% organic, if possible, is the best thing one can do for oneself, a developing fetus, and the environment. Pesticides, herbicides, and other forms of pollution interfere with the metabolic pathways of many nutrients and thus indirectly interfere with the development of the immune, endocrine, and neurological systems. Eating as many of our foods in their live (or biogenic) form or raw form preserves 70 to 80% more vitamins and minerals, 50% more bioactive protein, and up to 96% more bioavailable vitamin B12. I rarely see live-food mothers or children who are deficient in vitamin B12, but it is not an uncommon occurrence in mothers who follow a strict macrobiotic diet in which all the foods are cooked.

Grains, nuts, and seeds are the most potent health-building foods of all. Eaten raw or sprouted if possible (some grains need to be cooked), they contain all the essential nutrients for human growth, sustenance, and ongoing optimal health. These foods contain the germ power of the plants. They are the reproductive power and energy that ensures the perpetuation of the species. Particularly when eaten in their live form, they release this regenerative and reproductive growth power and energy into us. Sprouting the seeds, nuts, and grains activates them and enhances their general nutritive content and specifically the vitamin content. The seeds, nuts, and grains contain high-quality protein. Buckwheat, sesame seeds, pumpkin seeds, sunflower seeds, flaxseeds, and almonds are complete proteins.

Nuts, seeds, and grains are the best natural sources of unsaturated fatty acids and lecithin. They have a high vitamin and mineral content, especially vitamin E and the B-complex vitamins. Vitamin E is important for general endocrine development and hormonal building for the fetus and is specific for healthy pituitary gland development.

Vitamin E increases fertility for men and women and helps to prevent miscarriages and stillbirths. The B-complex vitamins help protect against stress and are important as metabolic intermediates in the brain and central nervous system. Nuts, seeds, and grains are high sources of magnesium, manganese, iron, zinc, copper, molybdenum, selenium, chromium, fluorine, silicon, potassium, and phosphorus. All of these minerals are needed during pregnancy. Paciferins, which have an antibiotic-like resistance to disease factor, boost the immune system. Grains, nuts, and seeds provide organic natural fiber and roughage, which helps protect the pregnant mother from constipation, a common problem during pregnancy.

The best seeds to use are flax, sunflower, chia, sesame, and pumpkin. Flaxseeds are excellent and the highest vegetarian source of omega-3 essential fatty acids, important for the immune system, nervous system, and brain development. I recommend one to two tablespoons daily of the uncooked and unheated oil or three to six tablespoons of freshly ground flaxseeds. Flax is a highly mucilaginous food and so it is excellent for keeping the bowels moving during pregnancy. However, depending on your bowel sensitivity, too much ground flaxseed can cause loose stools.

Almonds are the best nuts to use in the diet because they are the most resistant to rancidity. Hazelnuts (filberts) are also a high-quality nut for pregnancy. According to Paavo Airola in *Every Woman's Book*, buckwheat and millet are the most beneficial grains for pregnancy. Buckwheat is a complete protein and is high in magnesium, manganese, and zinc. As explained in Chapter 3, "A Revolutionary Breakthrough in Personalizing Your Diet: Linking Food Ratios to Physiological Types," in the section "Blood Type Approach," wheat is a lectin food and also a panhemagglutinin. It reacts to form antibody-antigen complexes with all the blood types. It seems to cause allergy reactions in general, especially for many women who are blood type O.

Vegetables are the next most important food for pregnancy. The leafy green vegetables are complete proteins as well as excellent sources of minerals, enzymes, and vitamins. They are high in calcium, magnesium, zinc, vitamin C, and the B-complex vitamins. They also contain small amounts of the omega-3 and omega-6 essential fatty acids. These leafy greens include alfalfa sprouts, green beans, broccoli, bokchoy, Brussels sprouts, vegetables in the cabbage family, collards, cucumbers, kale, leeks, mustard greens, peppers, romaine lettuce, spinach, Swiss chard, and turnip greens. Yellow vegetables are high in the fat-soluble vitamins A and E. These yellow vegetables include carrots, corn, pumpkin, rutabagas, sweet potatoes, and acorn, butternut, Hubbard, spaghetti, and summer squashes.

Fruits are an important food group for pregnancy, providing a good source of vitamins, minerals, enzymes, and biological water. Raisins and apricots are high sources of iron. Citrus is high in vitamin C, and melons are high in vitamin A. Fruits have an important role in cleansing as well.

Pregnancy Superfoods

THERE ARE CERTAIN SUPERFOODS that add significant benefits to the pre-pregnancy, prenatal, and lactation nutrition program. One of the most important of these is brewer's yeast. It is 40-50% protein and is particularly high for a vegetarian food in RNA and DNA. It is one of the best food sources of the total B-complex in the most natural form. It is known as one of the best foods to stimulate breast milk production. It contains high amounts of minerals such as selenium, zinc, iron, and chromium—all needed during pregnancy and nursing. It also contains Glucose Tolerance Factor, which is important for proper sugar metabolism.

Some people have difficulty digesting yeast or are allergic to it because of cross-reaction with candida. It is worth trying and observing how you do. The best time to eat yeast to maximize assimilation is to take one or two tablespoons one hour before meals on an empty stomach. In general, if the meal is raw, it is best to eat protein first at a meal so the hydrochloric acid can be stimulated. If eating a cooked protein, it is better to eat it either with or after the raw part of the meal.

There are some excellent nutritional yeasts available. The brand I suggest most often to people is Lewis Brewer's Yeast. Because yeast is high in phosphorus, it is best to take some calcium with it. I do not recommend baker's yeast or torula yeast.

Chlorella is a powerful high-protein algae. It is about **65%** assimilable protein. There are five grams of protein in one teaspoon or fifteen grams in one tablespoon. Two or three heaping tablespoons can provide the estimated thirty grams of extra protein needed per day for pregnancy. This algae is very high in Chlorella Growth Factor, which is a powerful anabolic energy that supports the growth of the fetus. It contains carotenoids, high amounts of magnesium, and the super detoxifier known as chlorophyll. It also contains approximately two to six times more chlorophyll than spirulina.

Most of the chlorellas are considerably more assimilable today than when this food product first came on the market, because most of the companies have figured out how to break the cell walls in a way that does not destroy the nutrients and which maximizes assimilation. Chlorella is the best algae for pulling heavy metals out of the system, particularly mercury, lead, cadmium, uranium, and arsenic. I tend to use chlorella more in the preparing-for-conception stage because it is so specific for heavy metals. It also helps boost the immune system because it contains a compound known as chlorellan, which stimulates the production of interferon and the activity of macrophages (important defense cells in our immune system). Because of this and other reasons, chlorella has a strong anti-cancer activity.

Spirulina is another terrific green supplement similar to chlorella in many ways. It is about **60%** protein, but is less dense so that it only contains two grams of protein per teaspoon. It is one of the highest sources of gamma-linolenic acid (GLA) on the planet. Only mother's milk is higher. I tend to recommend taking more spirulina during lactation because of the GLA. Spirulina is very high in human-active B12. In Chapter 15, "Do Vegetarians Get Enough Vitamin B12?" I give detailed reasons why vegetarians, vegans, and live-food mothers never have to worry about their B12 if they are taking spirulina, algae from Klamath Lake, and/or sea vegetables as superfood supplements. Chlorella and spirulina support the immune system and are extremely high in vitamins (especially A) and minerals. Depending on how you like the taste and how it feels, they can be taken at different times of the day or together during pregnancy or lactation.

The algae from Klamath Lake is another extraordinary food concentrate for pregnancy. Although it is high in protein, chlorophyll, vitamins, and minerals and enhances the immune system, I value it in pre-pregnancy, pregnancy, and lactation for its enhancing effect on brain function. I am not sure what it is that does this, although the algae is high in neurotransmitters, but it carries an energy that specifically enhances the quality of brain function. The algae from Klamath Lake is the only vegetarian food I know that specifically strengthens the hypothalamic and pituitary function. Many people consider the hypothalamus the master gland of the endocrine system. As I discuss in Chapter 15, the algae contains high amounts of human-active B12.

Tachyonized organ-specific nutrients are a new and powerful concept for prenatal nutrition and conscious eating in general. I have developed many of these nutrients in conjunction with David Wagner, inventor of the Tachyonization process and my co-author of the book *Tachyon Energy: A New Paradigm in Holistic Healing* I first mentioned Tachyon energy in my book *Spiritual Nutrition and The Rainbow Diet*. Tachyon energy is the first step in the condensation from Zero Point energy, or unlimited cosmic energy, which I explain in Chapter 3. Tachyon

energy, which itself is moving faster than the speed of light, is the link in the energetic continuum between the faster-than-the-speed-of-light Zero Point energy and the just-slower-than-the-speed-of-light SOEFs, which are also described in Chapter 3. The SOEFs are the energetic template for our whole body—each organ, gland, and every cell. If the SOEFs are low in energy from the weak germ plasm of the parents, the fetal organs and glands may not be too strong. In the Pottenger Cat Study, we can say that the kittens of nutritionally deficient mothers had generally weakened SOEFs and specifically weakened adrenal, thyroid, immune system, and bone which could not be brought back to normal even with specific supplements.

The Tachyon energy contains the essence of all frequencies and information to strengthen each individual SOEF. Tachyon moves faster than the speed of light where frequencies begin. It energizes the SOEFs of the total system and of each organ, gland, and cell. In doing so it strengthens the quality of health of these organs, glands, and cells, and the organism as a whole. The Tachyon energy, by energizing the SOEFs, brings coherency to the fields and therefore general health to the whole body, down to the cellular level. An important aspect of the Tachyon energy is that it is not a frequency like a magnet, for example. Because of this one cannot overdose. When the SOEFs get their optimal energetic need, then they continue to convert enough Tachyon energy to maintain an optimal energetic balance of the SOEFs.

In exploring how to work with the Tachyon energy, we hit upon the idea of Tachyonizing certain herbs, algae, minerals, and vitamins known to be absorbed in high concentrations by particular organs and glands as a way to turn these organs and glands into antennas for attracting the Tachyon energy. This approach is a way to energetically rebuild the damaged SOEFs of these structures and therefore a way to strengthen these organs. The Tachyonization process restructures the particular herbs, algae, minerals, and vitamins at the submolecular level. Once a material is Tachyonized in a fourteen-day process, every molecule draws a rich flow of the Tachyon energy to it. When these Tachyonized nutrients are ingested, they move to their specific target organs and glands and are absorbed at the molecular level. These specific targets both receive the Tachyon energy the nutrients are carrying and become transformed into Tachyon antennas. As antennas they continue to draw the Tachyon energy into them and thus strengthen their SOEFs and their whole function.

We have found that when a nutrient is Tachyonized, only about half the normal nutrient dosage is needed to be effective. The antenna effect is not permanent because we are always building new cells, so one needs to keep the Tachyon supplementation going on a regular basis to maintain the Tachyon antenna effect. The Tachyon nutrients I recommend for pregnancy are the Tachyonized Klamath Lake algae to build and maintain a strong hypothalamic and pituitary function; Tachyonized DHA, the main long-chain omega-3 fatty acid for brain development; Tachyonized kelp to build and maintain the thyroid; Tachyonized vitamin C to build and maintain the connective tissue and the adrenals, which seem to be weak in a great many people; Tachyonized silica to strengthen the bone and all connective tissues; Tachyonized vitamin A and E creams to help reduce stretch marks; and Tachyonized water to strengthen each cell and the hematological system. These recommended Tachyonized organ-specific nutrients are excellent and safe for the mother as well as the fetus. There are many other Tachyon organ-specific nutrients available as herbs which I don't like to give during pregnancy but are excellent for children and nonpregnant adults. These Tachyon nutrients can be obtained from the Tree of Life Rejuvenation Center in Patagonia, Arizona, or other places where Tachyon products are sold.

Bee pollen is another superfood. It is the collective semen or germinating essence of the plant kingdom. It is the procreative life force of the plant world and the ultimate biogenic food. It is high in almost all the vitamins and minerals needed for pregnancy. It contains at least 25% protein and is high in RNA and DNA. I discuss it more in depth in Chapter 29. Bee pollen carries the germ force energy and supports the power of the germ plasm in the parents and the generative force of the fetus. One to three tablespoons of bee pollen per day will provide a tremendous boost to one's health. The ratio of protein to carbohydrates in bee pollen makes it a good food for slow oxidizers or sympathetic-dominant types when taken with other carbohydrates. Taking bee pollen with other protein is also excellent for fast oxidizers because it has such a high protein-per-gram ratio. It is also high in adenosine, which helps fast oxidizers' metabolism.

Sea vegetables in general and kelp in particular are other miracle foods from which pregnant mothers and nursing mothers can greatly benefit. Kelp is very high in iodine, which is supportive for the thyroid, which is low in many people (not unlike the deficient cats in the Pottenger Cat Study). Pregnant women have a greater-than-normal excretion of iodine in the urine. A low thyroid gland can weaken and unbalance the rest of the endocrine and hormone system. A deficiency of iodine and thyroid function can lead to a build-up of estrogen in the system. Iodine is essential for the development of the thyroid of the fetus. Iodine deficiency during pregnancy may cause a mentally retarded baby.

Kelp also helps protect from radioactive fallout. Like the other sea vegetables, it is high in B12. Please see the charts in Chapter 15. Eating sea vegetables on a daily basis is a good idea. One-half teaspoon of kelp granules or two

to three kelp tablets per day is all that is needed.

Key Nutritional Factors for a Healthy Pregnancy

THERE ARE SEVERAL KEY NUTRITIONAL FACTORS about which I want to make a particular note. These include the essential fatty acids, calcium, magnesium, iron, zinc, copper, manganese, selenium, chromium, B-com-plex and especially B6, B12, and folic acid, and vitamins A, C, and E.

The essential fatty acids (EFAs) are extremely important for vegetarian, vegan, and live-food mothers. They are critical for proper brain and nervous system development, and they also supply the raw materials to make the prostaglandins, which are needed for the development and proper functioning of the immune system. During lactation, babies do not have the enzymes to make the much-needed GLA for prostaglandin production and the docosahexaenoic acid (DHA) necessary for brain and nervous tissue development. There also needs to be a balance among the omega-6 EFAs and the omega-3 fatty acids because they compete for the same enzyme systems. The most agreed-upon ratio of omega-6 to omega-3 is approximately four to one. However, Michael Schmidt, author of *Smart Fats*, pointed out to me in a personal communication that a key factor in this ratio is the actual content of the specific fatty acids in the omega-6 and omega-3 intake. Today the balance is significantly off with omega-6 to omega-3 ratios of thirty to one and even as much as forty-five to one in mother's milk. In *The Omega-3 Phenomenon*, Dr. Rubin estimates that there has been an 80% drop in the intake of omega-3 fatty acids in the popular American diet. There is a variety of reasons for this, including increased sugar intake (which interferes with the EFA synthesis), a 2500% increase in trans fatty acid intake (which interferes with fatty acid synthesis), increased hydrogenation of oils, and increased consumption of omega-3-deficient oils such as corn, sunflower, olive, safflower, and sesame.

The solution is to increase our intake of omega-3 EFAs. The best source of omega-3 EFAs is flaxseeds or flaxseed oil. The optimal intake for a pregnant woman is one to two tablespoons of oil per day or three to six tablespoons of the ground-up flaxseed. Since the oil can turn rancid quickly, I suggest you grind up only enough seeds for the day. An alternative is hemp oil, but since the seeds have to be cooked before entering this country, their nutritional value is compromised. Hemp does not contain as much of the omega-3 alpha-linoleic acid (ALA) as flaxseed oil. Flaxseed oil has 58% and hemp oil has 25% ALA. Pumpkin seeds have 1-5%, chia has 30%, and walnuts have 5% ALA. These, however, have marginal amounts of the most critical EFA needed for brain development in the fetus and maintenance during childhood and into adulthood—DHA. But with optimal doses of flaxseed oil and optimal health, a certain amount of ALA is converted into DHA. The ratio is one hundred molecules of ALA to make one molecule of DHA.

The low amount of DHA in normal vegetarian foods is a significant concern. DHA is the major long-chain omega-3 fatty acid found in the brain. It is the primary building block of the gray matter of the brain and the retina of the eye. It is concentrated in parts of the brain that require a high degree of electrical activity. One such area is the synaptosomes, which are the junctions where the nerves communicate with one another, and the receptor sites in the synaptosome to which the neurotransmitters attach when impulses cross from one nerve cell to another. Also high in DHA concentration are the photoreceptors of the retina, which receive light stimulation. A third area is the mitochondria, where the ATP is created which generates biochemical energy for the brain, nervous system, and every energetic process in the body. The fourth major area of DHA concentration is the cerebral cortex, which is the outer layer of the brain connected to our consciousness and thinking abilities. DHA is a critical building block of the fetal brain and during infancy, and it is important for optimal brain function our whole life, as mentioned above. Lower DHA in adulthood is associated with an increased incidence of senility and decreased cognitive ability. Low levels are linked with insufficient brain and vision development in infants, hyper-activity, attention deficit disorders, depression, obsessive-compulsive disorders, and the worsening of schizophrenia. Research shows that children who receive adequate amounts of DHA have higher IQs and better visual acuity than children who do not receive adequate amounts.

Another important brain fat for infants is arachidonic acid (AA). It is the principal long-chain fatty acid of the omega-6 family found in the brain. It is present, like DHA, in the breast milk to continue to promote brain development. By the age of one year a child can make its own AA (as with DHA). An excess of this in the brain or anywhere in the body creates a tendency to inflammation. AA is balanced by the omega-3 fatty acids such as DHA.

One other EFA important for brain function is gamma-linolenic acid (GLA). It is converted into prostaglandin-1 (PGE-1), a hormone-like substance that enhances certain brain functions and has been shown to enhance mood and

to diminish depression. It also seems to be helpful for treating attention deficit disorders and hyperactivity. It helps some women with premenstrual syndrome. The priming of PGE-1 with increased GLA helps balance the inflammatory substances associated with excess AA. An imbalance in the EFAs can cause a variety of emotional disorders and nervous system irritability. In my work I use these substances most often in the treatment of depression and the rebalancing and healing of the addictive brain.

Researchers have found that during pregnancy a drop occurs in the AA and DHA levels of the mother. Most likely they are being pulled away for the brain development of the fetus. In one study there was a significant imbalance of the omega-6 to omega-3 ratio by the third trimester in all cases. The omega-3 ALA and DHA were low, and the omega-6 fatty acids were high. In one study, Dr. Holman of the University of Minnesota found that during pregnancy the omega-3 fatty acids fell significantly and the drop persisted at least six weeks after delivery, when he stopped the study. DHA was the most depleted fatty acid. It averaged 35% of the pre-pregnancy levels. ALA and DHA were even lower after delivery. Another study done by Dr. Monique Al found that the DHA levels were depleted during pregnancy and continued to drop with each pregnancy.

Since a lowered DHA seems to be associated with depression, it may be linked with postpartum depression and the high rates of depression in women as compared with men. It is interesting to note that the incidence of postpartum depression increases with each birth and the levels of DHA decrease with each birth. I feel that DHA supplementation for postpartum exhaustion and depression is an important part of prevention and treatment.

Associated with postpartum depression observations is the finding of Dr. Fugen Neziroglu and associates, who observed that in five hundred cases of obsessive-compulsive disorder, many linked the onset of their problem with pregnancy. In another of their studies, they found that 69% of postpartum women reported that their obsessive-compulsive disorder began with or became worse with some aspect of their pregnancy. It is interesting to explore this link between DHA deficiency and probably other EFA deficiencies from pregnancy and obsessive-compulsive disorders. Again, the question is one of balance. There needs to be an effort to balance the AA, GLA, ALA, and DHA, but generally speaking, DHA and GLA supplementation is an important consideration for these syndromes.

At birth, a baby's brain contains as many cells as the Milky Way does stars—approximately one hundred billion. By the end of the first year the brain nearly triples in size. It is during the first year that there is a major developmental process for vision, feelings, movement, and language. It is a critical time for the formation of physical, mental, and emotional intelligence as well as the development of the nervous system. During this time DHA is needed in high amounts. Since the infant cannot make DHA efficiently, breast milk is the key source of DHA and the other EFAs such as GLA, ALA, and AA. Studies have shown that breast-fed infants, as compared to formula-fed infants, develop better visual acuity and higher IQ. Until 1997, DHA was not added to formula milk.

It is obvious that the lactating mother needs a high level of DHA in her system. This is of concern because vegans and vegetarians have been shown to have a lower level of DHA in their breast milk, and their babies show a lower level of DHA. In one study, Australian and British babies of omnivores had approximately 6% DHA in their red blood cells. American omnivores had 3%. British infants fed from vegetarian mothers had 2%. Research by Agren published in 1995 in *Lipids* showed that long-term vegetarians had lower levels of DHA than omnivores. Research by Reddy, Saunders, and Tab showed there was less DHA in infants of vegetarian mothers. In general, the data show that vegetarian mothers before, during, and after pregnancy are lower than nonvegetarians in DHA and so are their babies.

Meat-eaters in the US also seem to be lower in DHA than people in other countries because their diets are low in cold-water fish such as sardines, salmon, and tuna. These are a main source of dietary DHA for non-vegetarians. In countries like Malaysia, where the people eat a lot of cold-water fish, the percentage of DHA in the breast milk content is three times higher than it is in the US omnivores and approximately four times higher than the average vegan. Because these fish oils are high in EPA, a fatty acid that acts to slow blood clotting time, I do not recommend fish oils for pregnant women.

As with vitamin B12, which is lower in vegetarians and vegans than in omnivores, but not significant enough to cause pathological B12 deficiency problems, the question to be asked is how low is low DHA? Is there any harm being done? My feeling in seeing so many beautiful vegan and vegetarian children is probably not. A “low” DHA may be the same as a “low” B12, but still within the nonpathological range we need for normal neurological and brain development of the fetus and infant. There is not enough research, however, to fully answer this question. Because it is better to err on the side of safety, my next step is to look at the ways vegetarians, vegans, and live-food mothers and infants can increase the amount of DHA in their breast milk and brains. Also included are recommendations for increasing ALA and GLA.

The most obvious way is to take in high amounts of flaxseed or flaxseed oil, which is high in ALA. This ALA to some extent converts to DHA. It appears, however, that the amount of this conversion is not necessarily enough to supply sufficient DHA for the increased needs of pregnant or nursing mothers. Nevertheless, it is important for all

vegans, vegetarians, and live-food people to know how to maximize this ALA-to-DHA conversion process (which becomes less efficient with age). The enzymatic conversion of ALA to DHA is optimized by adequate amounts of B3, B6, magnesium, zinc, and vitamins A, C, biotin, and E. For this reason, during pregnancy and lactation it is good to increase the vitamin B6 consumption to approximately thirty to fifty milligrams per day. B6 in amounts greater than two hundred milligrams can suppress lactation. A good range for vitamin B3 is thirty to fifty milligrams. The vitamin C need is at least two thousand milligrams per day. The magnesium need is around four hundred milligrams per day and zinc need is between fifteen and twenty milligrams. About four hundred units of the d-Alpha-tocopherol of vitamin E is needed, and ten thousand units of vitamin A. If these amounts can be achieved by natural whole foods and food concentrates, this is the optimum way to go.

Another way to optimize DHA production is to avoid habits or medical conditions that block the process. This includes any intake of alcohol, a diet high in saturated fats and trans fatty acids, stress, diabetes, high dietary cholesterol intake, high blood cholesterol, and intake of white sugar. Other conditions that inhibit the conversion include: elevated blood glucose, excess insulin, and use of corticosteroids and nonsteroidal anti-inflammatory drugs like aspirin. Smoking, starvation, and obesity also block the ALA-to-DHA conversion.

Alcohol is one of the main offenders of all brain function. It blocks the enzymes needed to form DHA and appears to dissolve fatty acids within the brain's neuron membranes. Some research suggests that alcohol causes a decrease in the DHA of the cellular membranes of the brain. This is another explanation of how the fetal alcohol syndrome takes place. DHA is a part of my program for the healing of the nervous system of chronic alcoholics in recovery. It is clear that the use of any alcohol during pregnancy is destructive to the fetus.

An excess of insulin will enhance the conversion of GLA to AA and cause an imbalance of the AA-to-DHA ratio. It may even diminish by competitive inhibition some of the enzymes and cofactors needed to make DHA.

Another competitive inhibitor of the enzymes needed to create DHA are trans fatty acids, which have no nutritional value and are actually detrimental to cell membrane function in general and brain cell membranes in specific. I discuss trans fatty acids in Chapter 21. They are a problem because they interfere with the metabolism of both omega-6 and omega-3 fatty acids. One study found that in the breast milk of approximately two hundred mothers, the amount of trans fatty acids was 20% of the total breast milk fat. Another scientist found that as the trans fatty acids increased in the breast milk, the amount of ALA—the precursor of DHA—went down. The best way to prevent the intake of trans fatty acids and to eliminate them from our cellular metabolism is to restrict one's intake of foods that are high in them and to take optimal levels of omega-3 fatty acids. Women and men (sperm requires long-chain EFAs for optimal function) preparing for conception should avoid the sources of trans fatty acids for as long as possible. The main source of trans fatty acids is our modern dietary junk foods: French fries, candy potato chips, corn chips, cookies, cake, mayonnaise, shortening, deep-fried foods, tortilla chips, doughnuts, margarine, and most salad dressings that are not olive oil-based. All partially hydrogenated soybean, sunflower, safflower, or corn oils are sources of trans fatty acids. If one is eating only organic, whole, natural foods, avoiding these trans fatty acid sources will not be much of a problem.

Vegetarian sources of DHA include sea vegetables such as nori, hijiki, and kombu. One source of vegetarian DHA has been extracted from a golden micro algae of the conifer species that supplies enough DHA on a daily basis to provide a safety margin for pregnancy and minimize a DHA depletion in the mother. It is sold as Neuromins in one or two hundred-milligram doses of DHA. There is also Tachyonized DHA, which is a most potent form. Both are available at the Tree of Life Rejuvenation Center. For the first pregnancy, I suggest priming your system as early as one year before conception with one hundred milligrams per day and continuing until six months after breast feeding is completed. Given all the data and the importance of DHA for brain development, I do not think we can get enough from the sea vegetables or convert enough of the ALA in flaxseeds to DHA to maintain an optimal supply for the developing fetus and the needs of the mother. If as vegans, vegetarians, and live-food people we are on the minimum side of healthy, sufficient DHA levels, why operate without a margin of safety at the risk of the mental and physical health of our newborn children, pregnant mothers, young people, and adults at every stage of development? Without such a margin of safety, any sort of stress, physical or emotional, could cause enough of a depletion to drop us into a pathological zone in terms of DHA levels. For example, this seems to be what happens to some mothers who never feel at optimal health and energy levels since their child-bearing years began.

Several minerals are important for pregnant women to more fully understand. Adequate calcium intake contributes to proper development of bones, teeth, muscles, and blood of both the mother and fetus. High sources of calcium foods are leafy greens like broccoli, collard greens, kale, turnips, romaine lettuce, carrots, legumes, sesame seed butters, sunflower seeds, pumpkin seeds, almonds, filberts, and organic tortillas made with lime. According to Dr. Michael Klaper, in his book *Pregnancy, Children, and the Vegan Diet*, three good meals a day of these foods will supply the thousand milligrams of calcium needed daily by pregnant women. Twelve hundred milligrams of calcium is recommended by the USRDA. To meet this requirement one might want to take five hundred milligrams

of calcium citrate, calcium gluconate, or a food-concentrated calcium fed to yeast and then harvested. Avoid bone meal, dolomite, or oyster shell calcium because they may be contaminated with heavy metals and some are animal products. The cell salt *Calcareo Phos* enhances calcium absorption. The time when calcium is best absorbed in the body is in the evening, and this keeps calcium from blocking the absorption of other minerals. If calcium causes constipation, add some magnesium at about 50% of the calcium amount, making a two-to-one ratio of calcium to magnesium.

Magnesium is another critical nutrient for fetal development. A study in West Germany on one thousand women found that women who took four hundred milligrams per day of magnesium had babies with higher birth weights and higher vitality and neurological alertness. These women had fewer miscarriages and fewer pregnancy complications. Magnesium is also an important co-factor in the omega-3 metabolic cycle for making DHA. According to the USDA, 80% of Americans are deficient in magnesium, so pregnancy puts an additional stress on an already-lowered mineral.

Magnesium is involved in more than three hundred different biological functions in the body. It is essential for heart function, immune system function, blood pressure regulation, blood sugar balance, stroke prevention, muscle strength and relaxation, energy production, calming the nervous system, and muscle growth. It helps mitral valve prolapse, fibromyalgia, chronic fatigue, and a number of other problems. Good sources of magnesium are the leafy greens, buckwheat, sea vegetables, nuts, and seeds. The highest amounts of magnesium are found in sesame, sunflower, and pumpkin seeds. Many people enjoy consuming these seeds as nut butters because they are often easier to digest. Presently I only recommend nut butters from Rejuvenative Foods, 831-457-2418, because their raw nut butters are the only ones I know that are prepared at temperatures that do not destroy the enzymes.

The green concentrate foods like spirulina and chlorella are very high in magnesium. One tablespoon of chlorella has about forty-eight milligrams of magnesium; spirulina has approximately thirty milligrams. My first choice is to go high on magnesium foods, but I also recommend a food-concentrated type of magnesium such as yeast-grown food concentrate similar to what I described for calcium. If that is not available, I suggest a magnesium citrate. If one is suffering from muscle cramps, fatigue, constipation, insomnia, and anxiety, I suggest taking more than the recommended four hundred milligrams of magnesium per day for a short time because these are signs of magnesium deficiency. The cell salt *Mag Phos* enhances magnesium absorption. People who are slow oxidizers or sympathetic types need to take higher amounts of magnesium and lower amounts of calcium, although both need to be increased for pregnancy. I also recommend that magnesium be taken separate from the calcium except for a small amount needed to balance the calcium.

Iron is needed for the development of fetal red blood cells, white blood cells, and to support the blood volume which is increased by 50% to help build immunity and for the development of the placenta. There seems to be a large variation in the ability to absorb iron. Dairy products block the absorption of iron, and vitamin C enhances the absorption. The recommended daily allowance is thirty to sixty milligrams per day, which is a high amount. Women whose systems are better able to absorb iron can get most of this from foods such as raisins, green leafy vegetables, wheat, oats, barley, millet, corn, buckwheat, apricots, nuts, seeds, spirulina, chlorella, and sorghum molasses. One tablespoon of chlorella supplies approximately twenty-five milligrams of iron, and one tablespoon of spirulina supplies approximately nine milligrams. This is amplified by the four milligrams of vitamin C in the chlorella. The natural vitamin C in fruits and vegetables also significantly amplifies the absorption of iron. A good way to monitor your iron needs is to measure your hemoglobin at the beginning of pregnancy and then recheck it every month. If the hemoglobin drops below twelve, then it's a good idea to take an iron supplement. The best supplements are liquid herbal iron concentrates and chlorella or spirulina. They cause the least amount of constipation and are natural.

Zinc is another crucial mineral for pregnancy. It is important for many aspects of fetal growth and critical for the development of the thymus. T-cells are produced in the thymus, which is one of the most important mediators and organs in the immune system. Zinc is found in high concentrations in whole grains, mushrooms, pumpkin seeds, sesame seeds, green leafy vegetables, miso, tofu, bee pollen, and brewer's yeast. For insurance, take fifteen to twenty milligrams in a separate zinc food concentrate tablet from a plant or yeast source.

Other important minerals include copper, manganese, selenium, chromium, and iodine. Copper is needed for optimal development of the immune system and brain. The need is about one milligram per day. Beans and nuts are good sources. Manganese helps prevent birth defects. It is found in high concentrations in grains, nuts, and seeds. Selenium helps protect the immune system and antioxidant system, and also helps prevent birth defects. Chromium helps to regulate the blood sugar. Brewer's yeast is high in selenium, manganese, and chromium. The importance of iodine and kelp supplementation has already been discussed.

The most important vitamins are A, B-complex, C, D, and E (the whole first part of the alphabet). Vitamin A is a co-factor in the metabolism of EFAs and crucial for the development of vision and the enhancement of the immune system. According to Dr. Airola, vitamin A has been shown to increase life expectancy, regulate the stability of the

cell membranes, keep the skin young, maintain the health of all the mucous membrane linings of the body, and improve cellular oxygenation. Approximately ten thousand units are needed per day. One tablespoon of chlorella contains about twelve thousand units of beta-carotene, which is amplified by all the additional carotenoids. These help protect against cancer and heart disease. Yellow vegetables such as carrots are also great sources of vitamin A, as are tomatoes and green leafy vegetables. Spirulina is excellent too.

Vitamin C is found in high concentrations in fruits and some vegetables. Vitamin C is important for building the collagen in the connective tissue, for metabolizing the EFAs, for building the immune system, is one of the most important antioxidants, helps to strengthen the adrenals, generally stimulates all the endocrine glands including the sex glands, and is a first-class healer for almost every type of medical condition. It helps protect against viral and bacterial infections. Vitamin C is an excellent detoxifier for heavy metals and other toxins. It can also help to protect against stretch marks. Peculiar to pregnancy, vitamin C with the bioflavonoids may not be a good idea, because some research has found that rutin can be converted into another bioflavonoid called quercetin that can damage chromosomes. To be on the safe side, I recommend the vitamin C without bioflavonoids. I suggest taking at least two thousand milligrams.

Vitamin D is important because it increases our ability to absorb calcium and enhances calcium metabolism. Usually thirty minutes of sunlight will provide the daily need of vitamin D. An excess of vitamin D can be toxic to the fetus and mother and can make calcium deposits in the soft tissues. If you are getting thirty minutes of sun per day, you don't need vitamin D supplementation. Sprouted seeds, mushrooms, kelp, and sunflower seeds contain some natural vitamin D. If one lives in a cold climate and can't get outside, one can take up to four hundred units of plant-derived ergocalciferol per day. Using full-spectrum lighting three to six hours a day may be another way to stimulate your own vitamin D production.

Vitamin E, as I pointed out before, helps prevent spontaneous abortions, and it is an excellent antioxidant of the system in general and the brain in particular. Vitamin E helps protect the cell membranes of the neurons from free radicals. Vitamin E is also crucial for the healthy development of the pituitary gland, which affects all aspects of the growth of the fetus. Paavo Airola, in *Every Woman's Book*, considers vitamin E the number-one rejuvenation vitamin. It protects the heart, prevents the formation of an aging pigment called ceroid, helps build fertility for men and women, and is an anti-stress vitamin. The best sources of vitamin E are grains, seeds, and nuts.

General B-vitamin support during pregnancy is important for development of the body and its nervous system. Vitamin B6 is particularly important for making prostaglandins to support the immune system and aiding the general metabolic function of the brain cells. It also helps create healthy nerves and mucous membranes. Folic acid is important for development of the nervous system, building white blood cells for the immune system, and preventing the congenital defect called spina bifida occulta. The need for folic acid doubles during pregnancy. Brewer's yeast, dark green leafy vegetables, and dates are excellent sources of folic acid. For insurance, I suggest going high on these foods, especially the brewer's yeast, and then taking eight hundred micrograms of a folic acid supplement (a microgram is one-millionth of a gram). Vitamin B12 is very important also. It has been discussed thoroughly in Chapter 15 and earlier in this chapter. There is no need to take a supplement of B12 if one is eating good amounts of spirulina, chlorella, algae from Klamath Lake, sea vegetables, bee pollen, and brewer's yeast.

Leo Galland, in his book *Superimmunity for Kids*, makes an important point about how to take nutritional supplements. Some multivitamin-mineral tablets have been proven to actually interfere with nutrient absorption. Research shows that calcium can block the body's ability to absorb zinc, iron, and copper. Zinc and iron can interfere with each other's absorption. The absorption of selenium is partially blocked by vitamin C and zinc. When B12 is added to a multivitamin it combines with B1, vitamin C, and copper to produce a B12 analog that is inactive in the body. One British study showed that the usual prenatal vitamin caused a 30% reduction of zinc absorption. Vitamin E and iron taken at the same time also interfere with each other.

The answer is to take each supplement separately and in a way that does not interfere with other nutrients. It seems that iron and calcium are the two that cause the most interference. Calcium is best taken at bedtime. Iron can be taken at the evening meal. The rest of the vitamins can be taken in the morning and at lunch. It is best to take the vitamins with the meals. By eating the high-quality foods and food concentrates recommended, one does not have to take many supplements. I suggest taking one tablespoon of chlorella or spirulina before the evening meal since it is so high in iron. The brewer's yeast and bee pollen that are so high in B vitamins and trace elements can be taken as a mid-morning snack with juice. You will find that when you add up the protein, vitamin, and mineral content of the food concentrates and the whole natural foods, you may need less supplements than you expected. More is not better. An excess of any vitamin or mineral can also interfere with development. The idea is balance and moderation. Once you begin to understand the whole natural foods and food concentrates, it can actually be fun to nurture yourself in this way. When we are eating whole foods and whole food concentrates, we are biting into the life force of nature. It is a different experience than taking a synthetic vitamin or mineral.

Flow of Pregnancy

UNDERSTANDING THE DEVELOPMENTAL FLOW of pregnancy is another part of a successful prenatal nutrition program. In the first trimester, the fetus is the most sensitive to all toxins such as drugs, alcohol, and X-rays. During the first three months, the fetus develops almost all of its vital organs, endocrine system, sexual system, digestive organs, circulatory system, and the basics of the nervous system and brain. The fetus is at its most vulnerable stage. If the mother's nutrition is inadequate during the first trimester, the development of the fetal brain, nervous system, and vital organs can be compromised. For example, as I point out in Chapter 29, one X-ray during the first trimester increases the rate of leukemia by a factor of twelve. An X-ray during the second and third trimester increases the rate of leukemia by a factor of two. During pregnancy in general and the first trimester specifically, I do not recommend flying since we are exposed to up to ten times the normal amount of radiation at thirty thousand feet above the planet.

The first trimester is the time to begin nest building and enjoy being pregnant. During this stage there may be some morning sickness. My observation is that it is often less severe when one is well prepared for pregnancy. As a first step Paavo Airola in *Every Woman's Book* suggests taking a brisk walk in the morning. Another successful approach to morning sickness is to eat five to six small and frequent meals during the day. I have found homeopathic remedies to be very successful in treating such nausea. Dr. Galland, in his book *Superimmunity for Kids*, suggests one hundred milligrams of vitamin B6 plus a ten-milligram injection of vitamin K to combat morning sickness. This often works within a few days. If a vitamin K injection is not available, ten milligrams of vitamin K per day orally will work, but it will take longer. I only recommend this latter approach if nothing else is successful.

In the second trimester the mother's weight gain more obviously begins. How much one should gain varies according to constitutional type and general state of health. During pregnancy it is best to enjoy your food. Don't skip meals, diet, or create any other type of nutritional stress. If your weight is less than twenty pounds above the median for your height and weight, gaining twenty-five to thirty-five pounds is fine. If one is more than twenty pounds overweight before pregnancy, it is still important to gain at least twenty-four pounds during pregnancy.

By the third trimester the baby is usually thirteen inches long and weighs about one and one-half pounds. During the third trimester, the nutrient demand goes up and you may want to increase your general supplement input and your food concentrates. During this time you may want to add digestive enzymes to increase your ability to absorb nutrients. The baby will absorb up to 85% of the calcium and iron the mother assimilates. During the third trimester you may want to increase vitamin C and E, zinc, and silicon. Horsetail tea and the Tachyonized silica are good sources of silicon. Rub Tachyonized vitamin E and A creams on your skin and a liquid vitamin C from Vital Image called C-Serum. These will strengthen the tissues locally to increase elasticity as well as bring increased energy to them. Stretch marks are minimized if your nutrition is optimal starting one year before conception. During this time it is good to prepare your breasts for nursing by gently massaging them and gently pulling them out. Going without a bra helps to stimulate nipples into more readiness for nursing by exposing them to the air and to the gentle friction of the clothing. If one's nipples are inverted, it is even more important to massage several times per day and gently pull out the nipples.

The third trimester is the time to have your nest prepared and your life in order so you can fully focus on the baby.

Lactation

AFTER BIRTH, BREAST FEEDING REQUIRES approximately the same level of nutrient input as pregnancy. The protein intake, however, can be dropped by ten grams per day to approximately sixty-five. One exception is to stop any manganese supplements, as the infant brain is susceptible to manganese toxicity. An excess of manganese may be associated with hyperactivity later on. Vitamin B6 intake above two hundred milligrams per day may suppress lactation. During breast feeding it is important to continue to avoid all toxic substances, since most of it is transmitted through the breast milk. Let the baby be an inspiration for you to keep a high level of health.

Breast feeding is so far superior to any other approach to infant nutrition that it is hard to understand how the medical profession moved away from this after World War II. Thankfully the medical profession in the nineties has become more open to breast feeding, as has the general public. The exceptions to breast feeding are if the mother has a disease which requires medicines that might be toxic to the baby, or if the baby has jaundice. Breast milk has substances that slow the excretion of bilirubin out of the system, which is the pigment that causes the yellow color in jaundice.

Breast milk transfers immunity to the child in many ways, including substances that protect the infant's intestinal tract from infection. These substances include bifidus growth factor, which protects and enhances the health of the intestinal tract; immunoglobulins, which protect against infection; interferon, which protects against viral infection; enzymes to help digest the mother's milk; iron and lactoferrin, which support the immune system and build red blood cells; antioxidants, especially selenium and taurine; and GLA needed for proper metabolism of the prostaglandins, which protect against allergies and other immune problems.

A properly nourished mother's breast milk has high concentrations of DHA, which is crucial for brain development in the first year. No baby should be cut off from the flow of DHA because it is so critical for brain development. This is a particularly important point for the feeding of premature babies who cannot breast feed. They need to be given DHA in their tube feeding for the development of their brain and nervous system.

Breast milk is better digested than formula and cow's milk. Breast feeding encourages good facial and dental development. It lowers infant mortality. The protein quality of mother's milk is significantly better than cow's milk. Nearly 100% of breast milk protein is utilized, but only 50% of cow milk protein is used. The fats in cow's milk do not have the high levels of long-chain fatty acids needed for brain development (such as DHA) that are found in mother's milk. Although the fat content is the same, the composition is different. The cow's milk is more difficult to assimilate. Breast milk contains twice as much lactose, which is needed for the development of myelin sheaths of the neurons. Human milk also is much higher in *Lac-tobacillus bifidus*, which is the best flora for protecting the intestines from infection and developing normal flora in the infant's intestines.

Breast feeding deepens the connection between mother and baby, connecting the baby to the heartbeat of the mother and to love. It is the most simple, natural, and best approach for the physical, emotional, mental, and spiritual development of the baby. I feel that one should breast feed as long as is comfortable, but for at least nine months to one year.

Perspective

ONE THING TO REMEMBER after months of preparation is that there are many unknowns in this whole process of birth. In the story of life, we are not the authors. The baby comes in with its destiny, you have yours, our society has its own destiny too. We can neither control it all nor are we responsible for it all. We can only do our part of the physical, emotional, mental, and spiritual preparation to optimize the coming into the world of this baby. If you have followed this program, be at peace that you have done a great job preparing yourself and optimizing your baby's total expression in the world. All that remains is to allow yourself to be in a state of love and to surrender as this wondrous process unfolds.

Part IV. The Art of Live-Food Preparation

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The Art of Live-Food Preparation

THE ART OF LIVE-FOOD PREPARATION is a joyful interplay between your intuition and the principles and conceptual frameworks elaborated in this book. These recipes are starting points for you to use your intuitive understanding to create recipes that are just perfect for you. In the recipe section I am primarily concerned with how each recipe affects your individualized constitution considerations, including the Ayurvedic dosha and metabolic/autonomic type, as well as the recipe's seasonal effect.

An important focus of my concern in the evolution of these recipes was the preservation of both the taste and energetic qualities of the original food. I have developed the recipes to bring out the energetic interplay of individual foods in conjunction with the properties of herbs. At the same time, they have been created to be tasty, artful, interesting, and practical for helping the reader individualize the diet to his or her own constitution. There is also a brief section on how various herbs affect the Ayurvedic doshas, including whether these herbs are heating or cooling.

The Conscious Eating recipes lead us to a slightly new twist on food combining. Traditional food-combining concepts were concerned with such issues as not combining fruits with vegetables, carbohydrates with proteins, etc. In the Conscious Eating approach, these traditional concerns still have some importance; however, we are now adding the Ayurvedic doshas and metabolic/autonomic considerations. For example, from the Ayurvedic perspective, one does better not to combine two heavy foods. Although avocado is a fruit and theoretically could be combined with other fruits, if it is combined with banana, another heavy fruit, it will cause an imbalance, especially for kaphas. For a pitta person, one tries not to combine foods that are all pitta-unbalancing. Foods with major opposite actions, such as milk and flesh foods, are best not combined. On the other hand, one may choose to combine foods and herbs that modify each other's action. For example, garbanzo beans, which unbalance vata, can be eaten with tahini, garlic, and lemon, which balance vata—making a good combination that we enjoy as hummus. By adding warming herbs (which activate the digestive fire) to vegetables that normally unbalance vata, we are able to broaden the range of foods a vata person can eat without being thrown out of balance. The same principle applies to the kapha and pitta doshas. From an autonomic and metabolic perspective, our concern about food combining is the ratio of carbohydrates, proteins, and fats (which should be the same with each meal). These ratios vary according to one's constitution as a fast oxidizer, slow oxidizer, parasympathetic or sympathetic type. In this context, food preparation becomes an artful endeavor.

The recipes are entirely composed of live-food preparations without the use of refined oils, sugar, or dairy. In the recipes there is an occasional use of miso, which although derived from cooked soybeans, becomes enlivened by a beneficial nonalcoholic fermentation process that creates a great number of enzymes. Miso is very high in many minerals, adds a salty taste, has a strong yang energy, has specific anti-irradiation effects, and is an excellent nerve and stomach calmer and balancer for vata. It has a neutral effect on kapha, and if taken in small quantities by pitta, does not cause an imbalance.

Occasionally honey is suggested in the recipes. Although honey comes from bees and hence does not fit into a strictly vegan concept, honey is highly recommended in the Ayurvedic system as a food specifically indicated for balancing the kapha dosha. Paavo Airola, in his book *Worldwide Secrets for Staying Young*, reports some very interesting longevity research conducted by famed Russian experimental botanist Dr. Nicolai Tsitsin. Dr. Tsitsin, who is Russia's chief biologist and botanist in the bee industry, surveyed approximately 150 Russian people who were all greater than one hundred twenty-five years old. He said:

All of the 150 or more people past 125 years old in Russia, without exception, have stated their principal food has always been pollen and honey—mostly pollen.

The honey these Russians ate was not the store-bought, pasteurized, and filtered honey that many of us are familiar with, but an unpasteurized, unfiltered, unprocessed, raw mix of honey and bee pollen found at the bottom of the honey containers. Interestingly enough, many of these Russian centenarians turned out also to be beekeepers. In *Worldwide Secrets for Staying Young*, Airola claims that honey boosts calcium retention, increases red blood cell count for nutritional anemias stemming from iron and copper deficiencies, and has a beneficial effect on arthritis, colds, poor circulation, constipation, liver and kidney disorders, poor complexion, and insomnia.

The fact that honey and bee pollen are rejuvenating foods was known long before the Russians discovered it. Pythagoras, the Greek spiritual teacher and mathematician, used raw foods for healing and recommended honey for health and long life as far back as 500 B.C.

Although honey, strictly speaking, is a bee product and not a plant product, it is possible to find beekeepers who do not engage in an exploitive relationship with their bees. Ideally they avoid such practices as taking all the honey and feeding the bees sugar or antibiotics. Most often, the kind of beekeeper that cares about the welfare of the bees will also sell honey and bee pollen in its unadulterated, totally raw form. For one who adheres to a strict vegan philosophy this may still not feel “correct,” but for others who follow the living law of harmony, honey in this context may feel acceptable. As I have discussed earlier, the principle of “harmlessness” is always a relative one in a world where each and every organism takes life in some form in order to survive. My ultimate guide is to eat that which enhances my communion with the Divine and which also does not violate my own spiritual sensitivities in light of the principle of harmlessness. The value and necessity of using honey differ with constitutional type. Honey is drying, warming, and astringent. Those with kapha constitutions are positively balanced and brought into a higher level of harmony and health by the use of honey. Pitta people, on the other hand, can become unbalanced by the use of too much honey. In any case, in the few times where I recommend honey in recipes, apple juice, dates, raisins, or figs can usually be easily substituted without affecting the recipes significantly.

These recipes originate from several sources and have emerged as a product of collaboration in a great number of cases. Some of them are used in the Spiritual Nutrition Workshops that I developed. Other recipes were developed independently or in collaboration with Eliot Jay Rosen, our first live-food chef for the Spiritual Nutrition Workshops, and Pat Furger, a former food preparation chef. I also thank Shanti Golds, who teaches vegan and live-food preparation, for her generous help and contributions to this recipe section. I extend my gratitude to Bobbie Spurr, a naturopathic and Ayurvedic practitioner, and Kiana Rose, an Ayurvedically knowledgeable yoga instructor, who double-checked the dosha balancing of these recipes. I am particularly grateful for the generosity of Renée Underkoffler, co-author of *Have Your Cake and Eat It Too* and *The Raw Truth: the Art of Loving Food*, who sent me some of her special recipes with permission to adapt them for this book. And finally, thanks to the chefs at the Tree of Life Café at the Tree of Life Rejuvenation Center, where the final form of these recipes has evolved and been put into practice. These recipes are truly living.

Information is provided above each of the Conscious Eating recipes that indicates the overall effect of the combined foods on each dosha. In designating the specific effects of a certain recipe, the word “balances” denotes that the dish brings a particular dosha back into balance. The word “unbalances” means that the dish causes a disharmony in that dosha. For example, a pitta person tends to have his or her pitta energy more easily unbalanced than a kapha or vata person by heating foods and herbs. Therefore, pittas are more prone to be thrown out of balance by foods and herbs that increase the pitta energy. A kapha person who is low in pitta energy will often be brought into balance by the heating energy of the same food or herb. Throughout the recipes, K means kapha, P means pitta, and V means vata. Many recipes also suggest modifications that make it more balancing for a certain dosha. Although the following recipes may be eaten in any season, the times of the year in which a particular recipe is more balancing for all three doshas are also provided.

Because metabolic and autonomic individualization depends on the total carbohydrate, protein, and fat intake for the whole meal, this information is not provided for each dish. In general, a fast oxidizer and parasympathetic diet includes 50-55% protein, 30-35% carbohydrates, and 20-25% fat at each meal. Parasympathetic types can have more grain than fast oxidizers. Both of these types do best when minimizing high-glycemic-index foods, such as white potatoes and white rice. Slow oxidizers and sympathetic types do best with a ratio of 50-60% carbohydrates, 30-40% protein, and 10-15% fat with each meal. Those with sympathetic constitutions can even have less protein. The key is the ratio being the same at each meal, and not the total amount of food. For example, a person who is a fast oxidizer could eat 50% protein, but if they are not eating much food at each meal, they will still have a low total protein intake. This is just fine, so long as the ratio is balanced appropriately for their constitution. With this understanding, we see that a fast oxidizer does not really need a high total quantity of protein, just the correct ratio.

Most of these ratios are designed for one or two servings. My primary goal is to create an appreciation of the different food and herb energies and to give the reader a basic repertoire of recipes that represents patterns of raw-

food preparation so that he or she may begin to create his or her own recipes based on the principles behind these “template” recipes. With a proper understanding of these recipe patterns, one can develop a tasty diet that consistently balances constitutional doshas, maintains a balanced pH, builds or cleanses, and heats or cools the body as one chooses.

The Conscious Eating Kitchen

IN ORDER TO BEST SERVE YOU IN YOUR LIVE-FOOD PREPARATION, I would like to provide a brief introduction to the optimal live-food kitchen for preparing the following recipes. This includes both general and specific information about equipment, produce, and basic food preparation techniques.

I recommend always using fresh, raw, organic produce. The fresher the better. Garden fresh, like we have at the Tree of Life Rejuvenation Center, is ideal; however, high-quality organic produce is available through wholefood stores, farmer's markets, co-ops, mail order, and in some conventional grocery stores. Although organic produce is generally more expensive than commercially grown produce, as discussed earlier, it is significantly higher in its content of vitamins, minerals, trace elements, and enzymes. In addition to avoiding the detrimental effects of pesticides, irradiation, and produce waxes, you actually get a lot more nutrition for your money

There are some important things to remember about specific foods and how they are incorporated into the Conscious Eating Kitchen. The Conscious Eating kitchen aims to support and enhance spiritual growth as well as your personal constitution. As discussed earlier, the Ayurvedic system classifies food according to the influence upon one's consciousness as well as physical body. Onions and garlic, although beneficial medicinally, often have an over-stimulating effect on the mind. For this reason I do not use onion, but substitute hing, also known as asafoetida. Garlic is used sparingly or in moderation, with appreciation for its strong medicinal properties.

I do not include Braggs Liquid Amino Acids or other salty tasting preparations in the Conscious Eating recipes; instead, I generally recommend Celtic salt, which is live. Celtic salt is a sun-dried sea salt that is very high in minerals. It is superior to many other sea salts, which are heat processed. Celtic salt can be purchased in some whole-food stores or from The Grain and Salt Society: 800-867-7258.

In some of the recipes stevia is recommended as a sweetener. *Stevia rebaudiana* is a South American herb that adds a very sweet taste to foods, yet paradoxically doesn't contain sugars. Some anecdotal cases suggest that it may actually help the function of the pancreas. Stevia comes in several forms: clear liquid, dark liquid, white powder, green powder, and crushed leaf form. The green powder and the crushed leaf form are the least processed.

In order to reap the benefits of all the enzymes in our food, we recommend using fresh juices, ideally within thirty to sixty minutes of juicing. Packaged foods should be organic and/or raw. Some important foods to keep in stock are tahini, tamari, miso, apple cider vinegar, nori sheets, and honey. Because these items are available in both cooked and raw forms, be sure to check the labels for "raw" and "organic." Spices should be organic and non-irradiated.

For the best assimilation it is important to soak all nuts, seeds, grains, and legumes before consuming. Please refer to the *Soaking and Sprouting* section at the end of Part IV.

Recommended equipment for your live-food kitchen includes a Vita-Mix® blender, the Champion Juicer, a nut/spice grinder, food dehydrator, food processor, and a Saladacco "veggie noodle maker." The Vita-Mix® is a high-powered, heavy-duty blender that is good for just about anything that needs to be blended. It is excellent for blending seed sauces, salad dressing, and soups. The Champion Juicer is not only a juicer, but can be used to homogenize foods for dips, patés, spreads, breads, and dehydrated cookies.

Many of the recipes offered in this book rely on electrical appliances for preparation. Ultimately a live-food diet does not require any equipment other than your teeth. However, the electrical equipment makes food preparation far easier. My research has shown that in order to nullify the potential negative effects of AC 60-cycle electricity, the Tachyon Silica Disk applied directly to the electrical device, or covering the electrical fuse box of your building structure, completely neutralizes any negative electrical effects. Tachyon Silica Disks can be purchased through the Tree of Life Rejuvenation Center at 520-394-2533, or through our internet web site at www.treeoflife.nu.

With this information you are now empowered to embark upon a marvelous journey into the world of live-food preparation. I hope the following recipes are helpful in bringing health, harmony, and spirit into your kitchen and your life.

Simple Secrets for Warming, and Not Killing, Live Foods

THESE TECHNIQUES FOR WARMING LIVE FOODS preserve the enzymes and other unknown heat-sensitive factors in food.

1. One easy way to create warmth is to warm the empty plate in the oven or the sun. One can also warm the plate with the food on it for several minutes until warm to the touch.
2. As long as one doesn't go above 115-118° F for more than 2-3 minutes, one can warm raw soups, grain dishes, and vegetables in a regular saucepan. An easy rule of the "fingertip" is: If it is warm to the touch of a finger, it is approximately 115° F. Just how much above 115° F, and for how long food can be heated and still retain its enzymes is not entirely clear, so I recommend taking away the heat as soon as the food becomes warm to the touch.
3. If one is able to find a crock pot which heats at 115° F or below, it is possible to slow-heat certain foods. Small, thinly cut potatoes will actually taste like cooked potatoes after 12 hours in a crock pot. In such a low-heat crock pot it is also possible to make raw stews and vegetable soups. One potential danger to this type of 12-hour, low-heat food preparation is that it makes a good medium in which bacteria multiply. With potatoes, this is not particularly a problem, but with soaking vegetables it may be more so. One way to minimize this potential is to scrub the vegetables well before using. Another difficulty to the extended warming approach is that despite the low temperature of the cooking, the food loses its energy over the extended cooking time.
4. Another interesting way to bring external heat to the food is by warming sauces and pouring them over the rest of the food. One can even warm some of the food to 115° F and mix it with the other raw food. This technique is used with the Wilted Spinach Salad (see *Salads*).
5. Many foods do not create a marked cooling to the body if they are simply served at room temperature rather than chilling them in the refrigerator before serving.

Balancing Your Doshas While You Eat

HOW WE COMBINE THE DIFFERENT TASTES, food qualities, and herbs has the power to balance the overall doshic effect of a meal.

A number of herbs specifically enhance digestion, dry or moisten the body, and heat or cool the body. Many of these herbs are particularly beneficial to the vata and kapha constitutional types, whose digestive fire is often low and who therefore receive benefit from the heat- and digestive-stimulating properties of certain herbs. There are also some cooling herbs for pitta constitutional types. The interplay of the doshic effect of the foods and herbs is what creates the balance. Most of this herbal information is taken from my own direct experience as well as other books, including *The Yoga of Herbs*, by Dr. Vasant Lad and David Frawley, and *Classical Indian Vegetarian and Grain Cooking* by Julie Sahni. These healing and culinary herbs are one of the secrets to how one can increase digestive fire and total body heat while eating live foods.

Herbs for Balancing Doshas

FOLLOWING ARE A FEW HERBS commonly used in food preparation. I have provided information on their seasonal and doshic effects. Once you become familiar with the properties of the different herbs, you can use them to tailor many of the Conscious Eating recipes to your own dosha.

Allspice is pungent, heating, balances K and V, and unbalances P. It relieves gas, promotes peristalsis, and stimulates metabolism.

Best for fall, winter, and spring.

Anise is pungent, heating, balances K and V, and unbalances P. It relieves gas and promotes digestion. It comes from the tiny seeds of both *Anisum vulgare* and *Anisum officinalis*. In India it is known as “foreign fennel.”

Best for fall, winter, and spring.

Asafoetida (*king*) is pungent, heating, balances K and V, and unbalances P. It is a powerful stimulant of the digestive fire and dispeller of intestinal gas, pain, and bloating. It is one of the best herbs for removing V imbalance in the colon. It comes from the dry gum of the living rhizome of several species of *Ferula* growing in India, Kashmir, and Afghanistan. If available, it is preferable to buy asafoetida in what one might call “lump” form because when it is in powdered form it often has added gum arabic, barley, wheat, or flour. In its lump form it is odorless. When ground, asafoetida gives off an onion-like smell due to the sulfur compounds of its volatile oils.

Best for fall, winter, and spring.

Basil is pungent, heating, balances K and V, and unbalances P if taken in excess. Basil is said to open the heart and mind to the Divine. There is a variety of basil plants. The most famous basil is called *tulsi*, or holy basil, in India. There it is said to have an association with Lord Vishnu that dates back to Vedic times. “Holy” basil juice is said to be a longevity drink.

Good for all seasons, but less in the summer.

Bay leaves are pungent, heating, balance K and V, and unbalance P if taken in excess. They stimulate digestion and relieve gas. The Indian bay leaves are the leaf of the cassia tree. The tree grows in India and eastern Asia. American bay leaves, called laurel bay, are more pungent, as well as more expensive.

Best for fall, winter, and spring.

Black pepper is pungent, heating, balances K and V, and is neutral to P, but unbalances P if taken in excess. It is a powerful digestive stimulant that relieves gas, neutralizes toxins, and burns up mucus. It has been used in food and ceremonies since Vedic times in India.

Good for all seasons.

Cardamom is pungent, sweet, heating, and balances V. Its sweetness helps to alleviate P if not taken in excess, and balances K. It is one of the best herbs for enhancing digestion, relieving gas, and strengthening the stomach. Cardamom is the fruit of the plant *Elettaria cardamomum*, found in southern India and Sri Lanka. The cardamom pod can be used in its whole form for a mild effect. For a more aromatic effect, the seeds or whole pod can be ground. It comes in three colors: green, white, and black. The white is actually a bleached green. The natural green is preferable. The black cardamom is less spicy.

Good for all seasons.

Cayenne is very pungent and heating, balances K and V, and unbalances P. Cayenne can be thought of as containing a great deal of sun energy because of its dramatic heating effect. It has the ability to relieve internal and external chilliness. Cayenne also helps to alleviate indigestion, stimulates the digestion, and burns up toxins in the digestive system. It is good for circulation. It is pleasantly warming on a cold winter day. There are many grades of cayenne peppers with different degrees of pungency and heat deriving from the same capsicum plant. Cayenne pepper is a general term for a pepper called “bird chiles,” used to make Tabasco sauce. Other red chiles are also given the name “cayenne.” Dried chile peppers come as pods and also in a powdered form.

Best for fall, winter, and spring.

Cinnamon is pungent, sweet, astringent, and heating. It balances K and V, but in excess may unbalance P. Cinnamon's sweet, astringent qualities make it suitable for Ps who are not in a state of excess. It stimulates digestion and relieves gas. It comes from the bark of the cassia tree, *Cinnamomum cassia*. This form of cinnamon is stronger than the cinnamon that comes from the bark of the *Cinnamomum zylanicum*, or “sweet” or “true” cinnamon. Cinnamon can be used in whole sticks, crushed, or ground.

Good for all seasons.

Clove is pungent, heating, balances K and V, and unbalances P. Cloves stimulate digestion and metabolism and eliminate gas. Cloves come from the dried buds of the plant *Syzygium aromaticum*, native to the Molucca Islands in eastern Indonesia.

Best for fall, winter, and spring.

Coriander is bitter, pungent, and cooling. It balances V, P, and K. A substance that balances V, P, and K is called tridoshic. It helps to cool P aggravations and is good in general on a hot summer day. The white-colored coriander seeds are taken from the plant *Coriandrum sativum*. The leaves of this plant are highly aromatic. Coriander seeds are a primary spice in curry. The fresh leaves are used in food preparation the way parsley is used. In Chinese and Japanese stores it is called Chinese parsley. It is also known as cilantro, especially in Spanish and Portuguese-speaking nations.

Good for all seasons.

Cumin is bitter, pungent, and cooling and balances V, P, and K. It stimulates digestion and relieves gas. Cumin comes in white or green seeds from the *Cumin cyminum* plant. It resembles caraway seeds. Cumin is used in Spanish, Mexican, African, West Indian, and Middle Eastern food preparations. There is also a black or royal cumin that comes from the plant *Cuminum nigrum*. This variety is more mellow and sweet, grows wild in Iran and in the valleys of Kashmir, and is rarer than other types of cumin. Black onion seeds and caraway seeds are often mistakenly referred to as black cumin.

Good for all seasons.

Curry leaf (Neem leaf) is pungent, sweet, and heating. It balances K and V, and unbalances P. It comes from the aromatic leaf of the plant *Murraya koeniggi*, which grows to be six to eight feet tall. Curry leaf is an ancient spice used in Vedic food preparation and comprises the base of the curry powder many are familiar with and commonly use. The fresh leaves keep about two weeks in the refrigerator. They are available as dry leaves but are about one-third as potent. Curry leaves are frequently used in Indian lentil and vegetable stews. Best for fall, winter, and spring. Please note that curry powder, which will be discussed later, is not a single herb but a “masala” combination. A masala is made up of a combination of spices, spices and herbs, or spices, herbs, and vegetable seasonings (such as onion or garlic).

Best for fall, winter, and spring.

Dill is pungent, bitter, and cooling. It balances P and K, and is neutral for V. Dill helps with digestion and is a good cooling herb for the summer. Indian and European dill are closely related and both can come in either a wild or cultivated form.

Good for all seasons.

Fennel is sweet, pungent, and cooling. It balances V, P, and K. It is good for strengthening the digestive fire without unbalancing P. It helps to cool pitta and relieves gas and digestive slowness. Fennel seeds resemble cumin but are larger. The licorice-like taste of fennel makes it easily distinguishable from other herbs. Fennel is such a good digestive aid that in India it is used as an after-dinner “mint.”

Good for all seasons.

Fenugreek is bitter, sweet, pungent, and heating. It balances K and V, and although it slightly unbalances P, it can be taken in small amounts by Ps. Fenugreek helps digestion. Fenugreek sprouts are good for indigestion. The fenugreek seed is actually a legume or bean.

Good for all seasons.

Garlic is pungent, heating, balances K and V, and unbalances P. It is a digestive stimulant, dispels gas, and is a great general healer. It contains all the Ayurvedic tastes but sour. In its sun-dried form, garlic's characteristic aroma and stimulating qualities are significantly diminished, so it can be considered more of a sattvic and balancing food than the rajasic, heating, and activating raw form.

Best for fall, winter, and spring.

Ginger is pungent, sweet, heating, balances K and V, and unbalances P. It stimulates digestion, relieves gas if not taken in excess, and helps to detoxify the body, especially the liver. Dry ginger is more balancing for kapha because of its drying qualities, and fresh-squeezed ginger is slightly more balancing for vata because of its more fluid qualities. It is good for detoxifying during a juice fast. Its sweetness allows Ps to take it in minimal amounts. Botanically, ginger is an aromatic rhizome of the tropical plant *Zingiber officinale*. A rhizome is a horizontal stem that resembles a root-like structure of a plant which sends out roots from its under surface and stalks from its upper surface. When ginger is organic, freshly picked and young, the skin does not need to be peeled.

Good for all seasons, but less in the summer.

Hing (see *Asafoetida*)

Horseradish is pungent, heating, balances K and V, and unbalances P. It helps to relieve mucus and stimulates digestion. It is best taken in small amounts. I have used it successfully as an adjunct to helping heal asthma.

Best for fall, winter, and spring.

Mustard seed is pungent, heating, balances K and V, and unbalances P. It stimulates digestion and relieves gas. It comes from the mustard plant, *Bras-sica*. Certain mustard seeds are pressed to make mustard oil, which is also heating. Best for fall, winter, and spring.

Nutmeg is pungent, heating, and sweet. It balances K and V, and unbalances P. It increases food absorption, particularly in the small intestine. It helps to relieve V in the colon. Nutmeg is the nut portion of the *Myristica fragrans* tree. It is often used with cardamom. The covering of the nut is a red membrane which is ground and used as a spice called mace. Too much nutmeg has been known to have a disorienting effect on the mind.

Best for fall, winter, and spring.

Onion is pungent, sweet, and subtly cooling to the digestive tract in its post-digestive effect. It is classified as rajasic in the Ayurvedic system. In its raw form it balances K, slightly unbalances V, and unbalances P. Its sweetness, watery properties, and post-digestive slowing of digestion may unbalance K if K is already in excess. There are many varieties of onions, all possessing varying strengths.

Best for fall, winter, and spring.

Turmeric is bitter, astringent, pungent, and heating. Taken in small amounts it is tridoshic like cumin. It may unbalance V and P if taken in excess. It is good for digestion, relieves gas, and increases peristalsis. It improves and balances metabolism in the body. A rhizome of the plant *Curuma longa*, it is the spice that gives curry powder its

coloring. It is said to purify the subtle nerve channels of the body.
Good for all seasons.

Raw-Food Recipes

MASALA RECIPES

“Masala” is a Hindu word referring to a seasoning blend that can be any combination of herbs, spices, and vegetables. These already-prepared combinations speed up the food preparation process. In India they are often individualized to a particular geographic area or even to a particular food preparer. As you play with these combinations, I encourage making your own mixtures or varying the proportions to your dosha needs.

Purchased masalas often have spices processed in several ways, including cooking in oil. Processing the spices and herbs in this way is said to help preserve the masala because it insulates and dries it. To make your own masala, and thereby eliminate the need for excess processing and the use of heated oils, you can mix and dry spices and herbs by putting them in a food dryer at 115° F or lower. The masala recipes below are all raw combinations with the exception of a few already-dried spices that can be added to the mix.

Basic Raw, Hot Curry Powder

*Balances V and K, unbalances P
Fall, Winter, and Spring*

½ cup coriander seeds

3 Tbs turmeric powder

2 tsp black peppercorns

1½ tsp cumin seeds

1 tsp mustard seeds

1 tsp fenugreek seeds

10 dry red chile pods

20 curry leaves (double if not fresh)

Grind in a blender and store in an airtight jar. Stores well up to three months. For best storage, dry the fresh curry leaves in a dehydrator before using. Makes one cup.

Remarks: This masala is typical of South Indian cuisine. It adds taste and heat to sauerkrauts, hummus, seed sauces, and salad dressings.

Raw, Mild Curry

Same as the basic curry recipe above, but use only 3 chile pods and 1 tsp black peppercorns.

Hot and Sweet Raw Curry

Same as the basic curry recipe, but add 2 tsp cinnamon and 1 tsp ground cloves.

Basic Raw Garam Masala

Balances V and K, unbalances P All Seasons

¼ cup cumin

¼ cup coriander seeds

3 Tbs black peppercorns

1½ Tbs cardamom seeds

½ tsp whole cloves

4 bay leaves

2 whole cinnamon sticks

Blend in a spice mill until a fine powder. Store in an airtight jar. Makes ¾ cup.

Marathi Hot, Raw Garam Masala

Balances K and V, unbalances P Fall, Winter, and Spring

½ cup flaked coconut

¼ cup coriander seeds

4 Tbs cumin seeds

2 Tbs cardamom seeds

1 Tbs fenugreek seeds

½ Tbs cloves

8 bay leaves, broken up

8 dry red chile pods, broken up

Dry at 115° F for 6 hours and blend in a spice mill. Makes one cup.

Curry Masala

Balances K and V, unbalances P All Seasons-Heating

2 tsp curry powder

1 tsp black peppercorns

1 tsp cardamom

½ tsp dried garlic

½ tsp cloves

Blend in a spice mill.

Remarks: Adds an interesting taste to veggie dips, seed sauces, and seed dressings.

Banana Smoothie Masalas

Balances K, slightly unbalances V and P All Seasons

$\frac{2}{3}$ tsp cardamom

$\frac{1}{3}$ tsp dried ginger

$\frac{1}{3}$ tsp cinnamon

$\frac{2}{3}$ tsp powdered cardamom

$\frac{1}{3}$ tsp dried ginger

$\frac{1}{2}$ tsp nutmeg powder

$\frac{1}{2}$ tsp cinnamon

$\frac{1}{2}$ tsp nutmeg

$\frac{1}{3}$ tsp dried ginger

Blend any one of these garam masala combinations with a 12-ounce banana smoothie.

Remarks: Taken in small amounts, cardamom and cinnamon do not unbalance P. This masala taken at half the amount of spice per ounce of banana smoothie creates a balanced drink for V, P, and K. This masala is moderately warming, sweet, and stimulating to digestion.

Fruit Masala

Balances V, neutral for K and P in small amounts Spring, Summer, Fall

5 cups apricots, thinly sliced

3 cups kiwis, thinly sliced

2 cups lemon rind, thinly sliced

Put all ingredients into dehydrator for approximately 10-15 hours. After drying, put ingredients, small amounts at a time, into a coffee mill and grind to a spice-like consistency

Remarks: Use with fruit salads or fruit dressings. This also makes a delicious tea. Put 1-2 tsp in a tea strainer and let sit in a large cup of hot water or make a great sun tea by adding V* cup of spice to 1 gallon of water; put in a covered jar, set outside, and let the sun shine its love onto it.

Harmony Masala

Balances V, P, and K All Seasons

4 medium to large cucumbers, sliced

2 large red bell peppers, sliced

2 large green bell peppers, sliced

1 bunch celery, chopped

3 cloves garlic, chopped

1 tsp hing

Place in dehydrator 10-15 hours. When completely dried, put into a coffee mill (a little at a time) and grind until mixture resembles spice.

Remarks: This masala is great for anything from soup to salads. For soups, do not grind the vegetable mixture as fine. By leaving it coarser it adds texture as well as taste to soups.

Heating Vegetable Masala

Balances V and K, unbalances P All Seasons

5 cups green bell peppers, sliced

4 cups red peppers, sliced

1 cup garlic cloves

Put entire amount of vegetables and garlic into dehydrator and dry for 5-10 hours. After drying, put small batches into a food processor or coffee mill and grind to desired consistency. Store in jar with tight-fitting lid.

Mexican Masala

Neutral for V and K, unbalances P All Seasons—Warming

5 cups tomatoes, sliced

2 cups celery, sliced

2 cups red bell pepper, sliced

1 cup lemon with rind, sliced

¼ tsp cayenne

Put all ingredients into dehydrator and dry for 5-10 hours. After drying, put small batches into a food processor or coffee mill and grind to desired consistency. Store in jar with tight-fitting lid.

Remarks: Tomatoes unbalance P, and in excess, may unbalance V and K. Vs do best with tomatoes if the peel and seeds are removed and if it's a sauce, paste, or juice, so this masala form is acceptable for V.

For an instant tomato-celery juice, add 2 Tbs Mexican Masala to one cup of water. Blend or stir for one minute. Let stand for a minute, then add fresh lemon if desired.

To make a hot tomato dressing, add 2 Tbs raw apple cider vinegar to 4 Tbs Mexican Masala. Add 1 cup water, ¼ tsp cayenne or more to taste, and blend or stir until evenly dispersed.

To make a zingy tomato dip, add 6 Tbs Mexican Masala to the juice of one lemon and add water to achieve desired thickness. The lemon makes the dip more balancing for V. Let sit in a cool place or refrigerator for a little while. Serve with dehydrated crackers or slices of cucumber, carrot, or jicama.

Nala Masala

Balances K and V, and P in small amounts All Seasons

1 tsp cloves

1 tsp cinnamon

1 tsp nutmeg

1 tsp black peppercorns

1 tsp cardamom

Blend in a spice mill.

Remarks: This is nice to add to the soak water for dried fruits to create an overnight spice effect.

Pizza Masala

Balances V and K, slightly unbalances P All Seasons, best Winter

2 Tbs dried bell pepper

1 Tbs black pepper

1 Tbs black peppercorn

1 Tbs oregano

2 tsp basil

1 tsp fennel

1 tsp thyme

1 tsp parsley

1 tsp marjoram

1 tsp dried chile

¼ tsp hing

Put all ingredients into dehydrator and dry for 5-10 hours. After drying, put small batches into a food processor or coffee mill and grind to desired consistency. Store in jar with tight-fitting lid.

Vegetable Cooling Masala

Balances V, P, and K Late Spring and Summer

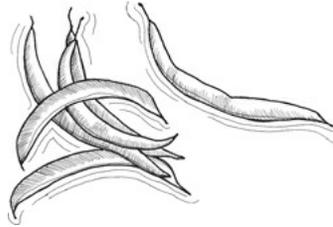
5 cups cucumbers, sliced

3 cups yellow squash, sliced

2 cups green beans, sliced

Put entire amount of vegetables into dehydrator 5-10 hours. After drying, put small batches into a food processor or coffee mill and grind to desired consistency. Store in jar with tight-fitting lid.

Remarks: Normally, cucumber unbalances K; however, dehydrating the cucumber eliminates that effect. This is a good masala for late spring and summer and good for P anytime.



Winter Heat Masala

Balances V and K, unbalances P Winter

1 tsp black peppercorns

½ tsp cayenne

½ tsp ginger powder

½ tsp cardamom

Blend in a spice mill.

Remarks: If one has gas difficulties or likes the smell and taste of onions without eating them, add ¼ tsp of asafoetida (hing). Hing is balancing to V, especially in terms of lower bowel gas. This is a cold-weather masala which can turn almost any salad dressing or vegetable preparation into a warmer and gastric fire stimulator.

NUT AND SEED RECIPES

Nuts and seeds are essential in a live-food diet because they carry a high concentration of protein and healthy fats. They are excellent for fast oxidizers and parasympathetics because they supply both protein and oil, but should be eaten in moderation by slow oxidizers and sympathetics.

The soaking of nuts and seeds renders them excellent biogenic foods for several reasons. The soaking activates the enzymes and metabolism in the germinal seed or nut as well as washes away inhibitory enzymes, which may obstruct digestion and assimilation. The fats, carbohydrates, and protein in the nuts and seeds are pre-digested when soaked. The primary effect of soaking is that the nuts and seeds become significantly easier to assimilate. In addition, in the soaked form, nuts and seeds can be combined with fruit. Most seeds need to be soaked 6-8 hours and can be soaked longer if necessary. Nuts require 12 hours of soaking. In general, it is easiest to simply soak both nuts and seeds overnight. (See *Soaking and Sprouting* section.)

Soaking the nuts and seeds also influences their effect upon the doshas. The more fat a nut has, the more likely it will aggravate pitta and kapha. Some nuts that do this are Brazil, macadamia, walnuts, and pistachios. Other seeds are warming, such as chia and sesame seeds, and may aggravate pitta if eaten in excess. Chia seeds are particularly heating and will usually aggravate pitta. Soaked seeds and nuts, however, are less concentrated, less heavy, less oily, less sweet, and less dry. Because of this, the whole range of soaked nuts and seeds generally is less aggravating to the three doshas if not eaten in excess.

Blending the soaked nuts and seeds further enhances their digestibility and minimizes their vata-aggravating effect. When blended they should be eaten as soon as possible to minimize oxidation, which may alter the quality of fats as well as the enzyme content. For some seeds, such as flaxseed, it is difficult to get the full nutrition of the seed without breaking it down by blending. For this reason flaxseeds should be soaked and blended, or ground in a nut grinder.

Dehydrating nuts and seeds tends to make them slightly aggravating for vata if eaten in excess, but more balancing for kapha.

Nuts and seeds that are heating will become more heating when dehydrated, and are therefore aggravating for pitta if eaten in excess.

The primary nuts and seeds recommended for a live-food diet are sesame, pumpkin, sunflower, flax, chia, and almonds. Nuts such as walnuts, Brazil nuts, macadamia, and pistachios can be soaked but will not sprout.

The following recipes contain a variety of ways to incorporate soaked nuts and seeds into a complete live-food diet. These include seed sauces for breakfast, seed patés, seed milks, and a variety of recipes that include flaxseeds. Nut and seed recipes can be found in several sections other than the *Nut and Seed Recipes* section. These include *Fermented Foods*; *Sauces, Spreads, and Dips*; *Salad Dressings*; and *Dehydrated Foods*.

PATÉS

Patés are created by blending soaked nuts and seeds with a variety of different herbs, spices, and vegetables. They are particularly good in the live-food diet for fast oxidizers and parasympathetics. For best results we recommend using a food processor with the S-shape blade or the Champion Juicer with the blank plate. Patés may be served with soups, salads, and vegetable entrées, as well as with nori sheets, vegetable slices, and sprouted grain or flax crackers. They are also used in a number of other recipes as fillings. We hope you enjoy our serving suggestions and feel free to experiment with your own creations.

Veggie Paté

Balances V, P, K All Seasons

1 cup sunflower seeds, soaked

1 cup carrots, chopped

½ cup broccoli, chopped

¼ cup cilantro

1 clove garlic

1 Tbs lemon juice

1 Tbs mellow miso

Blend all ingredients except the miso. Mix in miso by hand and serve. Use half the miso for K. Serves 2-4.

Carrot-Almond Paté_____

Balances V, neutral for K, slightly unbalances P All Seasons

9 large carrots

1 cup almonds, soaked and blanched

¼ cup parsley

¼ cup cilantro

2 tsp olive oil

½ tsp hing

Celtic salt to taste

Blend ingredients well.

Cumin-Veggie Paté_____

Balances V and K, slightly aggravates P All Seasons

1½ cups almonds, soaked and blanched

½ cup squash

½ cup carrots

½ cup zucchini 1 tomato

1 Tbs cilantro
1 Tbs basil
1 Tbs cumin seeds
Celtic salt to taste

Blend all ingredients, except the cumin seeds. Add cumin seeds to mixture and serve.

Sunny Red Pepper Paté

Balances V, neutral for K, unbalances P All Seasons

1 large red pepper
1 ½ cups sunflower seeds, sprouted
½ cup almonds, soaked and blanched
¼ cup dill
¼ cup cilantro
½ tsp hing
1 clove garlic, pressed
Juice of 1 lemon
Celtic salt to taste

Blend.

Avocado Sun Paté

Balances V, neutral for P and K All Seasons

2 large avocados
1½ cups sunflower seeds, soaked
½ cup parsley
¼ cup lemon juice
¼ tsp cayenne
1 handful sunflower sprouts

Blend all ingredients, saving the sunflower sprouts for a garnish. Serves 2-4.

Beet Paté

Balances V and K, neutral for P All Seasons

1½ cups beets, grated

1½ cups sunflower seeds, sprouted

1 Tbs raw tahini

½ tsp dill

½ tsp coriander

¼ tsp cayenne

½ lemon (juice and pulp)

Blend, adding up to 1/4 cup water until reaching desired consistency.

Remarks: Beets sweeten, warm, and moisten. They balance V and K, and aggravate P. They are, however, very useful in liver conditions in P people. The coriander and dill help balance P in this recipe.

Olive Paté

Balances V, aggravates P and K Spring, Summer, and Fall

Make any veggie paté you wish and add 1/4 cup chopped olives to every cup of veggie paté. Mix well and serve.

NUT AND SEED ENTRÉES

Three-Nut Carrot Loaf

Balances V, neutral for K, unbalances P All Seasons

1½ cups carrots, grated

1 cup sprouts of your choice

1 cup parsley
¾ cup walnuts, soaked
½ cup sunflower seeds, soaked
¼ cup pinenuts, soaked
½ large avocado
½ red pepper
½ yellow pepper
1 clove garlic
1 tsp black pepper
Nori sheets (optional)

Blend all ingredients, except for red and yellow peppers, until slightly chunky. Shape into a loaf and garnish with peppers or wrap in dry nori sheets. Serves 2-3.

Almond-Miso Sculpture

Balances V, slightly unbalances P, unbalances K Spring, Summer, Fall

4 cups almonds, soaked and blanched
Juice of 4 lemons
2 Tbs mellow miso

Veggies, fruits, or edible flowers of the chakra colors

Put almonds through the Champion Juicer. Mix thoroughly with the miso and lemon juice. Shape into any form you like and place on a bed of lettuce. Decorate with the colored vegetables to create a spectacular live-food sculpture. Our favorite is the rainbow person with chakras and their respective colors in place.

Remarks: The miso, almonds, and lemon are balancing for V, neutral to slightly aggravating for P, and aggravating for K. This dish is a strong builder and nerve tonifier for V and very good for gaining weight.

SEED SAUCES

Seed sauces are made from soaked seeds and/or nuts blended with a fruit, juice, or water. The following seed sauces have been created to be enjoyed at breakfast time. They can be poured over fresh sliced fruit or the cereals found in the *Grain Recipes* section. As a way to add beneficial elements to your diet, try topping your dish with freshly ground flaxseeds and/or bee pollen.

Although best consumed immediately, refrigerated seed sauces are an excellent snack for those with hypoglycemia. Seed sauces may last up to **24** hours if kept in the refrigerator. (Seed sauces can also be converted into seed cheeses and seed yogurts. This process is discussed in *Fermented Foods: Seed Cheese and Yogurt*.)

Apple-Cinnamon Seed Sauce

Balances V and K, slightly unbalances P All Seasons

2 cups almonds, soaked and blanched

2 cups apples, diced

2 cups raisin soak water

1 Tbs cinnamon

1 cup water

Blend, adding water to achieve desired consistency.

Banana-Almond Seed Sauce

Balances V, unbalances P and K All Seasons

3 cups almonds, soaked and blanched

2 bananas

1 cup raisin soak water

1 Tbs ginger

Blend, adding water to achieve desired consistency.

Orange-Almond Seed Sauce

Balances V, unbalances P and K All Seasons

2 cups almonds, soaked and blanched

2 oranges, peeled

1 Tbs ginger

Blend, adding water to achieve desired consistency.

OM Seed Sauce

Balances V, neutral for P and K All Seasons

½ cup sesame seeds, soaked

2 mangos, peeled and pitted

2 oranges, peeled

2 dates or ½ tsp raw honey

Blend, adding water to achieve desired consistency Serves **4-6**.

Banana-Sesame Seed Sauce

Balances V, neutral for P, slightly unbalances K All Seasons

2 cups sesame seeds, soaked

2 bananas

2 cups raisin soak water

Blend, adding water to achieve desired consistency



Pear-Sesame Seed Sauce

Balances V, P, K All Seasons

2 pears

2 cups sesame seeds, soaked

2 cups raisin soak water

Blend, adding water to achieve desired consistency.

Mango-Banana Seed Sauce

Balances V, slightly unbalances P and K Spring, Summer, and Fall

2 cups sesame seeds, soaked

2 cups raisin soak water

1 banana

1 mango

3 dates, soaked

1 tsp cardamom seed or ½ tsp cardamom powder

¼ tsp nutmeg

Blend, adding water to achieve desired consistency.

Banana-Pumpkin Seed Sauce

Balances V and P, slightly unbalances K All Seasons

2 cups pumpkin seeds, soaked

1 cup raisin soak water

¼ cup raisins

Fennel to taste

Blend, adding water to achieve desired consistency.

Sun Sauce

Balances V, P, K All Seasons

2 cups sunflower seeds, soaked

2 cups raisin soak water

1 Tbs cardamom seed or 1 tsp cardamom powder

1 tsp cinnamon

Blend, adding water to achieve desired consistency.

Sweet Golden Sun Sauce

Balances V and K, slightly unbalances P All Seasons

- 1 cup sunflower seeds, soaked
- 1 cup almonds, soaked and blanched
- 2 cups raisin soak water
- 1 Tbs vanilla extract
- 1 tsp cinnamon

Blend, adding water to achieve desired consistency. Serves 5-6.

Spiced-Banana Sunseed Sauce

Balances V, neutral for K, unbalances P All Seasons

- 2 bananas
- ½ cup sunflower seeds, soaked
- 1 tsp cinnamon
- 1 tsp cardamom
- ½ tsp nutmeg

Blend, adding water to achieve desired consistency.

Remarks: These spices make this seed sauce very balancing for V and neutral for K.

SEED MILKS

Seed milks are made by blending soaked nuts and/or seeds with water and then straining the mixture through a cheesecloth or mesh colander. The fiber from the nuts and seeds may be discarded or used in other dishes. The remaining liquid is referred to as a “seed milk” and may be mixed with a number of different spices, flavorings, and fruits. It may also be served with breakfast cereals, porridges, and fruit. Seed milk is easily digestible and makes a wonderful snack. It is especially good for infants and people with poor digestion. Seed milk recipes may also be used to create delicious kefir (see *Fermented Foods: Kefir*).

Egg-less Nog

Balances V and K, unbalances P Fall, Winter, and Spring

2 cups almonds, soaked and blanched

1 tsp nutmeg

½ tsp cloves

½ tsp cinnamon

¼ tsp cardamom

Stevia to taste

Blend ingredients until smooth, adding water until reaching milky consistency. For traditional nog consistency, do not strain.

Sesame Milk

Balances V, slightly aggravates P and K All Seasons

½ cup sesame seeds, soaked

4 cups water

Blend until liquefied, strain, and serve.

Cardamom-Sesame Milk

Balances V, P, K All Seasons

½ cup sesame seeds, soaked

½ tsp licorice root powder

½ tsp cardamom

4 cups water

Blend until liquefied and strain. Try adding a small amount of stevia for a sweeter flavor.

Remarks: May aggravate P if taken in excess. Warming spices such as ½ tsp ginger, cardamom, or cinnamon can make this seed milk more warming in winter. These spices go well with any of the seed milks.

Almondana Milk

Balances V, unbalances P and K Summer

1 cup almonds, soaked and blanched

1 cup date soak water

4 dates

4 frozen bananas

2 cups water

Blend soaked almonds and 2 cups water until smooth. Strain and collect the milk. Blend dates and date soak water until smooth.

Blend date mixture, frozen bananas, and almond milk thoroughly.

Serves 3-4.

Cardamom-Almond Milk

Balances V, P, K All Seasons

1 cup almonds, soaked and blanched

1 cup raisin soak water

1 Tbs cardamom

2 cups water

Blend all ingredients until smooth and strain. Serves 4.

Chai

Balances V, P, K All Seasons

1 cup almonds, soaked and blanched

1 cup raisins, soaked

1 cup raisin soak water

½ tsp cardamom

½ tsp cinnamon

½ tsp fennel

¼ tsp clove

¼ tsp nutmeg

2 cups water

Blend all ingredients until smooth and strain.

FAVORITE FLAXSEED RECIPES

Flaxseeds are particularly important because they are the best and safest source on the planet of omega-3 essential fatty acids, as well as being rich in lignands, which boost the immune system. One tablespoon of flaxseeds meets the daily requirement for omega-3 fatty acids. These fatty acids help to relieve all inflammations, especially joint and skin inflammations. When flaxseeds are combined with sunflower seeds, which supply the omega-6 essential fatty acids, one gets a full supply of all fatty acids. Just adding flax to peoples' live-food diets has rebalanced some vata skin conditions. It is also balancing to the bowel and enhances elimination. Flaxseeds are most easily digested and assimilated when ground. One wonderful way to include flaxseeds in your diet is to grind them into a powder in a nut grinder and sprinkle them over fruit and seed sauce or a breakfast porridge. Some recipes that include flaxseeds are offered below. Do not hesitate to experiment and create your own unique combinations.

Sun Squash Soup

Balances V and P, neutral for K All Seasons

1 medium yellow squash

1 cup sunflower sprouts

¼ cup sunflower seeds, soaked

2 Tbs raw apple cider vinegar

1 Tbs flaxseeds, soaked

1 tsp basil

1 clove garlic or ½ tsp sun-dried garlic

1 cup water

Blend all ingredients until smooth, adding more water if necessary, until reaching desired consistency. Serves 2-4.

Red Top Salad Dressing

Balances V and K, unbalances P All Seasons

1 cup carrot juice

½ red bell pepper

2 Tbs flaxseeds, soaked

¼ tsp cayenne

Blend until smooth.

Double O-3 Salad Dressing

Balances V, neutral for K, unbalances P All Seasons

1 cup fresh apple juice

2 Tbs raw apple cider vinegar

2 Tbs walnuts, soaked

1 Tbs flaxseeds, soaked

Blend until smooth.

Second Love Sauce or Dressing

Balances K and V, slightly unbalances P All Seasons

1 papaya

1 cup fresh carrot juice

1 Tbs flaxseeds, soaked

1 tsp ginger, grated

Blend ingredients until smooth.

Curry-Apple Sunflax Drink

Balances V and K, slightly unbalances P All Seasons

1 cup fresh apple juice

½ cup sunflower seeds soaked

1 Tbs flaxseeds, soaked

½ tsp curry

Blend until smooth.

Remarks: Adding 1 clove garlic or ½ tsp sun-dried garlic heats this drink up for the winter months, but makes it more aggravating for P.

Omega-36 Smoothie

Balances V, P, K All Seasons

2 bananas

½ cup sunflower seeds, sprouted

½ cup fresh apple juice

1 Tbs flaxseeds

1 tsp cardamom

1 tsp cinnamon

Blend all ingredients, adding apple juice slowly until reaching desired consistency.



GRAIN RECIPES

Grains are essential building blocks for health. They are critical body builders, important in balancing the vata dosha, and supply a grounding, heating, yang effect. In infants, grains strongly support the development of the first, second, and third chakras and supply a nutritive growth energy that supports vegetarian babies. They are also healing and balancing for adults' first three chakras. Grains are particularly good for slow oxidizers and those with sympathetic constitutions because of their high carbohydrate content. They can be eaten very moderately by parasympathetics, and should be eaten minimally by fast oxidizers. In addition, grains, like nuts and seeds, are high in calories and therefore an excellent food for maintaining or gaining weight. They are very high in minerals, B vitamins, and vitamin E. In addition, the high phosphorus content of grains is good for the nervous system and brain.

It is possible to make raw grains edible by soaking or sprouting them without having to cook them. Grains are turned into biogenic foods when prepared in this way. In their biogenic state, the life force in the seed germ is capable of re-creating a new plant. Raw grains, unlike cooked grains, are rich in enzymes. The high-enzyme and high-calorie content makes soaked or sprouted grains particularly good for those who, after years of eating cooked foods, have begun to deplete their enzyme systems.

Soaked and sprouted grains can be very helpful in the transition process from cooked foods to live foods. They are generally more filling for those accustomed to the heavy feeling usually produced by eating cooked foods.

Soaked and sprouted grains have differing effects on doshas. V and P do a little better with grains than K. Each grain, however, will affect the doshas differently. Millet, rye, buckwheat, and corn are hot, light, and dry in effect. These, along with barley, are balancing for K, but neutral for V and slightly unbalancing for P. Wheat is considered cold, heavy, and moist so it unbalances K but is balancing for V and P. Soaking of grains shifts their effect on the doshas by making all the grains slightly more unbalancing for kapha. For example amaranth, barley, buckwheat, corn, millet, and rye are generally balancing for K, but when soaked become more unbalancing for K. If eaten in excess these may potentially unbalance K.

For further information on soaking and sprouting grains, see the *Soaking and Sprouting* section at the end of Part IV.

BREAKFAST CEREALS

Sweet Barley Porridge

Balances V, P, K All Seasons

4 cups barley, soaked

2 cups fig soak water

1 cup figs, soaked

2 tsp coriander

Blend ingredients to desired consistency. Add 4 extra figs just before stopping blender to provide chunks of fruit in this wonderful porridge. Serves 4-6.

Sweet Aztec Porridge

Balances K, unbalances P, slightly unbalances V All Seasons

4 cups quinoa, sprouted

1½ cups date soak water

1 cup dates, soaked

1 banana

1 tsp nutmeg

Blend all ingredients until smooth.

Grandma's Live Oatmeal Porridge

Balances V and P, unbalances K Fall, Winter, and Spring if not heated

1 cup hulled oat groats, soaked

3 figs, soaked

Blend ingredients. In a pot, heat the porridge to 115° F or when hot to finger and serve. This heating method can be applied to any of the porridges.

Remarks: Oats are sweet, warm, heavy, and moist. They are most balancing for V and aggravate K. To make this recipe more balancing for K, soak the grains or figs in a heating masala (see *Masala Recipes*). This presoaking approach allows the masalas to permeate the grain and figs. Use approximately 1 tsp masala per cup of oats. This adds an unusual taste to the porridge that would intrigue even the three bears. In this form, it is excellent for the winter.

Date-Oatmeal Porridge

Balances V and P, aggravates K Fall, Winter, and Spring

3 cups oat groats, soaked

1½ cups date soak water

1 cup dates, soaked

1 Tbs cinnamon

1 tsp nutmeg

Blend. Serves 4-6.

Amaranth Porridge

Balances V, P, K Fall, Winter, and Spring

1 cup amaranth, sprouted

¼ cup figs, soaked

½ cup fig soak water

½ ripe banana

Blend all the ingredients until smooth. In a pot, warm to 115° F or until hot to the touch. Serve and enjoy.

Millet Porridge

Balances K, neutral for V and P All Seasons

1 cup millet, sprouted

½ cup fig soak water

3-4 figs, soaked and chopped

½ tsp cinnamon

Blend sprouted millet with fig soak water and cinnamon. Stir in chopped figs by hand.

Banana-Millet Porridge

Neutral for V, P, and K All Seasons

1 ripe banana

3 cups millet, sprouted

2 cups raisin or fig soak water

1 tsp cinnamon (optional)

¼ tsp nutmeg (optional)

Blend all the ingredients until smooth.

Quinoa Pudding

Balances V and K, slightly unbalances P All Seasons

2 cups almond milk (see *Nut and Seed Recipes: Seed Milks*)

1 cup quinoa, sprouted

¼ cup almonds, sunflower seeds, or walnuts, soaked (and blanched)

¼ cup raisins, soaked

½ tsp cardamom

½ tsp cinnamon

½ tsp fennel

¼ tsp nutmeg

¼ tsp cloves

Raw honey or raisin soak water to taste

Blend until smooth and serve.

Wheat Treat Cereal

Balances V and P, unbalances K Spring, Summer, and Fall

1 apple, shredded

1 cup wheat berries, sprouted

¼ cup raisins, soaked

2 tsp raw maple syrup

½ tsp cinnamon

½ tsp nutmeg

Mix ingredients together by hand and serve. Serves 2-3.

Buckwheat Granola

Balances K, neutral for V and P All Seasons

4 cups buckwheat, sprouted and dehydrated (see Buckwheat Crunch under *Dehydrated Foods*)

2 cups seeds and nuts, soaked

1 cup raisins, soaked

4 apples, chopped

20 dates, chopped

2 Tbs cinnamon

Place seeds and nuts in food processor and grind into chunks. Add remaining ingredients and mix by hand. Serve alone or with seed milk. Makes 15-20 servings.

GRAIN ENTRÉES

Nepalese Pulau

Balances V, P, K All Seasons

4 cups wild rice, sprouted

1 cup carrots, shredded

1 cup cauliflower, chopped

1 cup zucchini, chopped

1 tomato, chopped

¼ cup sesame oil

¼ cup fresh mint or cilantro

1 Tbs lemon juice

1 tsp curry powder

Celtic salt to taste

Mix well and serve.

Barley Kitchery

Balances V, P, K All Seasons

4 cups barley, sprouted or soaked

¼ cup parsley, chopped

¼ cup cilantro, chopped
1 Tbs coriander seed
1 Tbs cumin seed
1 Tbs ginger, grated
1 Tbs turmeric
1 Tbs mustard seed, soaked
2 tsp sesame oil
½ tsp Celtic salt
¼ tsp hing
1½ cups warm water

Blend ingredients except mustard seed, parsley, and cilantro. Add the mustard seeds (which will be very hot if blended), chopped parsley, and cilantro to taste.

Buckwheat Kitchery

Balances V, P, K All Seasons

2 cups buckwheat, sprouted
2 cups buckwheat, dehydrated (see Buckwheat Crunch under *Dehydrated Foods*)
¼ cup parsley, chopped
¼ cup cilantro, chopped
2 Tbs sesame oil
1 Tbs coriander
1 Tbs cumin
1 Tbs turmeric
1 Tbs mustard seed
½ Tbs Celtic salt
¼ tsp ginger powder
1½ cups warm water

Blend 1 cup sprouted buckwheat with sesame oil, coriander, cumin, tumeric, Celtic salt, ginger powder, and water until smooth. Stir in 1 cup sprouted buckwheat, 2 cups dehydrated buckwheat, parsley, cilantro, and mustard seed. Serve.



GRAIN SOUPS AND SALADS

Kale-Barley Soup

Balances P and K, unbalances V All Seasons

2 celery stalks, finely chopped

3 cups kale, finely chopped

$\frac{3}{4}$ cup barley, sprouted

2 Tbs cilantro, finely chopped

2 tsp oregano

1 tsp miso

4 cups water

Heat the water to 115° F, or until warm to the fingertip. Turn off heat and add all ingredients, except for the miso. Let steep for 10 minutes. Now, blend $\frac{1}{3}$ the amount of soup with the miso and mix back into the remaining soup. Serves 4.

Remarks: Barley is cool, light, and drying. It is good for P and K and slightly unbalances V. Combined with kale, this soup is balancing for P and K, and unbalances V.

Tabouli

Balances V, slightly unbalances P and K All Seasons

1 cup quinoa, sprouted

1 small bunch kale, chopped

3 ripe tomatoes, chopped

4 stalks fresh basil

1 clove garlic

1-2 Tbs virgin olive oil

1 Tbs light miso

½ tsp hing

Juice of 1 lemon

Mix miso and olive oil in a bowl, then mix well with all other ingredients. Serves 4.

Veggie Tabouli

Balances K, slightly unbalances V and P All Seasons

1 cup quinoa, sprouted

¼ cup broccoli, chopped

¼ cup carrots, grated

¼ cup parsley, minced

¼ cup cilantro, minced

2 tomatoes, diced

2 Tbs virgin olive oil Juice of 2 lemons Stalk of mint

Mix well and serve.

Festive Wild Rice

Balancing for V, neutral for P and K All Seasons

1 cup black long-grain wild rice, sprouted

¼ cup red pepper, diced

¼ cup fresh corn

1 tsp virgin olive oil

1 tsp paprika

1 tsp chili powder

Mix ingredients and serve.

Mexican Wild Rice

Balances V, neutral for P and K All Seasons

1½ cups wild rice, sprouted

¼ cup red pepper, diced

⅛ cup cilantro, chopped

2 small tomatoes, diced

¼ cup green pepper, diced

2 tsp virgin olive oil

1 tsp chili powder

Juice of 1 lemon

Celtic salt to taste

Mix ingredients and serve.

Buckwheat-Cabbage Salad

Balances V, P, K All Seasons

2 cups buckwheat, sprouted

2 cups cabbage, shredded

¼ cup parsley, chopped

2 Tbs lemon juice

1 tsp cumin

1 tsp coriander

Celtic salt to taste

Mix well and serve.

Zucchini-Barley Salad

Balances P and K, slightly unbalances V All seasons

- ¼ cup barley, soaked
- 1 small zucchini, grated
- 1 large tomato, diced
- 1 tsp cilantro, finely chopped
- 1 tsp masala of your choice (see *Masala Recipes*)

Combine all ingredients and serve. Can be presented on a bed of alfalfa or sunflower sprouts or lettuce.

Remarks: Barley is cool, light, and dry. It has a diuretic and mild laxative effect that helps to balance K, but unbalances V. It can be balancing for V if a warming masala is used. This salad is generally better for the cooler months, but with a warm masala it works all year round.

Buckwheat-Avo Salad

Balances K, slightly unbalances V and P All Seasons

- ½ cup buckwheat, soaked
- ½ avocado
- ½ tsp garlic, crushed

Mix ingredients and serve.

Remarks: Buckwheat is hot, light, and dry. The avocado helps to balance V and P, and the garlic further helps to balance V. This makes a great salad by itself, but also a great stuffing. Try stuffing tomatoes, bell peppers, cabbage leaves, and nori rolls. Barley may be substituted for buckwheat.

Spinach-Barley Seed Salad

Balances V,P,K All Seasons

- ½ cup barley, sprouted
- ¼ cup sunflower seeds, sprouted
- ¼ cup pumpkin seeds, sprouted
- 1 bunch spinach, thinly sliced
- 1 tomato, diced

Toss ingredients with Italian dressing (see *Salad Dressings: Light Dressings*).

ESSENE BREADS

Essene breads are prepared by sprouting grains such as wheat, rye, and buckwheat and then (along with the nuts) homogenizing them in the Champion Juicer using a blank plate, blending them in a food processor with an S-blade, or best of all, grinding with a hand-cranked meat grinder. The ground grain is the basis of the bread, which should be mixed well with the additional ingredients and formed into a loaf. The bread is then dehydrated at 115° F for 10-12 hours rather than baked. The effect upon the doshas will depend upon the type of grain used in the bread. Doshas are as follows:

Wheat: Balances V and P, unbalances K

Rye: Balances K, slightly unbalances V and P

Buckwheat: Balances K, slightly unbalances V and P if eaten in excess

Herbed Essene Bread

2 cups grain, sprouted
1/8 cup parsley, minced
1/8 cup cilantro, minced
1/8 cup basil, minced
1/4 cup carrot, shredded
1/4 tsp hing

Fruit-N-Nut Essene Bread

2 cups grain, sprouted
1/4 cup raisins
1/4 cup almonds, soaked
1/8 cup walnuts, soaked
5 dates, soaked

Carrot-Almond Essene Bread

2 cups grain, sprouted
1 cup carrot, shredded
½ cup almonds, soaked
5 dates, soaked

Cinnamon-Apple Essene Bread

2 cups grain, sprouted
1 cup apple, finely chopped
7 dates, soaked and chopped
2 tsp cinnamon

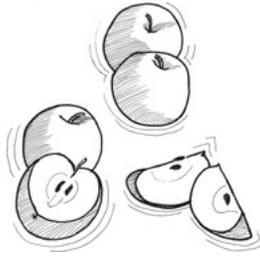
Caraway Essene Bread

2 cups grain, sprouted
¼ cup caraway seed, soaked
½ tsp hing
1 clove garlic, finely chopped

Sweet Sacred Challah

5 cups buckwheat, sprouted
2 cups figs, soaked and chopped
8 Tbs flaxseed, ground

Separate dough into three equally sized strands and roll each in the ground flaxseed. Braid the three strands into one loaf. Dehydrate.



VEGETABLE ENTRÉES

The vegetable entrées are some of the more interesting dishes. They demonstrate that the Conscious Eating Kitchen can produce interesting, exotic, and enticing live-food arrays.

ASIAN

Chow Mien

Balances V, P, K All Seasons

“Noodles”:

2 carrots

2 beets

2 zucchini

2 yams

Cut veggies in long thin strands using the Saladacco (veggie noodle maker) and dehydrate 5 hours.

Vegetables:

1 cup carrot, chopped

1 cup zucchini, chopped

1 cup broccoli, chopped

1 cup cauliflower, chopped

1 cup Napa cabbage, chopped

4 tsp fresh ginger, grated

Sauce:

1 cup sesame seeds, soaked

1½ Tbs fresh ginger

½ Tbs lemon grass

½ Tbs basil

3 dates, pitted

2 cloves garlic

Tamari to taste

Blend the sauce ingredients using water to reach desired consistency Mix chopped vegetables with sauce and place atop chow mien noodles. Serves 8.

Thai Vegetables

Neutral for P and K, slightly unbalances V All Seasons

1 cup purple cabbage, shredded

¼ cup cauliflower florets

¼ cup mushrooms, chopped

¼ cup carrot, shredded

Sauce:

½ cup sun-dried organic peanuts, sprouted

¼ cup coconut milk

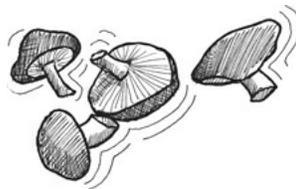
⅛ cup coconut meat

1 tsp fresh ginger juice

Celtic salt to taste

Thai chile pepper to taste

Blend sauce and serve over vegetables.



Tomato Chutney

Balances K, slightly unbalances V and P Fall, Winter, and Spring

4 large tomatoes

2 tomatillos

1 red-hot chile pepper or ½ teaspoon cayenne

½ cup fresh herbs: mint, basil, cilantro

½ cup sesame oil

¼ cup sesame seeds, soaked

1 Tbs lemon juice

1 tsp cumin

1 tsp coriander

½ tsp hing

¼ tsp mustard seed, soaked

Blend all ingredients except tomato. Add diced tomato to blended mixture and serve.

MIDDLE EASTERN

Falafel

Balances V and P, slightly unbalances K All Seasons

3 cups almonds, soaked and blanched

⅓ Vscup raw tahini

¼ cup sesame seeds, ground

¼ cup lemon juice

¼ cup cilantro

¼ cup parsley

2 Tbs cumin seed, soaked

Celtic salt to taste

Homogenize all ingredients in the Champion Juicer. Spread on dehydrator trays as round disks, patties, or balls. Dehydrate 12 hours. Flip over and dehydrate 1 hour on other side. Serves 4. Best served with any of the following:

Almond Hummus (see *Sauces, Spreads, and Dips*)

Babaganoush (see *Sauces, Spreads, and Dips*)

Tabouli (see *Grain Recipes: Grain Soups and Salads*)

Rice Dolmas

Balances V, slightly unbalances P, unbalances K Spring, Summer, and Fall

10-15 grape leaves
3 tomatoes
1 avocado
1 cup wild rice, soaked
2 Tbs basil, chopped
½ tsp dulse flakes or granules
½ tsp hing
4 olives, pitted
½ tsp cinnamon
1 clove garlic
Juice of 2 lemons
Celtic salt to taste

Blend all ingredients except grape leaves and tomatoes. Rinse grape leaves, cutting off stems. Overlap 2 leaves and spread with 1-2 tablespoons of filling and a thin wedge of tomato. Roll leaves, tucking sides in to cover ends. Serves 6.

Spanikopita

Balances V, neutral for P, slightly unbalances K All Seasons

4 cups spinach, chopped
1 avocado
2 Tbs lemon juice
2 Tbs tamari or 1 Tbs Celtic salt
1 tsp dried dill weed or ¼ cup fresh dill
¼ tsp hing
¼ tsp nutmeg
Additional spinach leaves for wrapping

Blend in food processor until smooth. Spoon two tablespoons of mixture into each spinach leaf. Wrap and

dehydrate for 4 hours or until the spinach wrap is flaky. Serve warm.

ITALIAN

Pesto Wraps

Balances V, neutral for K, slightly unbalances P All Seasons

2 cups walnuts, soaked

1 cup basil

1 tomato, cubed

1 zucchini, cut into thin strips

3 cloves garlic

1 tsp red miso

Blend all ingredients except the tomato and zucchini. Spread the pesto on the zucchini strips. Place the tomato on top of the pesto, and roll up the zucchini. Secure with a toothpick and serve.

Spaghetti

Balances V and K, slightly unbalances P All Seasons

2 zucchini

2 carrots

1 yam or potato

2 beets

To create noodles, cut the vegetables into strands of “spaghetti” using the Saladacco (veggie noodle maker). Serve with sauce such as Sun-dried Tomato Pizza Sauce (see *Sauces, Spreads, and Dips: Pizza Sauces*) and Veggie Balls or Cheese Balls (see *Dehydrated Foods*).

Lasagna

Neutral for V and K, unbalances P All Seasons

1 large zucchini, cut into long thin strips

1 eggplant, cut into long thin strips

Marinade:

2 cups water

1 tsp parsley, dried

1 tsp basil, dried

1 tsp hing

1 clove garlic, pressed

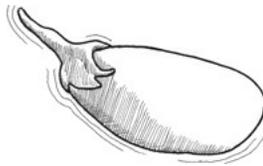
2 cups seed cheese (see *Fermented Foods: Seed Cheese and Yogurt*)

1 cup Sun-dried Tomato Pizza Sauce (see *Sauces, Spreads, and Dips: Pizza Sauces*)

1 cup White Pizza Sauce (see *Sauces, Spreads, and Dips: Pizza Sauces*)

½ cup pinenuts, soaked

To create a wonderful lasagna, layer the marinated vegetables with intermittent layers of sauce and seed cheese. Top with sauce and garnish with pinenuts.



Italian Pizza Crust

Neutral for V and K, slightly unbalances P All Seasons

4 cups buckwheat, sprouted

4 cups sunflower seeds, soaked

1 cup fresh cilantro

1 cup fresh basil

3 Tbs oregano

3 Tbs Pizza Masala (see *Masala Recipes*)

1 Tbs Celtic salt

½ tsp hing

Homogenize all ingredients using the Champion Juicer with the blank plate, or a food processor with the S-blade. Form mixture into a pizza crust and dehydrate 10-12 hours. Top with one of our pizza sauces (see *Sauces, Spreads, and Dips: Pizza Sauces*) and veggies. Serves 4-6.

Tree of Life Pizza Crust

Balances V,P,K All Seasons

4 cups buckwheat, sprouted
4 cups sunflower, sesame, or almonds, soaked (and blanched)
2 cups flaxseeds, soaked
2 cups carrot
2 cups seed cheese, hydrated (see *Fermented Foods*)
1 cup cucumber
1 cup cauliflower or broccoli
1 cup fresh cilantro
½ cup sweet potatoes
3 Tbs oregano
3 Tbs Pizza Masala (see *Masala Recipes*)
1 Tbs Celtic salt
1 Tbs cumin
½ tsp hing
Dash of cayenne and ginger powder

Homogenize all ingredients using the Champion Juicer with the blank rather than the strainer in place, or a food processor with the S-blade in place. Form mixture into a pizza crust and dehydrate 10-12 hours. Top with one of our pizza sauces (see *Sauces, Spreads, and Dips: Pizza Sauces*). Next, add seed cheese, slightly hydrated so as to make it creamy in consistency. Top with vegetables, and more sauce if you like. Serve and enjoy.

Greek Pizza

Crust—Italian Pizza Crust

Sauce—Tapenade (see *Sauces, Spreads, and Dips*)

Toppings—cucumber, tomato, and seed cheese (see: *Fermented Foods: Seed Cheese and Yogurt*)

Mexican Pizza

Crust—Italian Pizza Crust

Sauce—Guacamole (see *Sauces, Spreads, and Dips*)

Toppings—green pepper, tomato, buckwheat greens

Pizza for the Self

Create your own personalized pizza by combining any of our pizza crusts with your favorite sauce and seed cheese (see *Sauces, Spreads, and Dips: Pizza Sauces*, and *Fermented Foods*). Add exotic toppings such as soaked pinenuts, artichoke hearts, squash, soaked seaweed, and even edible flowers.

FRENCH

Layered Quiche of Life

Balances V, neutral for K, slightly unbalances P All Seasons

Crust:

2 cups long-grain wild rice, sprouted

1½ cups fresh herbs: cilantro, basil, parsley

½ cup sunflower seeds or almonds, soaked (and blanched)

1 Tbs Celtic salt

1 tsp curry powder

½ tsp hing

1 clove garlic

In a food processor pulse-chop dry sunflower seeds or almonds and set aside. Grind into a fine meal the sprouted wild rice, garlic, herbs, and spices. Mix the two preparations together well by hand. Press evenly into a 10-inch pie plate.

Optional: Dehydrate 1 hour or until a crust forms.

Bottom Layer:

1 ripe avocado

Cut avocado into slices and layer evenly on the crust at the bottom of the pie plate.

Middle Layer:

½ cups carrot, shredded

1 cup fresh herbs: cilantro and parsley

1 cup sun-dried tomatoes, soaked

½ cup beet, shredded

½ cup raw tahini

½ tsp hing

3 large basil leaves

Celtic salt or miso to taste

In a food processor pulse-chop herbs and soaked sun-dried tomatoes until minced. Add in shredded carrots, tahini, and Celtic salt or miso and blend until smooth. Set ⅓ of this mixture aside. To the remaining mixture, add the shredded beet and blend until thoroughly mixed. Spread the beet mixture followed by the carrot mixture (the half you set aside) over the avocado layer. These different-colored layers will look beautiful when the quiche is served.

Topping:

2 tomatoes, firm and ripe

¼ cup herbs, chopped: parsley and cilantro

3 Tbs sesame seeds, soaked and dry

Slice the tomatoes and layer in rings on top of the spreads. Sprinkle the chopped herbs on top of the tomatoes. Garnish with sesame seeds. The quiche is best served after being refrigerated at least one hour.



MEXICAN

Mexican Taco

Balances P and K, neutral to V All Seasons

1 tomato, chopped

2 large carrot, grated

2 large cabbage leaves

1 avocado, sliced or ½ cup guacamole (see *Sauces, Spreads, and Dips*)

½ cup Mexican Masala (see *Masala Recipes*)

Place avocado or guacamole on cabbage leaves. Add tomatoes and carrots, fold into a taco, and serve. Serves 2.

Remarks: Cabbage is not the best choice for V. It is balancing for P and K. Vs can enjoy cabbage if warmed with spices to increase the digestive fire. Hing can be added to neutralize the gas-producing effects of cabbage and the rest of the cabbage family, including broccoli, cauliflower, Brussels sprouts, and kale. The carrot and avocado make this combination more neutral for V. This recipe is good for all seasons, best in summer, and not in the fall for Vs.

Hummus Taco

Balances P and K, neutral to V in smaller amounts All Seasons

2 tomatoes, chopped

2 carrots, grated

½ avocado, sliced

½ cup hummus (see *Sauces, Spreads, and Dips*)

Handful of alfalfa, clover, or sunflower sprouts

Several large cabbage leaves

Spread out cabbage leaves and coat with hummus. Top with the remaining vegetables. Fold like a taco and enjoy.

AMERICAN

Yam Burgers

Aggravates V, P, K All Seasons

4 cups yams, grated

4 cups sunflower seeds, soaked

2 cups celery

1 Tbs oregano

1 Tbs hing

1 Tbs Celtic salt

Blend all ingredients in food processor using the S-blade to make a paté. Scoop out individual portions, shaping into a patty and placing on a dehydrator sheet. Dehydrate 8-12 hours. Serve with Live Catsup and Live Mustard (see *Sauces, Spreads, and Dips*).

Veggie Boats

Balances V and P, slightly unbalances K All Seasons

2 bell peppers, cut in half

1 tomato, chopped

1 carrot, shredded

1 avocado, sliced

Sprouts

Paté of your choice (see *Nut and Seed Recipes: Patés*)

Masala of your choice (see *Masala Recipes*)

Fill each half of bell pepper with paté and veggies. Sprinkle masala on top. Try garnishing with edible flowers.

Stuffed Cabbage Leaves

Balances P and K, slightly unbalances V All Seasons

Stuff red or green cabbage leaves with any paté (see *Nut and Seed Recipes: Patés*) or seed cheese (see *Fermented Foods: Seed Cheese and Yogurt*). Serve on a bed of sprouts with sauce of choice (see *Sauces, Spreads, and Dips* or *Salad Dressings*).

Stuffed Vegetables

Balances K, slightly unbalances V and P Fall, Winter, and Spring

Tomatoes

Red, green, or yellow peppers

Celery

Cucumber

Cut out area where stem joins the tomato or pepper, and scoop the insides out, and/or cut the cucumber in half (long way) and scoop out the seeds with a spoon. Stuff the tomatoes, peppers, celery, and/or cucumber with Veggie Paté (see *Nut and Seed Recipes: Patés*), seed cheese (see *Fermented Foods: Seed Cheese and Yogurt*), Spinach-Avocado Dip, or Almond Hummus (see *Sauces, Spreads, and Dips*).

Spinach-Stuffed Tomatoes

Balances V and K, unbalances P Fall, Winter, and Spring

4 large tomatoes

2 cups spinach

1 Tbs basil, chopped

1 tsp tarragon, chopped

2 Tbs seed cheese (see *Fermented Foods: Seed Cheese and Yogurt*)

Blend all the ingredients except the tomatoes. Hollow out tomatoes and fill with the mixture. Serves 4.

SOUPS

Soups play an interesting and important role in our live-food cuisine. Warmed and/or blended foods are a very effective way to balance vata. Soups, prepared in this way, increase the range of live-food dishes available for vata people. In the Conscious Eating Kitchen, soups are usually the entrée for the evening meal. This is important because the digestive power decreases in the evening. Blended foods make a wonderful light meal which is easier to digest for all three doshas.

WARM SOUPS

The best way to prepare a warm soup is to heat it until hot to the finger, which is about 105-115° F. Cooked soups are often heated to very high temperatures, which destroys all the enzymes, and we then wait for them to cool down to eat them. By not heating soups excessively, we do not have to wait so long, and the ingredients are still alive. Another way of preparing the soup is in a crock pot at low temperatures (115° F or below) for 6-8 hours, but this presents the danger of becoming a culture for harmful bacteria.

Five-Minute Warm, Enzyme-full, Raw Veggie Soup

Balances V and K, unbalances P All Seasons, best Fall and Winter

- 1 carrot, chopped
- 1 beet, grated
- ¼ head purple cabbage, chopped
- ¼ handful sunflower or alfalfa sprouts
- ¼ tsp ginger
- 1-2 nori sheets, cut in strips
- Cayenne to taste

Heat water to 115° F, adding ingredients except sprouts. Turn off heat and allow to cool. Warm before serving to a temperature of no more than 115° F. Top with sprouts and serve.

AMZ Soup

Balances V and P, unbalances K Summer

- 1 avocado
- 1 large zucchini
- 1 tsp heating or cooling masala (see *Masala Recipes*)
- ½ tsp mellow miso
- ⅔ cup water

Blend all ingredients except miso. Heat to 115° F, remove a small amount of the mixture, add miso, and mix back into soup.

Warm, Raw Vegetable Soup

Balances V, P, K All Seasons

- 3 carrots
- 2 potatoes
- 2 celery stalks
- 2 zucchini
- 1 tsp (less for P) Winter Heat Masala (see *Masala Recipes*)
- 8 cups water

Blend ingredients. Heat at 115° F until warm.

Vegetable Stew

Balances V, P, K All Seasons

- 2 cups potatoes, chopped
- ¾ cup cherry tomatoes, dehydrated
- ½ tsp curry
- ⅛ tsp cayenne
- 1 handful raw dulse, kelp, or alaria, soaked
- 4 cups water

Place all ingredients in a pot and heat at 115° F until warm.

Heavenly Garden Soup for the World

Balances V, P, K All Seasons

8 purple potatoes, chopped
2-3 sweet potatoes, chopped
2-3 yams, chopped
1 yellow Finn potato, chopped
8 carrots, chopped
4 stalks celery, chopped
½ purple cabbage, chopped
½ green cabbage, chopped
¼ head cauliflower, chopped
¼ bunch cilantro, chopped
¼ bunch spinach, chopped
¼ lb shiitake mushrooms, chopped
2 cloves garlic, chopped
3 Tbs mellow miso
1½ Tbs dill
1 tsp basil
¼ tsp ginger, grated
2 gallons water

Heat water to 115° F adding all ingredients, except miso and cilantro. Heat 3-4 hours, adding cilantro during the last half hour. When soup is ready, remove 1 cup of broth, add miso, stir, and mix back into soup. Remove 2 cups of soup mixture (with vegetables). Blend this mixture and stir back into soup. Serves 25.

Hot Spice Corn Soup

Balances V and K, unbalances P Fall, Winter, and Spring

3 cobs fresh corn kernels
1 hot red pepper
2 Tbs dulse, soaked

½ tsp fresh ginger juice

2 cups water, heated to 115° F

Blend and serve. Serves 2-4.

Remarks: Without the ginger and red pepper, this soup is balancing for P.

COOL SOUPS

Any of the following cool soups can be warmed by following the warming instructions given in the *Warm Soups* section above or in *Simple Secrets for Warming, and Not Killing, Live Foods* at the beginning of Part IV.

Raita

Balances V and P, slightly unbalances K All Seasons

2 cups mixed cauliflower, broccoli, cucumber, zucchini, chopped

1 cup seed yogurt (see *Fermented Foods: Seed Cheese and Yogurt*)

1 cup cucumber, chopped

1 large tomato

¼ cup mint, chopped

¼ cup cilantro, chopped

1 tsp cumin

1 tsp coriander

1 tsp mustard seed, soaked

Juice of 1 lemon

Ginger, Celtic salt, and cayenne to taste

2 cups water

Blend all ingredients until smooth, except chopped vegetables. Add the vegetables, stir, and serve.

Apple-Spinach Cosmic Soup

Balances V, P, K All Seasons

1 cup spinach, chopped

1 cup fresh carrot juice

1 cup sprouts

½ apple

½ carrot

½ avocado

1 tsp nutmeg

Blend and serve.

Cream of Broccoli Soup

Balances V and P, neutral for K All Seasons

1 medium bunch broccoli

4 cups almond milk (see *Nut and Seed Recipes: Seed Milks*)

½ cup loose parsley

2 tsp nutritional yeast

½ tsp hing

Celtic salt to taste

Blend and serve.

Creamy Carrot-Ginger Soup

Balances V, neutral for K, slightly unbalances P Fall, Winter, and Spring

1½ cups fresh carrot juice

¾ cup avocado

¼ cup fresh cilantro (reserve a bit for garnish)

½ inch fresh ginger, peeled and minced, or 1 tsp ginger powder

1 Tbs shoyu or Celtic salt to taste

Sesame seeds

Blend all ingredients until smooth. Garnish with fresh cilantro and sesame seeds. Serves 1-2.

Creamy Red Pepper Soup

Balances V and P, slightly unbalances K All Seasons

1 red pepper

1 ripe avocado

1 sprig oregano

¼ cup mixed cilantro and parsley

2 cups water

Blend and serve.

Green Goddess Soup

Balances V, slightly unbalances P and K All Seasons

3 cups sunflower seeds, soaked

½ cup parsley

½ cup cilantro

2 Tbs dill weed

Juice of 3 lemons

Celtic salt to taste

Blend and serve.

Cucumber-Dill Soup

Balances P and V, unbalances K Summer

1 large cucumber

1 cup sunflower seeds, sprouted

⅛ cup dill

Celtic salt to taste

Nutritional yeast to taste

Blend and serve.

Cucumber-Tahini Soup

Balances K, neutral for V, slightly unbalances P All Seasons

1 cucumber, chopped
1 red pepper, chopped
1 carrot, shredded
1 cup mushrooms, chopped
1 cup spinach, finely chopped
1 cup string beans, chopped
½ cup raw tahini
¼ cup fresh parsley, minced
1 clove garlic
Juice of 2 lemons
Celtic salt to taste
2 cups water

Blend water, tahini, lemon juice, and garlic. Combine with remaining ingredients and add Celtic salt to taste. Garnish with parsley.

Carrot-Celery Soup

Balances V and K, slightly unbalances P All Seasons

4 parts carrot juice
1 part celery juice
zucchini, shredded
rutabaga, shredded
parsley, chopped
1 Tbs cumin seed
1 Tbs ginger powder
Celtic salt to taste

Fill bowl ¾ full with carrot-celery juice mixture. Add vegetables and spices, mix well, and serve.

Three-Carrot Soup

Balances V and K, slightly unbalances P All Seasons

3 carrots

1 avocado

1 cup fresh carrot juice

1 tsp cumin

Blend and serve.

Carrot-Sprout Soup

Balances V and K, slightly unbalances P All Seasons

1 cup fresh carrot juice

1 avocado

1 handful mixed sunflower, alfalfa, and clover sprouts

1 tsp masala of choice (see *Masala Recipes*)

Blend the avocado with the carrot juice until smooth. Mix in masala or try adding sea vegetables for a different taste. Garnish with sprouts and serve.

Italian Soup

Unbalances V, P, K All Seasons

6 tomatoes

3 zucchini

1 carrot

2 cups sprouts

1 Tbs virgin olive oil

1 Tbs fresh oregano

1 Tbs fresh basil

3 cloves garlic

Blend all ingredients and garnish with fresh parsley. Serves **3-4**.

Minestrone Soup

Balances K, neutral for V, slightly unbalances P All Seasons

Broth:

2 cups carrot

2 cups celery

1 cup zucchini

Soak the vegetables in 4 cups of water overnight, blend, and strain.

4 cups tomatoes

2 cups total of the following vegetables: carrot, zucchini, broccoli, green beans, corn, spinach

1½ cups celery

½ cup parsley

½ cup barley, sprouted (optional)

¼ cup virgin olive oil 2 tsp basil

1 tsp oregano

½ tsp rosemary

2 bay leaves

1 clove garlic, minced

Celtic salt and pepper to taste

Blend the above ingredients with the broth for 15-30 seconds in a way that maintains the chunky quality Serves 10.

Mexican Zucchini Soup

Balances V, slightly unbalances P and K All Seasons

4 cups zucchini

2 cups carrot, shredded

2 Tbs lemon juice

- 1 Tbs oregano
- 1 Tbs chili powder
- 1 Tbs allspice
- 1 Tbs Celtic salt
- Garlic to taste (optional)

Blend all ingredients, except shredded carrots, adding water to achieve desired consistency Mix shredded carrots into blended mixture. Serves 6.

Spicy Papaya Soup

Balances V, slightly unbalances K, unbalances P Summer

- 1 papaya seeded and peeled
- Juice of 1 lime
- Pinch of cayenne

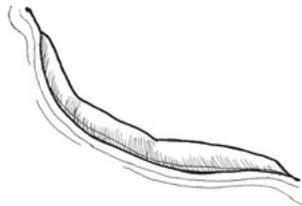
Blend and serve.

Spinach Soup

Balances K, neutral for V and P All Seasons

- 1 bunch spinach
- 1 avocado
- ½ cup parsley
- 1 Tbs lemon juice
- ½-1 cup water

Blend ingredients and serve. For a warm soup, add water heated to 115° F.



Sprout Soup

Balances V, P, K

All Seasons—best in Summer

- 1 cup buckwheat sprouts
- 1 cup sunflower sprouts
- 1 large avocado
- ¼ handful parsley
- 1 tsp masala of choice (see *Masala Recipes*)
- 1 cup water

Blend all ingredients, except parsley, until smooth. Garnish with parsley and serve. Serves 2-4.

Upbeet Soup

Balances V and K, neutral or slightly unbalancing to P All Seasons

- 2 cups fresh carrot juice
- ½ cup beet, grated
- ½ cup carrot, grated
- 1 avocado

Blend ingredients until smooth and serve. Garnish with sprouts.

For a chunkier soup reserve ¼ cup grated carrots and beets and add to blended soup and mix well. Serves 3-4.

Remarks: For cold winter days try adding 1-2 tsp of a heating masala (see *Masala Recipes*).

Creamy Borscht

*Balances V and K, neutral for P
All Seasons, best Spring, Summer, and Fall*

- 2 cups fresh beet juice
- 1 cup beets, grated (optional)
- 1 avocado
- 1 nori sheet, cut into 1" by ¼" strips

Blend all ingredients, except for nori strips. Top soup with nori strips and serve.

SALADS

There is an infinite number of vegetable salads that can be made. My approach is to find a balance between a few components that one can clearly taste, yet with enough variety to continue to be delicious and interesting each day. There are three approaches that enable one to taste each vegetable or fruit in a salad. One is to put each item on the salad plate separately with its own dressing. Another approach is to cut the vegetables in big enough pieces that they are readily identifiable and tasty. A third approach is to grate one major foreground component such as a beet or a carrot and put it over a background component. The main two background components I use are a nest of sprouts in the bottom of the salad or several different lettuces. This approach allows one to experience a predominant taste above others in a salad. I then add one or two secondary components such as avocado squares, hot peppers, bell peppers, almonds, walnuts, sunflower seeds, or tomatoes. My choice of the secondary tastes and energies is influenced by the chosen dressing of the day. If the dressing is a seed-based dressing, I usually do not use nuts and seeds on the salad. If the dressing is a light dressing, or even a thin tahini dressing, then I might use nuts or seeds in the salad. I may then add one pungent herb or vegetable such as arugula or kale. Salads can be a complete balanced meal when accompanied by a seed salad dressing or garnished with nuts and/or seeds.

Salads are mostly light and cool, which makes them especially balancing for P and K and a pleasant summer meal. However, with the masalas like Winter Heat used in dressings, there is no salad alive that will not warm one to the core and also be balancing for V. During the cold seasons, the salads are balancing for P and V, and for K with the addition of heating dressings. Cooling dressings will be okay for P in the winter, but may unbalance V and K. In the summer, I mostly use cooling dressings, and these salads are balancing for P, V, and K. A heating dressing in the summer may unbalance P. Salads are easiest for P and K to assimilate, but V will also do well with salads if adding more oily, warming dressings, avocados, and soaked nuts and seeds. The additional water and oil component of the soaked nuts and seeds keeps Vs from getting too dry and flatulent. Dressings with a little hing added will help prevent a wind imbalance for V. Warming vegetables, like beet and carrot, also help to balance V and K. Cooling vegetables, such as zucchini, squash, and cucumber, help to balance P.

Most of these salads take about ten minutes to prepare. For myself, I don't really use "set" recipes. I begin by intuiting my "color needs" in a Rainbow Diet way. I then ask myself, "Do I want to pick a beet or carrot from the garden? Is the arugula ready to harvest?" Whether I choose a cooling or heating dressing will depend on how I feel at the time.

Mexican Cabbage Salad

Balances K, unbalances V and P Spring, Summer, and Fall

2 cups carrots, grated

1 cup cabbage, sliced

½ cup arugula, chopped

2 Tbs lemon juice

1 Tbs oregano

¼ Tbs chili powder

½ Tbs allspice Celtic salt to taste

Mix ingredients and serve with a light dressing.

Cabbage Cole Slaw

Balances P and K, unbalances V Summer

1½ cups purple cabbage, shredded

1½ cups green cabbage, shredded

1 cup Chinese cabbage, shredded

½ cup celery, finely chopped

½ cup Herb Dressing (see *Salad Dressings: Light Dressings*)

Combine ingredients and store in refrigerator for one hour to allow for the blending of flavors. Serve on individual cabbage leaves.

Carrot Slaw

Balances P and K, unbalances V Summer

1 cup green cabbage, shredded

1 cup purple cabbage, shredded

1 cup carrots, grated

3 Tbs raw apple cider vinegar

2 dates, pitted

Blend the apple cider vinegar and the dates, adding a small amount of water if necessary. Toss the vegetables in this dressing. Serve.

Remarks: The carrots and the apple cider vinegar help to balance V, but are best taken in small amounts by V.

Beet Slaw

Balances P and K, unbalances V Spring, Summer, and Fall

1 cup beets, grated

1 cup green cabbage, shredded

½ cup jicama, grated

3 Tbs raw apple cider vinegar

2 dates, pitted

Blend the apple cider vinegar and the dates, adding a small amount of water if necessary. Toss the vegetables in this dressing. Serve.

Creamy Cole Slaw

Balances P, neutral for V and K Spring, Summer, and Fall

2 carrots, shredded

½ small head purple cabbage, shredded

½ small head green cabbage, shredded

3 tsp raw tahini

1 tsp raw apple cider vinegar

1 tsp raw maple syrup

1 tsp mustard seed, soaked

Celtic salt to taste

Blend all ingredients, except for the vegetables. Toss the vegetables in this dressing and serve.

Mixed Greens and Sprout Salad

Balances P, K, and V All Seasons

4 leaves Romaine lettuce

4 leaves butter lettuce

4 leaves red leaf lettuce

4 leaves arugula

1 tomato, chopped

1 avocado, sliced

1 cup sprouts, mixed: alfalfa, sunflower, buckwheat, and clover

½ cup parsley, chopped

⅓ cup seed dressing of your choice (see *Salad Dressings: Seed Dressings*)

Tear the lettuce into bite-sized pieces. Add the vegetables, except the avocado, and toss with the dressing. Garnish with the sliced avocado and a sprig of parsley.

Remarks: Parsley is a slightly warming diuretic that balances K, unbalances P, and is tolerated by V in small amounts. The avocado and seed dressing help to balance V and P. For fall and winter, choose a heating seed dressing to further help calm V.

Spinach Salad

Balances P,K, and V All Seasons, best Summer

1 large handful spinach

1 carrot, grated

½ cup cauliflower, coarsely ground

10 walnuts

On top of spinach, sprinkle carrots, cauliflower, and walnuts. Serve with your favorite dressing.

Remarks: Spinach is cool, light, and dry, with a slightly heating after-effect. It can be unbalancing for V and P if eaten in large amounts.

Spinach-Avocado Salad

Balances V, P, and K All seasons, best Summer

1 bunch spinach

1 avocado, sliced

1 tomato, diced

1 handful alfalfa sprouts

¾ handful dulse, soaked

½ cup Curry-Apple Dressing (see *Salad Dressings: Light Dressings*)

Toss all ingredients, except avocado, with the dressing. Garnish with the sliced avocado.

Remarks: The avocado adds to the balancing effect on V. Alfalfa, clover, and seed sprouts can be eaten in normal amounts by V when they are combined with balancing foods such as heating vegetables, herbs, salad dressings, soaked nuts and seeds, and avocado. When alfalfa, clover, and seed sprouts are well-balanced, this combination can be eaten in normal, meal-sized amounts by Vs.

Wilted Spinach Salad

Balances V, P, and K All Seasons

This is the same recipe as above, except for the choice of dressing and the wilted spinach. Warm some Sweet Dill Dressing (see *Salad Dressings: Light Dressings*) in a saucepan until hot to the touch. Turn off heat and drop in six spinach leaves for **30** seconds. Place them on top of the spinach salad and pour the hot dressing over the entire salad.

Remarks: This is a warm salad which still remains essentially raw, give or take a few enzymes.

Sprouted Pea Salad

Balances P and K, neutral for V All Seasons

1 handful arugula

1 cup carrots, grated

½ cup peas, sprouted

½ cup guacamole (see *Sauces, Spreads, and Dips*)

¼ cup pumpkin seeds, sprouted

1 handful alfalfa or clover sprouts

Toss the greens and carrots and top with guacamole and pumpkin seeds.

Remarks: Peas are cooling, heavy, sweet, and astringent. They are neutral for V and balancing for P and K. A hot guacamole helps make this combination balancing for V, P, and K.

Carrot-Dill Salad

Balances P, K, and V All Seasons, best Summer

1 cup carrot, grated

½ cup jicama, grated

1 Tbs fresh dill

Enjoy with your favorite dressing.

Remarks: This is a cooling summer salad that helps to balance P in hot weather. Although jicama is balancing for P and K and unbalances V, the overall effect of the salad is balancing for all three doshas. A warm dressing will help balance V.

Cucumber-Dill Salad

Balances P, neutral for V, slightly unbalances K Summer

1 large cucumber, sliced

1 cup sunflower seeds, sprouted

½ cup fresh dill

1 Tbs raw apple cider vinegar

Celtic salt to taste

Mix all ingredients. Serves **3-4**.

Daikon-Ginger Salad

Balances V and K, unbalances P Fall, Winter, and Spring

1 daikon, grated

⅓ cup lemon juice

¼ cup ginger, finely grated

¼ tsp cayenne

Let the grated ginger marinate in lemon-cayenne juice for several hours. Pour the marinade over the daikon and serve.

Remarks: Daikon is unbalancing for P in large amounts.

Daikon-Cucumber Salad

Balances K and V, neutral for P Summer

1 cucumber, sliced into rounds

1 daikon, finely grated

¼ cup Lemon-Dill Dressing (see *Salad Dressings: Light Dressings*)

Spread the daikon over the cucumber slices and pour the dressing over the combination.

Jicama Salad

Balances V and K, and neutral for P All Seasons

1 jicama, grated

¼ cup lemon juice

¼ tsp cayenne (less for P)

Pour cayenne-lemon juice over grated jicama and serve.

Remarks: Jicama is aggravating for V and balancing for P and K. The lemon juice and cayenne help calm and warm V so that the overall effect is neutral for V.

Zesty Broccoli

Balances V, P, K; unbalances V in excess All Seasons, best Winter

1 cup broccoli, chopped

2 cloves garlic, chopped, or ½ tsp sun-dried garlic

1 Tbs fresh ginger juice

Toss together with dressing of choice (see *Salad Dressings*). This combination of broccoli, ginger, and garlic makes a wonderful sauce if blended with fresh apple juice or water.

Green Papaya Salad

Balances V and K, slightly unbalances P All Seasons

2 green papayas, shredded

½ green pepper, diced

½ red pepper, diced

⅓ cup parsley, minced

⅓ cup balsamic vinegar

⅓ cup raw apple cider vinegar

½ tsp fresh ginger juice

2 cloves garlic, pressed

Juice of 1 lemon

Juice of 1 lime

Celtic salt to taste

Mix all ingredients.

Greek Salad

Balances V and P, unbalances K Summer

5 cucumbers, sliced
5 tomatoes, diced
1 cup olives, pitted and diced
2 Tbs raw apple cider vinegar
2 Tbs virgin olive oil (optional)
1 Tbs oregano
Celtic salt to taste

Mix well and serve. Serves 4-5.

Marinated Italian Veggie Salad

Balances V and K, slightly unbalances P Summer

4 cups cauliflower florets
1½ cups carrot, sliced
1 cup olives, pitted
1 cup virgin olive oil
¾ cup celery, chopped
¾ cup white wine vinegar
2 Tbs raw apple cider vinegar
2 Tbs capers
4 cloves garlic, chopped
2 small chiles, dried
1 bay leaf

Mix all ingredients. Refrigerate for 24 hours before serving. Serves 6-10.

Zucchini-Squash Salad

Balances P and V, unbalances K Summer

1 zucchini, diced

1 yellow squash, diced

Toss with Herb Dressing (see *Salad Dressings: Light Dressings*)

Serves 2-3.

Seven-Spear Salad

Balances V, P, K All Seasons

7 asparagus spears

½ avocado, sliced

1 cup sprouts

¼ cup Sweet Dill Dressing (see *Salad Dressings: Light Dressings*)

Place spears and avocado on bed of sprouts and pour on dressing.

Remarks: Asparagus is balancing for V, P, and K. It is sweet, bitter, astringent, cool, light, and moist.



Tomato-Cuke Salad

Balances V and P, neutral for K Summer

1 large cucumber, sliced

4 cherry tomatoes, sliced

1 tsp fresh dill

1-2 cups Sweet Dill Dressing (see *Salad Dressings: Light Dressings*)

Toss with dressing and allow to marinate for several hours or overnight.

Sunny Green Salad

Balances V, P, K All Seasons

1 avocado, sliced

1 handful kale, chopped

1 handful sunflower sprouts

½ cup sunflower seeds sprouted

½ cup Tahini-Ginger-Miso Dressing (see *Salad Dressings: Light Dressings*)

Toss kale and sunflower sprouts with dressing. Decorate with avocado slices in a pinwheel design and top with sunflower seeds.

Underground Salad

Balances V and K, unbalances P All Seasons

1 daikon, grated

1 beet, grated

1 carrot, grated

¼ cup Tahini-Ginger-Miso Dressing (see *Salad Dressings: Light Dressings*)

Toss the vegetables with dressing and serve.

Walnut Salad

Balances V and K, neutral for P All Seasons

1 cup Chinese cabbage, thinly sliced

1 cup carrot, grated

¼ cup walnuts, soaked

½ cup Sweet Dill Dressing (see *Salad Dressings: Light Dressings*)

Combine ingredients and toss with dressing.

BAK Salad

*Balances V, P, K
All Seasons, best Summer*

1 beet, grated

1 avocado, sliced

½ handful kale

2 cups mixed sprouts: alfalfa, clover, and sunflower

¾ cup Winter Heat Dressing (see *Salad Dressings: Seed Dressings*)

Cover bottom of salad bowl with bed of sprouts. Place beets in a mound in the center and top with sliced avocado and dressing.

Remarks: Kale has **14** times more iron per weight than beef, plus many other nutrients. It is light and pungent with a heating aftereffect. Like many other dark greens, such as collards, arugula, dandelion, and mustard greens, it is good for the liver, immune system, skin, eyes, and mucous membranes because of its high nutrients and vitamin A content.

Carrot-Tomato Salad

Balances V and K, neutral for P All Seasons

3 carrots, grated

1 tomato, diced

½ handful arugula

2 cups sprouts or several lettuce leaves

Cover the bottom of a salad bowl with sprouts or lettuce. Place the carrots in a mound in the center. Garnish with arugula and tomatoes and pour on dressing of your choice.

Remarks: This is balancing for V and K, and neutral for P because of the heating effect of the carrots, tomato, and arugula. The arugula adds a bitter, pungent, heating effect that makes it good for all seasons, especially fall, winter, and spring cleaning.

California Hot Corn Salad

Balances V and K, unbalances P Fall, Winter, and Spring

1 cup mixed greens:

Romaine lettuce, butter lettuce, red leaf lettuce, arugula

1 cup fresh white corn

1 avocado, cubed

½ cup red-hot peppers, diced

½ cup Guacamole Dressing (see *Salad Dressings: Light Dressings*)

Remarks: Corn is light, dry, sweet, and astringent. Its dry, astringent warmth makes it good for K. With fresh corn that is still moist, this dish is neutral for V and slightly unbalancing for P. Corn in a dry form, as in chips, popcorn, or tortillas, is unbalancing for V. The peppers make this a heating salad that balances V and K, and unbalances P.



Chili Molé

Balances V, neutral for K, unbalances P Fall, Winter, and Spring

1 large tomato, diced

1 ear sweet corn kernels

½ red bell pepper, diced

½ green pepper, diced

½ cup sun-dried tomatoes, soaked

¼ cup parsley, chopped

¼ cup cilantro, chopped

1 Tbs virgin olive oil

1 tsp nutritional yeast

2 cloves garlic, pressed

Juice of ½ lemon

Pinch of cayenne

Celtic salt or miso to taste

Mix ingredients by hand.

SALAD DRESSINGS

A basic concept behind choosing a particular salad dressing in this live-food approach is to use a dressing to balance the salad according to one's dosha and other body needs. For example, adding a masala affects the heating or cooling properties of the food. The choice of the masala adjusts the energy of the total meal to one's doshas and the season of the year. The seeds and nuts add considerable building protein and oil to the salad. Walnuts add more omega-3 fatty acids.

In this approach to live foods, the addition of a seed dressing transforms a salad into a total balanced meal, which particularly balances vata. When one becomes well-established in live-food cuisine, this type of tasty seed-dressing salad becomes a filling meal in itself that simultaneously helps to meet one's minimum protein, fat, and complex carbohydrate needs, as well as biogenic needs. If I am not using a seed salad dressing, then I will often add some soaked nuts or seeds, such as walnuts, pumpkin seeds, or sunflower seeds, to the salad. If eaten in moderation, soaked seeds and nuts neutralize the potential unbalancing effects on any of the doshas that unsoaked seeds and nuts have. Flaxseeds are not well-absorbed unless they are soaked and blended. Powdering the dry nuts or seeds in a spice mill helps assimilation.

The seed salad dressings can also be used as soups or even dips by varying the thickness. These dressings can even be thought of as whole meals in themselves.

SEED DRESSINGS

Oil-N-Vinegar Seed Dressing

Balances V and P, unbalances K Spring, Summer, and Fall

1 cup sunflower seeds, soaked

¼ cup virgin olive oil

¼ cup raw apple cider vinegar

1 tsp basil, dried

½ tsp oregano, dried

½ tsp thyme, dried

Celtic salt to taste

Blend until smooth and creamy, adding more water if necessary to achieve the desired consistency.

Sunny Tahini-Ginger Dressing

Balances V, neutral for K, and unbalances P All Seasons, best Winter

- 1½ cups sunflower seeds, soaked
- 1 cup fresh apple juice or water
- 2 Tbs raw tahini
- 2 Tbs raw apple cider vinegar or juice of ½ lemon
- 1 tsp ginger juice
- 1 tsp Curry Masala (see *Masala Recipes*)
- ½ tsp mellow miso
- ¼ tsp cayenne

Blend.

Remarks: Tahini is heating, oily, and heavy. Although heating, it doesn't necessarily stimulate digestion.

Zucchini Sun Dressing

*Balances V, P, K
Spring, Summer, and Fall-Mildly Cooling*

- 1 cup zucchini, chopped
- 1 cup fresh apple juice
- ½ cup sunflower seeds, soaked
- 1 Tbs flaxseeds, soaked
- 1½ tsp dill

Blend.

Winter Heat Dressing

Balances V and K, unbalances P Winter

- ½ cup sunflower seeds, soaked
- ½ cup fresh apple juice

2 Tbs raw apple cider vinegar or juice of ½ lemon

1 Tbs flaxseeds

1 tsp Winter Heat Masala (see *Masala Recipes*)

Blend ingredients until smooth and serve.

Remarks: Try adding one heaping teaspoon of raw tahini. This makes the dressing hotter and adds more oil. This is great for V but can further unbalance P.

Sweet-N-Sour Dressing

Balances V, neutral for K, unbalances P All Seasons, best Summer

1 large tomato

½ cup sunflower seeds, soaked

3 Tbs raw apple cider vinegar

1 Tbs raw honey or 2 dates, pitted

1 cup water

Blend ingredients until smooth.

Spanish Salsa Dressing

Balances V and K, unbalances P All Seasons, best Fall

½ cup pumpkin or sunflower seeds, soaked

½ cup raw apple cider vinegar

½ cup cilantro, chopped

3 medium tomatoes

1 clove garlic

¼ tsp cayenne or to taste

Blend all ingredients except for cilantro. Add cilantro, mix well, and serve.

Remarks: This is more of a fall dressing but can be used any season. In the summer, increase the cilantro and decrease the cayenne.

Tomato-Cuke Dressing

Balances V and P, unbalances K Summer

1 cucumber

2 cup sesame milk (see *Nut and Seed Recipes: Seed Milks*)

¼ cup sun-dried tomatoes, soaked

2 Tbs raw apple cider vinegar

½ tsp mellow miso

Juice of 1 lemon

Blend all ingredients, except for miso, until smooth. Add miso and blend for 30 seconds.

Remarks: Cucumber is cooling and sweet. It is balancing for V and P, and unbalances K. Miso is neutral, but can unbalance K if taken in excess. The sourness of the apple cider vinegar or lemon unbalances P and K.

Your Very Own Veggie Seed Dressing

Doshas depend upon your creation

1 vegetable of your choice

½ cup nuts or seeds, soaked

2 Tbs raw apple cider vinegar or juice of 1 lemon

1 Tbs flaxseeds, soaked

1 tsp masala of your choice (see *Masala Recipes*)

¼-½ tsp cayenne

Blend ingredients, adding water to reach desired consistency.

Remarks: This is a basic dressing. You may add one of the following to change the taste and desired effect: During winter, the more heating masalas are used, such as Winter Heat, Nala Curry, or Hot Marathi Raw Garam Masala. In the summer, the cooling masalas or more dill or cilantro may be used. The base mixture balances V and K and is neutral to slightly unbalancing for P.



LIGHT DRESSINGS

Sweet Dill Dressing

a.k.a. Apple Cider Vinegar Honey-Dill Dressing

Balances V, neutral for P and K All Seasons, best Summer

3 Tbs raw apple cider vinegar

1 tsp dill

2 dates, pitted (for P), or 1 tsp raw honey (for K)

1 cup water

Blend and serve.

Remarks: Great on salads and cole slaws. 1 tsp of cilantro or parsley can be substituted for the dill. This dressing is neutral for K if honey is used, and neutral for P if dates are used.

Italian Dressing

Balances V and K, slightly unbalances P All Seasons

1 large tomato

¼ cup virgin olive oil (optional)

2 Tbs raw apple cider vinegar
1 tsp fresh basil
½ tsp fresh oregano
1 clove garlic or ½ tsp sun-dried garlic
½ cup water

Blend until smooth, adding more water if necessary.

Herb Dressing

Balances V, slightly unbalances P, unbalances K Summer

½ cucumber
⅛ cup basil
⅛ cup oregano
⅛ cup cilantro
⅛ cup parsley
4 tsp raw apple cider vinegar
3 tsp virgin olive oil
1 tsp paprika
¼ tsp hing
Juice of 1 lemon
Celtic salt to taste

Blend all ingredients and savor these flavors atop the Zucchini-Squash Salad (see *Salads*) or your own salad creation.

Miso Dressing

Balances V, neutral for P, slightly unbalances K All Seasons, best Summer

2-3 Tbs lemon juice
1 Tbs mellow miso
½ cup water

Blend for **30** seconds and serve.

Creamy Miso Dressing

Balances V, unbalances P and K All Seasons

¼ cup flax oil

2 Tbs lemon juice

1 Tbs mellow miso

½ cup water

Blend until smooth and creamy.

Tahini-Apple Dressing

Balances V and K, unbalances P All Seasons

⅓ cup fresh apple juice

2 Tbs raw apple cider vinegar

1 Tbs raw tahini

½ tsp black pepper

½ tsp curry

Blend.

Curry-Apple Dressing

Balances V and K, unbalances P All Seasons

1 cucumber

1 cup sesame milk (see *Nut and Seed Recipes: Seed Milks*)

¼ cup sun-dried tomatoes, soaked

2 Tbs raw apple cider vinegar

½ tsp mellow miso

Juice of 1 lemon

Blend all ingredients, except for miso, until smooth. Add miso and blend for 30 seconds.

Hot Mustard Dressing

*Balances V, slightly unbalances K, and unbalances P
All Seasons, best Winter*

2 cups mustard seeds, soaked

1 cup raw apple cider vinegar

1 tsp Celtic salt

1 cup water

Blend until smooth.

Tomato-Tahini Dressing

Balances V, slightly unbalances P and K All Seasons

1 cup fresh tomato juice

2 Tbs raw tahini

1 Tbs lemon juice

1 tsp ginger powder

1 clove garlic

Celtic salt and cayenne to taste

Blend and serve.

Zucchini-Lemon Dressing

Balances V and P, slightly unbalances K All Seasons

4 zucchini, grated

3 Tbs lemon juice

1 Tbs allspice

2 tsp Celtic salt

Blend all ingredients, adding water to achieve desired consistency.

Curry-Carrot Dressing

Balances K and V, slightly aggravates P Winter, Spring, and Fall

1 cup carrot

1 cup broccoli

1 cup beet

½ avocado

1 clove garlic

1 tsp ginger, grated

1 tsp curry

Blend.

Remarks: Works better for P if the garlic and ginger are cut in half.

Tahini-Ginger-Miso Dressing

Balances V, neutral for K, unbalances P Winter, Spring, and Fall

2 Tbs raw tahini

2 Tbs raw apple cider vinegar or juice of ½ lemon

1 tsp fresh ginger, grated

¾ tsp mellow miso

1 clove garlic

½ cup water

Blend all liquid ingredients and ginger for 30 seconds. Add remaining ingredients and blend until smooth.

Remarks: Same as Sunny Ginger-Tahini Dressing (see *Seed Dressings*), but not as building. For a spicy Tahini-Ginger-Miso Dressing, add ½ tsp black pepper, ⅛ tsp hing, and ½ tsp cayenne (not for P).

Carrot-Tahini Dressing

Balances K and V, unbalances P All Seasons

1 cup fresh carrot juice

2 Tbs raw tahini

½ tsp curry

¼ tsp black pepper

⅛ tsp hing

Blend.



Green Zinger Dressing

Balances K and V, neutral for P All Seasons

1 cup parsley

2 Tbs raw tahini

½ tsp black pepper

¾ cup water

Blend.

Remarks: Parsley is balancing for all three doshas. The black pepper does not aggravate P unless taken in excess.

Creamy Cuke Dressing

Balances V and P, neutral for K Summer

1 large cucumber

1 heaping Tbs raw tahini

2 tsp dill

½ cup water

Blend all ingredients until smooth.

Lemon-Dill Dressing

Balances V, K, P All Seasons

½ cup lemon juice

1 Tbs raw tahini

2 tsp dill

½ cup water

Blend until smooth.

Basil-Dill Dressing & Marinade

*Balances V, P, K
All Seasons, best Summer*

½ cup lemon juice

3 Tbs fresh basil

3 Tbs fresh dill

½ tsp raw honey or ½ cup fresh apple juice instead of water

½ cup water

Blend.

Avocado Dressing

Balances V, neutral for P, unbalances K All Seasons

1 large avocado

1 clove garlic or ½ tsp sun-dried garlic

4 tsp lemon juice

⅔ cup water

Blend until smooth.

Remarks: Try adding 1/4 tsp cayenne during the winter.

Guacamole Dressing

Balances V,P,K All Seasons

1 avocado

1 tomato, diced

¼ cup lemon juice or 2 Tbs raw apple cider vinegar

1 Tbs fresh cilantro

1 clove garlic or ½ tsp sun-dried garlic

¼ tsp cayenne (for P) or ½ tsp cayenne

Blend in food processor or mash with fork until coarse in texture.

Remarks: Depending on the amount of cayenne, this dressing can be heating or cooling. It can be balancing for V, P, and K depending on the amount of cilantro, garlic, and cayenne used.

Sweet-N-Sour Ginger Dressing

Balances V, slightly unbalances P and K All Seasons

1 tomato

3 Tbs raw apple cider vinegar

1 Tbs ginger, chopped

4 dates, pitted

Celtic salt to taste

Blend until smooth.

Sweet-N-Sour Dressing & Marinade

Balances V and K, unbalances P All Seasons

2 Tbs raw apple cider vinegar

½ tsp honey or 2 dates, pitted

1 tsp fresh ginger

¾ cup water

Blend until smooth or shake mixture in a jar.

Remarks: For a thicker consistency, add 2 Tbs tahini. This dressing also makes a wonderful marinade. Simply soak your favorite vegetables in dressing 4-6 hours.



SAUCES, SPREADS, AND DIPS

Sauces, spread, and dips provide another opportunity to increase the amount of live foods that vata people can eat. In addition, they add a tasty flair to live-food cuisine.

SAUCES

Live Catsup

Unbalances V, P, K All Seasons

1 cup sun-dried tomatoes, soaked

1 cup fresh tomatoes, diced

2 Tbs raw apple cider vinegar

½ tsp Celtic salt

1 cup water

Blend until smooth.

Live Mustard

Balances V, slightly unbalances P and K All Seasons

2 cups yellow mustard seeds, soaked

1 cup raw apple cider vinegar

1 tsp Celtic salt

1 cup water

Blend until smooth.

White Briksha Love Sauce

Balances V, neutral for P, slightly unbalances K All Seasons

- 1 cup cauliflower florets
- ½ cup almonds or sunflower seeds, soaked (and blanched)
- ½ cup walnuts, soaked
- ¼ cup coconut, shredded
- 4 Tbs lemon juice
- 2 Tbs raw tahini
- 1 Tbs raw honey
- 1 tsp cumin
- 1 tsp coriander
- ¼ tsp hing
- 2 cloves garlic
- 1 small turnip root (optional)
- Celtic salt to taste

Blend, adding water to create a thick sauce.

Red Briksha Love Sauce

Balances V, unbalances P and K All Seasons, best Winter

- 2 large tomatoes
- 1 orange, peeled
- 1 cup fresh carrot juice
- ½ cup virgin olive oil or 1 cup sunflower seeds, soaked
- 2 Tbs lemon juice
- ¼ tsp hing
- 2 cloves garlic
- Pinch of cayenne
- Celtic salt to taste

Blend, adding water to create a thick sauce.

Green Briksha Love Sauce

Balances V, neutral for K, slightly unbalances P All Seasons

- 1 green apple
- 2 cups spinach
- 1 cup pumpkin seeds, soaked, or 2 avocados
- ½ cup fresh cilantro
- ½ cup fresh parsley
- ¼ cup virgin olive oil (optional)
- 4 Tbs lemon juice
- 1 Tbs raw honey
- 1 tsp ginger powder
- ¼ tsp hing
- 2 cloves garlic
- Pinch of cayenne
- Celtic salt to taste

Blend, adding water to create a thick sauce.

PIZZA SAUCES

(see *Vegetable Entrées* for pizza crusts and pizza creations)

Sun-dried Tomato Pizza Sauce

Neutral for V and K, unbalances P All Seasons, best Winter

- 20 sun-dried tomatoes, soaked
- 4 large fresh tomatoes

4 cloves garlic

8 sprigs basil

3 Tbs virgin olive oil

2 Tbs Pizza Masala (when used for pizza) (see *Masala Recipes*) Celtic salt to taste

Blend, adding water to achieve desired consistency.

Green Pizza Sauce

Balances V, slightly unbalances P and K All Seasons

1 cup spinach

1 cup zucchini

½ cup cilantro

½ cup parsley

½ cup mint

½ cup virgin olive oil

2 Tbs Pizza Masala (see *Masala Recipes*)

1 Tbs basil, dried

Ginger powder and Celtic salt to taste

Blend, adding water to achieve desired consistency.

White Pizza Sauce

Balances V, neutral for P and K All Seasons

1 cup almonds, soaked and blanched

1 cup sunflower seeds or white sesame seeds, soaked

½ cup lemon juice

½ cup raw tahini

1 Tbs cumin

1 clove garlic

Celtic salt and cayenne to taste

Blend, adding water to achieve desired consistency.

HUMMUS

Hummus is traditionally made with garbanzo beans. In the Conscious Eating Kitchen, almonds are also used to make hummus. Garbanzos are one of the few raw beans I recommend for sprouting. This is because many of the raw beans unbalance V and cause gas. One reason is that trypsin and other enzyme inhibitors are still partially active in a raw sprouted bean. The longer it is sprouted the more the enzyme inhibitors are inactivated and washed away so the bean is easier to digest. Garbanzo beans need to be sprouted 2-3 days, until their tails are $\frac{1}{2}$ - $\frac{3}{4}$ " long (see *Soaking and Sprouting*). Garbanzos are cool and dry and so help to balance P and K.

Hummus may be served with crackers, on top of sliced tomatoes, with vegetable cuttings, on top of salads, or in sea vegetable wraps and cabbage tacos. Hummus, along with avocado and sprouts, makes a nice filler for bell peppers. For a variation, try adding 4 raw olives to the mixture before blending. You may also try adding 1 tsp of a masala of your choice (see *Masala Recipes*).

Sweet Hummus

Balances P and K, neutral for V All Seasons

2 cups garbanzo beans, sprouted

$\frac{1}{4}$ cup fresh apple juice

3 Tbs raw tahini

$\frac{1}{4}$ - $\frac{1}{2}$ tsp cayenne

$\frac{1}{4}$ tsp hing 2 cloves garlic or 1 tsp sun-dried garlic

Blend and serve.

Remarks: The cayenne, lemon, and garlic help to mitigate the unbalancing effect of garbanzos on Vs. Some Vs are unbalanced by hummus. For these folks, $\frac{1}{8}$ tsp hing keeps the hummus from having an unbalancing effect. The raw tahini brings more heat and oil, which is balancing for V. During the winter more cayenne and garlic may be needed to balance V and K.

Lemon Hummus

Balances V, P, K All Seasons

2 cups garbanzo beans, sprouted

3 Tbs raw tahini

¼-½ tsp cayenne

2 cloves garlic or 1 tsp sun-dried garlic Juice of 2 lemons

Blend, adding water if necessary to achieve desired consistency.

Sour Hummus

Balances V, P, K All Seasons

2 cups garbanzo beans, sprouted

½ cup raw apple cider vinegar

3 Tbs raw tahini

¼ tsp cayenne

2 cloves garlic or 1 tsp sun-dried garlic

Blend, adding water if necessary to achieve desired consistency.

Red Hummus

Balances V, P, K All Seasons

1 cup garbanzo beans, sprouted

¼ cup beets, grated

4 Tbs raw tahini

3 Tbs fresh apple juice

2 Tbs raw apple cider vinegar or lemon juice

Blend, adding water if necessary to achieve desired consistency.

Remarks: The beet especially helps to balance V and makes this combination easier for Vs.

Almond Hummus

Balances V, P, K All Seasons

2½ cups almonds, soaked and blanched

3 Tbs tahini or ½ cup sesame oil

2 cloves of garlic or 1 Tbs hing

Juice of 1 lemon

Cayenne to taste

Celtic salt to taste

Blend all the ingredients in a food processor. To allow for maximum thickness, run the almonds and garlic through the Champion Juicer and then mix in the other ingredients thoroughly.

Remarks: This is a Tree of Life Rejuvenation Center favorite.

Curry Hummus

Balances V and K, slightly unbalances P All Seasons, best Winter

2 cups hummus of your choice

2 tsp curry powder

Blend and serve.

SPREADS AND DIPS

Babaganoush

Balances K, neutral for V, unbalances P All Seasons, best Winter

3 cups eggplant, peeled and chopped

¼ cup parsley, minced

4 Tbs raw tahini

1 tsp cumin seed

¼ tsp hing

1 clove garlic

Juice of 1 lemon

Celtic salt to taste

Blend and serve. Serves 3-4.

Perfect Pesto_____

Balances V, slightly unbalances P and K All Seasons, best Fall-slightly heating

1½ cups walnuts, soaked

1 cup sweet basil

½ cup pinenuts, soaked

3 large cloves garlic or ½ tsp sun-dried garlic

Homogenize ingredients in the Champion Juicer with blank plate or in a food processor with the S-blade.

Remarks: The raw pesto is great to use on vegetable slices such as cucumber, carrot, or beet. Another delightful approach is to fill a green or red bell pepper with pesto and add sprouts.

Tomato Pesto_____

Balances V, slightly unbalances P and K All Seasons, best Fall—slightly heating

½ cup dehydrated or sun-dried

tomatoes, soaked

Perfect Pesto (above)

Homogenize tomatoes with ingredients in Perfect Pesto using the Champion Juicer or a food processor.

Caponata_____

Balances K, unbalances V and P Winter

5-6 cups eggplant, chopped

4 celery stalks, sliced

3 tomatoes, chopped

2 large green or red peppers, chopped

1 cup black olives, sliced

½ cup pinenuts, soaked

3-4 Tbs red wine vinegar

1 Tbs garlic, minced

1 Tbs capers, rinsed

½ tsp salt

Pepper to taste

Virgin olive oil as a marinade

1 tsp ginger, crushed

Soak the eggplant in virgin olive oil and crushed ginger for 48 hours. Mix the eggplant with the other ingredients, saving the marinade to be used in another dish of your creation. Serves 4-6.

Tapenade_____

Neutral for V, unbalances P and K Spring, Summer, and Fall

8 sun-dried tomatoes, soaked

15 olives, pitted

1 garlic clove

3 sprigs basil

2 tsp olive oil

Mix in a food processor. Serve with Herbed Essene Bread (see *Grain Recipes: Essene Breads*) or zucchini slices.

Guacamole_____

Balances V, neutral for P, unbalances K All Seasons

2 ripe avocados

1 large tomato, diced

¼ cup cilantro, chopped

½ tsp cumin

½ tsp hing

Juice of 1 lemon

Celtic salt to taste

Blend all ingredients except tomatoes, which should be mixed in by hand.

Almond-Guacamole Dip

Balances V, unbalances P and K All Seasons, best Fall and Spring

½ cup almonds, soaked and blanched

1 avocado

1 tomato, cubed

2 Tbs basil

¼-½ tsp cayenne

Juice of 1 lemon

Cilantro as garnish

Homogenize in the Champion Juicer using the blank plate or in a food processor using the S-blade.

Fiesta Spread

Balances V, P, and K All Seasons

1 cup garbanzo beans, sprouted

2 tomatoes

1 avocado

3 Tbs fresh cilantro

¼ tsp cayenne

2 cloves garlic

Blend and serve.

Remarks: The avocado is more balancing for V and P, and unbalances K. The tomato is mildly unbalancing for V, P, and K, but some of its effects are neutralized by the cilantro.

Spinach-Avocado Dip

Balances V, P, and K All Seasons

3 cups spinach, chopped

1 avocado

½ tomato

2 Tbs lemon juice

½ tsp dill

¼ tsp nutmeg

⅛ tsp hing

Blend and serve.

Remarks: Spinach is cooling, light, and dry, with a warming effect on the body. In small amounts, it is tolerated by V and P, but will aggravate these doshas if eaten in excess. Spinach-Avocado Dip is another Tree of Life Rejuvenation Center favorite.

Tomato Salsa

Neutral for V, slightly unbalances K, unbalances P Fall, Winter, and Spring

4 ripe tomatoes, diced

½ cup cilantro, chopped

1 tsp hing

1 tsp cayenne

1 small clove garlic

Juice of 1 lemon

Juice of 1 lime

Celtic salt to taste

Mix and serve.

Coconut-Spinach Dip

Balances V, P, K All Seasons

2 cups spinach

½ cup coconut

½ cup sunflower seeds or almonds, soaked (and blanched)

1 orange, peeled

5 dates, pitted

Cayenne and Celtic salt to taste

Blend and enjoy. Serves **4-6**.

Tom Yum

Balances V, neutral for P and K All Seasons

1 coconut, chopped Milk of 1 coconut

3 sprigs oregano

3 sprigs cilantro

3 sprigs parsley

1 leaf basil

½ Thai chile pepper

Blend until smooth.



Coconut Chutney

Balances V, P, K All Seasons

1 apple
1 tomato
1 orange
5 dates, pitted
½ cup coconut, shredded
1 Tbs basil
1 Tbs cilantro
Juice of 1 lemon
Celtic salt to taste

Blend all ingredients until smooth and creamy.

Tahini-Mango Dip

Balances V, P, and K All Seasons

1 mango
3Tbs raw tahini
2 tsp ginger, grated

Blend.

Remarks: Mango is balancing for V, P, and K. Tahini and ginger together unbalance P and balance V and K. Depending on how much ginger is used, this can be a cold- or warm-weather dip, although with 2 tsp ginger it is particularly good for the fall. _____

SEA VEGETABLE RECIPES

Many people are unfamiliar with sea vegetables (also known as seaweed). People all over the world have been eating sea vegetables for thousands of years. Four varieties of sea vegetables have been found preserved in Japanese burial grounds that were 10,000 years old. The Australian Aborigines use three different types of sea vegetables. The Native American Indians include alaria (wakame-like), nori (laver), and kelp in their traditional diets. The Atlantic coastal people of Scandinavia, France, and the British Isles also have been eating sea vegetables for centuries.

The vegetarian movement in North America, particularly macrobiotics, has brought attention to the tremendous health benefits of sea vegetables. Gram for gram, they are higher in minerals and vitamins than any other class of food. They are rich in A, B, C, E, and human-active vitamin B12. One-half ounce of alaria contains 2.15 µg of human-active B12, which is 10 times more B12 than the daily minimum requirement. Dulse has the least amount of human-active B12, but the amount in one-half ounce of dulse is .29 µg, which is still a little more than the minimum daily need. One-half ounce of kelp has .48 µg, approximately 1-2 times the daily minimum, and laver (nori) has .74 µg, or 2-3 times the daily minimum.

The minerals in sea vegetables are found in similar ratios to those in the blood. Sea vegetables produce substantial amounts of proteins, complex carbohydrates, carotenes, and chlorophyll. For example, dulse and nori have 21.5 and 28.4 grams of protein respectively per hundred grams of sea vegetable. They have approximately 2-4.5% fat, and 40 to 45 grams of carbohydrate per hundred grams of sea vegetable. Alaria (essentially identical to the Japanese wakame) and kelp are extremely high in calcium. All of the sea vegetables seem to be high in potassium, with kelp being the highest, followed by dulse and alaria. Alaria and kelp are high in magnesium, each having three times the RDA per 100 grams. Kelp and alaria have very high amounts of iodine. One hundred grams of kelp has approximately ten times the estimated RDA. One hundred grams of alaria and nori have approximately 8487 and 4266 iu of vitamin A per hundred grams. One hundred grams of most of the sea vegetables has about one-third the RDA of the B vitamins, one-tenth the RDA of vitamin C, and about one-third the RDA of vitamin E. As pointed out earlier, these sea vegetables also contain chelating agents that are effective for protection against the absorption of radioactive particles.

Some people must acquire a taste for sea vegetables. I find that they taste excellent in their dried raw-leaf form. Although I have never enjoyed raw granular kelp or kelp in tablet form, eating the actual kelp frond, dried or fresh, is a tasty addition to salads and soups. It is best to eat the sea vegetables in their raw form after the sea salt and occasional seashells and animals have been rinsed off. This takes about ten minutes of soaking and rinsing. After the raw sea vegetables are soaked, one can eat them right away or marinate them in vinegar or lemon juice. I enjoy adding a variety of masalas to the marinade.

Soaked sea vegetables balance V, are neutral to P, and neutral to slightly unbalancing to K.

SEA VEGETABLE ENTRÉES

Nori Rolls _____

Balances V, P, K All Seasons

4 raw nori sheets

4 cups sunflower seeds, soaked
3 carrots, shredded
2 zucchini, shredded
1 beet, shredded
frac12; cabbage, thinly sliced
2 Tbs lemon juice
2 Tbs miso
2 Tbs umeboshi plum paste
Pickled ginger, cut into thin strips
Wasabi (optional)
Tamari (optional)

Blend sunflower seeds and lemon juice in a food processor until you have a very thick paste, stopping the food processor periodically to scrape sides. Spread approximately ½ cup of sunflower paste onto the rough side of a raw nori sheet. Cover half of nori and fill with sliced vegetables. Smear a small amount of miso and umebosi plum paste on the nori. Roll up tightly and seal nori with miso, or by placing a little water on fingertips applied along the edge of the nori sheet. Serve with tamari and wasabi as condiments. Serves **4**.

Nori Burrito

Neutral for V, P, and K All Seasons

½ cup guacamole (see *Sauces, Spreads, and Dips*)
¼ cup peas, sprouted
½ tomato, diced
1 handful alfalfa sprouts
1 sheet raw nori

Apply guacamole to nori sheet, which moistens it; then add the rest of the contents and roll up. Hummus may be substituted for the guacamole.

Remarks: This is neutral for V, P, and K if not eaten in excess. Peas are cool, heavy, sweet, and astringent and are balancing for P and K.

If hummus is substituted for the guacamole, it will be more balancing for K and less balancing for V unless hing or some heating herbs are used.

Dummus Nori Roll

Balances K, P, and V All Seasons

1 sheet raw nori

3 Tbs dummus (see *Sea Vegetable Recipes: Dips, Light Bites, and Seasonings*)

½ avocado, sliced

½ tomato, chopped

1 handful sunflower sprouts

Spread the dummus on the nori. Add avocado, tomato, and sprouts. Roll and cut into one-inch pieces.

SEA VEGETABLE SOUPS

Sea Veggie Miso Soup

Balances V, neutral for K, unbalances P All Seasons

1 handful dulse, alaria, kelp, or nori (or a mixture), soaked

1 tsp fresh ginger

½ tsp mellow miso

1½ cups water, heated to 115° F

Dissolve the miso in a quarter-cup of the heated water and mix back in. Stir in the sea veggies and ginger. Serve.

Remarks: Excellent for building digestive fire.

Japanese Sweet Potato Soup

Balances V, slightly unbalances P, unbalances K All Seasons

5 small to medium sweet potatoes, grated

2 carrots, grated

1 cup wakame, soaked

2 Tbs miso

2 Tbs ginger powder

1 tsp cinnamon

1 tsp cumin

¼ tsp stevia

Blend all ingredients. Garnish with soaked wakame. Serves 4.

Tomato Sea Veggie Soup

Neutral for P, K, and V All Seasons

1½ cups Tomato Soup (see *Soups: Cool Soups*)

½ handful dulse or kelp, soaked

After soaking the sea vegetable for 10 minutes, marinate it in lemon juice for one hour. Add the sea vegetables to the Tomato Soup and serve.

Remarks: This soup can be modified for all seasons according to the amount of cayenne used.

SEA VEGETABLE SALADS AND DRESSINGS

Land and Sea Salad

Balances V, neutral for P, unbalances K All Seasons

1 handful sea vegetable, soaked

Add to any of your favorite salads and enjoy!

Sea Siren Salad

Balances V, slightly unbalances P and K All Seasons

2 cups purple cabbage, shredded

2 cups green cabbage, shredded

1 cup carrot, shredded

Marinade:

2 tsp tamari

2 tsp mirin (rice wine vinegar)

1 tsp sesame oil Juice of ½ lemon

Topping:

½ cup assorted seaweed, soaked: dulse, hijiki, arame, and/or nori

Garnish with sesame seeds and serve.

Thai Spice Salad

Balances V, neutral for K, slightly unbalances P All Seasons

1 sweet potato, grated

3 carrots, grated

2 cups arame, soaked

½ cup parsley, chopped

3 Tbs raw tahini

2 Tbs tamari

2 Tbs Thai spice

1 Tbs fresh ginger, grated

Mix thoroughly all ingredients.

Serves 4-6.

Carrot-Dulse Salad

Balances V and K, neutral for P All Seasons-Warming

2 carrots, grated

½ cup walnuts, soaked

¼ cup raisins, soaked

1 handful dulse, soaked and chopped

½ cup Tahini-Ginger-Miso Dressing (see *Salad Dressings: Light Dressings*)

Toss all ingredients in the dressing and serve.

Carrot-Hijiki Salad

Balances V and K, neutral for P All Seasons

3 carrots, grated

1 red bell pepper, cut into strips

1 handful alfalfa sprouts

½ cup pinenuts, soaked

¼ cup hijiki, soaked Juice of 1 lemon plus water to equal ½ cup liquid

¼ tsp cayenne

½ avocado

Blend the avocado, cayenne, and diluted lemon juice to create a dressing. Line your salad bowl with the sprouts and place the remaining vegetables and nuts on top. Pour on dressing.

Zucchini-Dulse Dance

Balances V and P, slightly unbalances K Spring, Summer, and Fall

2 small zucchini, cubed

¼ cup dulse, soaked and chopped

Tbs raw apple cider vinegar

1 tsp basil

1 tsp parsley

½ tsp raw honey (optional)

Place the chopped zucchini in a bowl. Mix other ingredients by hand and pour over zucchini.

Kelp Pickles

Balances V, neutral for P, unbalances K Summer

- 1 cucumber, cut into rounds
- 1 handful kelp, cut into small strips
- $\frac{3}{4}$ cup raw apple cider vinegar
- 1 Tbs masala of your choice (see *Masala Recipes*)
- 1 red chile pepper, chopped (not for P)
- 1 cup water to cover cucumber slices

Mix masala and apple cider vinegar; add other ingredients. Let sit overnight or **4-6** hours. Drain and serve.

Tahini-Ginger-Dulse Dressing

Balances V, neutral for K, unbalances P All Seasons, best Winter

- 1 handful dulse, soaked
- 2 Tbs raw apple cider vinegar or juice of $\frac{1}{2}$ lemon
- 1 Tbs raw tahini
- $\frac{1}{2}$ tsp fresh ginger, grated
- $\frac{1}{4}$ tsp cayenne
- $\frac{1}{4}$ tsp cumin

Blend.

Remarks: This is a good building dressing, as well as a good source of human-active B12.

Avocado Sea Dressing

Balances V, neutral for K, unbalances P All Seasons

- 1 avocado
- $\frac{1}{2}$ cup lemon juice
- 1 Tbs caraway seeds

1 Tbs “Seasoning (see *Sea Vegetable Recipes: Dips, Light Bites, and Seasonings*)

1 clove garlic

Blend.

Dulse and Dine Dressing

Balances V, neutral for K, unbalances P All Seasons

½ handful dulse, soaked

¾ cup fresh apple juice

1 Tbs raw apple cider vinegar

¼ tsp fresh ginger, grated

¼ cup water

Blend. For a thicker dressing, add 1 to 2 Tbs raw tahini.

You may also try substituting powdered dulse, dulse flakes, or dry nori in place of the whole dulse.

SEA VEGETABLE DIPS, LIGHT BITES, AND SEASONINGS

Sea Veggie Paté

Balances V, slightly unbalances P and K All Seasons

3 cups almonds, soaked and blanched

⅛ cup wakame, soaked

1 Tbs lemon juice Tamari to taste

Blend in a food processor using the S-blade. Serves 3-4 as an appetizer.

Dulse-Tahini Dip

Balances V, neutral for K, unbalances P All Seasons-Heating

½ cup powdered dulse

½ cup raw tahini

3 Tbs raw ginger juice

Blend. To make a thinner sauce, add water and blend.



Dummus_____

Balances P and K, neutral for V All Seasons

2 cups hummus (see *Sauces, Spreads, and Dips: Hummus*)

1 handful dulse, soaked

Blend. Dummus can be eaten with dulse chips, vegetable sticks, etc.

Remarks: Adding ¼ tsp hing to the hummus helps to balance V.

Avocado Sea Wrap

Balances V and P, slightly unbalances K All Seasons

1 avocado, sliced

Nori sheets or soaked dulse strips

Lay the avocado inside the sea vegetable and roll up.

Sweet-N-Spicy Alaria

Balances V and K, neutral for P All Seasons

3 cups raw apple cider vinegar

2 cups alaria, soaked and cut into strips

1 Tbs whole cloves

1 tsp raw honey or 2 dates

½ tsp celery seed

½ tsp black pepper

Marinate the alaria in the other ingredients for **24** hours in the refrigerator. Use as a condiment.

“Seasoning

Neutral for V and K, unbalances P All Seasons

1 cup black sesame seeds, soaked and dry

2 sheets nori or ½ handful dry dulse, ground into a powder

1 Tbs ginger powder

Blend in a coffee/nut grinder.

FRUIT DISHES

Fruits represent a joy and delight for many live-fooders. They are the only food in the plant kingdom that does not involve the killing of a plant. Although all constitutions may eat **1-2** pieces of fruit daily, fruits are best for people who are slow oxidizers or sympathetic-dominant. They may unbalance fast oxidizers and parasympathetics if eaten in excess. If fruits, particularly sweet or dried fruits, are eaten in excess they may aggravate hypoglycemia and candida conditions. Few people have physiologically evolved to the point where they can become pure fruitarians, but with the proper addition of vegetables, particularly fruits and vegetables with a high fat content, such as avocado, nuts, and seeds, they are more likely to be successful on a quasi-fruitarian diet.

Many fruits can be eaten by all three doshas, as long as the fruits are ripe and sweet. If an apricot, for example, is not ripe and sweet, it will unbalance P, but if it is sweet, it will be balancing. It is difficult to include all these nuances in the Ayurvedic charts. Some fruits such as banana may need a little spice, such as dry ginger to balance K and turmeric to balance P. Mangos, soaked raisins, sweet purple grapes, sweet cherries, sweet apricots, fresh sweet berries, and pineapple (in small amounts for K) do not unbalance any of the doshas. Apple, which is good for P and K, with the addition of cinnamon will balance V. Fresh figs balance V and P but need some dried ginger to balance K.

The following fruit recipes represent a sweet and delicious addition to the live-food diet. If eaten in moderation they can be balancing and add to the sweetness of life.

Tree of Life Seven-Fruit Haroset

Balances V, P, K All Seasons

- 4 cups coconut, shredded
- 4 cups walnuts and almonds, soaked (blanched) and chopped
- 4 cups raisins, soaked
- 4 cups apples, chopped
- 2 cups pears, chopped
- 1 cup prunes, soaked and chopped
- ¼ cup raw honey
- 4 Tbs cinnamon
- 2 lemon rinds, grated Fresh grape juice

Combine all ingredients except juice and mix well by hand. Add grape juice and stir until reaching desired consistency. Serves **15**.



Apple Chutney

Balances V and K, neutral for P All Seasons

2 apples, diced

3 dates, pitted

1 tsp ginger

1 tsp cinnamon

½ cup water

Blend all ingredients except apples. Pour over apples. Serves 2-3.

OM Fruit Salad

Balances V and P, slightly unbalances K Spring, Summer, and Fall

1 large banana, sliced

1 red apple, chopped

½ cup combined oranges, kiwis, and other seasonal fruit, chopped

¼ cup raisins, soaked

⅓ cup OM Seed Sauce (see *Nut and Seed Recipes: Seed Sauces*)

Pour seed sauce over fruit. Enjoy.

Cambodian Papaya Salad

Balances V and K, neutral for P All Seasons

1 green papaya, grated

1 carrot, grated

½ cup fennel

¼ cup Basil-Dill Dressing (see *Salad Dressings: Light Dressings*)

Mix the papaya, carrot, and fennel; pour on dressing.

Remarks: A little cayenne will warm this up for the winter.

Ganeshpuri Breakfast

Balances V, slightly unbalances P and K Summer and Fall

1 large papaya, cut in half

2 bananas, sliced Juice of 1 lemon or lime

Scoop the seeds out of the papaya. Place the bananas in the center of the papaya halves and squeeze the lemon or lime over the combination.

Straw-Apple Delight

Balances V, neutral for P, unbalances K Summer

1 apple, cubed

1 cup ripe strawberries

¼ cup almonds, soaked and blanched

1 Tbs coconut, grated

Homogenize the strawberries and almonds in the Champion Juicer using the blank plate or the food processor using the S-blade. By hand, mix with apple cubes and sprinkle with coconut.

Banana-Apple-Seed

Balances V, P, and K All Seasons

2 apples, juiced

2 bananas

½ cup sunflower seeds, soaked

½ cup raisins

1 Tbs cardamom

½ tsp cinnamon

Blend apple juice, bananas, cardamom, and cinnamon. Pour over the applesauce that was rendered from the apple juicing process. (This conserves food.) Sprinkle the raisins on top.

Remarks: Although some books suggest that apples are aggravating to V because of their dryness, tartness, and astringent skin, this may be more true of the Indian apples, which taste like wood. The organic apples, such as the red McIntosh, are juicy and sweet and so are balancing for V. Some American apples are bitter and dry, and they would be more aggravating for V.

Melon Balls

Balances P and V, unbalances K Summer

1 watermelon

1 cantaloupe

1 honeydew melon

Use a melon baller to scoop out the melons, forming balls. Having cut the watermelon in half, use these two halves as a vessel for holding the melon balls. You can present them with a dip made from any one of your favorite sweet seed sauces (see *Nut and Seed Recipes: Seed Sauces*).

FERMENTED FOODS

Fermented foods re-populate the colon with health-promoting lactic acid bacteria. The health powers of fermented foods are discussed in the body of this book in the Fermented Foods section. I believe this is an important part of everyone's diet, and I suggest that you experiment with adding fermented foods to your menus. From the Ayurvedic point of view, they add the sour taste to round out a fully balanced dosha energetic intake of food.

KEFIR

Kefir is a fermented food that adds healthy bowel flora to our intestines, stabilizes digestive function, and has an extensive range of other health benefits. Making kefir requires special grains known as “kefir grains” which aid in the fermentation process. High-quality kefir grains are only available through a group of select suppliers. Call 1-888-KEFIR 4 U, Lifeway Food Inc., also at 847-967-6558, or Teldon of Canada Ltd. at 800-663-2212 or 604-436-3312.

The “kefir grains” are actually a culture of healthy bacteria and yeast which can live indefinitely. The process of making kefir involves creating an environment with a base such as raw milk or seed milk in which the healthy bacteria and yeast can reproduce and proliferate. When consumed in the form of a drink, known as “kefir,” these healthy bacteria and yeast have tremendous healing power and benefit the body in many ways. First, the kefir creates a healthy mucous lining in the colon, which acts as a good medium to support the growth of beneficial bowel flora. Kefir helps to prevent parasitic infections and cancer, as well as constipation.

Because of kefir's ability to establish healthy bowel flora, it is beneficial in preventing many gastrointestinal disorders. Some researchers have found that kefir also exudes bacterial inhibitory factors which prevent the growth of harmful bacteria. In this sense, it actually acts as a natural antibiotic. Some studies show that kefir whey neutralizes most pathogenic bacteria within 24 hours. Various medical reports suggest that kefir has been helpful in the treatment of psoriasis, eczema, allergies, migraines, gout, rheumatic arthritic conditions, candidiasis, and colitis. The World Health Organization reported that kefir has been used effectively in the treatment of tuberculosis and typhoid fever. Additional studies suggest that diarrhea caused by *E. coli* bacteria in newborn infants has been successfully controlled with kefir. Other studies show that kefir helps to heal urinary tract infections and even prostate problems. Kefir may also be important in the alleviation of anxiety. Interestingly enough, those put a kefir diet consistently have less anxiety. This may be because the fermentation process produces high levels of tryptophan, which converts into serotonin in the brain, thus producing a relaxing effect.

The kefir grains produce right-rotating L(+) lactic acid, which is a normal constituent of the human body and very important for many of our bodily processes. It is particularly important in the prevention of cancer and has been used experimentally with success in the treatment of cancer. In addition, right-rotating lactic acid may help maintain healthy functioning of the heart. According to some researchers, the cells of the heart muscle obtain their energy primarily from right-rotating lactic acid.

Although many people are concerned about acidity, my experience is that many people are actually too alkaline. Acidity from healthy lactic acid helps bring back their pH to the normal range needed for optimal health. The acidity of kefir is as low as a pH of 3, consisting of .85-1.5% lactic acid. The normal healthy pH for optimal brain function as discussed earlier is 7.46. Many people I test often have a pH of 7.5-7.65, and the kefir helps to bring the pH back into the normal range.

Kefir has many nutritional benefits as well. Kefir is a complete protein and rich in many vitamins. The fermentation process helps to actually increase the amount of vitamins, especially the B vitamins. Kefir is an excellent source of B12, and is high in vitamins B1 and B6.

Kefir creates what are known as “ferments,” which act as super-metabolizers that assist with nutrient assimilation as well as digestion. The traditional term “ferment” refers more specifically to enzymes. Kefir actually creates many enzymes that can be absorbed as healing forces. As discussed earlier, enzymes are the key to building and

maintaining good health. These enzymes are actually vortexes of energy that help with many aspects of our metabolism. Since, in my experience, many people become enzyme-deficient as they age, I consider fermented foods, and especially kefir, an essential part of my total health program.

The exact origin of kefir is unknown. Some believe it may have come from Russia, while others suggest Turkey. We can say, however, that kefir originated somewhere in the northern Caucasus Mountains. Legend has it that the prophet Mohammed received kefir grains directly from Allah. According to the *Body Ecology Diet*, by Donna Gates, kefir was brought to the United States in 1960 from Russia.

Lifeway is the only company I know of that claims to make real kefir. There are numerous other companies that sell products labeled kefir; these, however, may not be authentic. The cultures that Lifeway uses are:

1. *Streptococcus lactis*, which produces lactic acid, aids digestion, inhibits harmful microorganisms, and produces bacteriolysins.
2. *Lactobacillus plantarum*, which makes lactic acid, fights against *Listeria monocytogenes*, and makes plantaricin, which inhibits microorganisms that cause spoilage.
3. *Streptococcus cremoris*, which has similar properties to *S. lactis*.
4. *Lactobacillus casei*, which produces large quantities of L(+) lactic acid; colonizes well in the gastrointestinal tract; creates a favorable medium for other healthy bacteria to grow; inhibits putrefaction; increases immune function; inhibits pathogenic bacteria; and helps protect against bacterial infections.
5. *Streptococcus diacetylactis*, which produces CO₂ in the kefir, makes diacetyl, which gives the kefir its characteristic odor, and has general properties similar to *S. lactis*.
6. The yeasts *Saccharomyces florentinus* and *Leuconostoc cremoris*, which do not cause candida.

Kefir is traditionally made from raw milk. We do not use any products from cows in the Conscious Eating Kitchen, but instead have found that any seed milk, such as almond, sesame, and sunflower milks, can be made into kefir (see *Nut and Seed Recipes: Seed Milk*). We have also begun to add EM (effective microorganisms) to our kefir and other fermented foods. We add one capful of EM to one gallon of kefir or other fermented foods near the end of the fermentation process. EM adds an incredible healing energy. (See Appendix 1 for further information.) In addition, there is some evidence to suggest that kefir made from dairy products may block the absorption of vitamin C. When one is taking high amounts of vitamin C for therapeutic reasons it's probably best to eat less dairy-based kefir. Because kefir bacteria produce an acid condition in the mouth, it is good to brush your teeth after eating kefir.

Kefir provides a sour taste which is very balancing from both the Chinese and Ayurvedic perspectives. Kefir is also cooling and good for calming pitta during the summer. There is a variety of kefir recipes in this section. I hope you enjoy these recipes and reap the many wonderful benefits of kefir.

Kefir Preparation Process

First, make any seed or nut milk by blending 1 cup nuts or seeds for every 2 cups water. Strain the mixture through a cheesecloth or mesh colander. The resulting liquid is seed milk.

Add ½ packet of kefir grains to the liquid, cover, and leave at 60-70° F for 24 hours, or for several days at 50° F. Kefir may also be made by adding ¼-½ cup of previously made kefir to the seed milk. Although this is an easy and efficient way to make kefir, it is not recommended for those with candida. For candida it is best to use the pure grains to start each batch.

During the fermentation process, shake the container occasionally to help develop the formation of carbon dioxide. This facilitates the coagulation process. The result is kefir. The longer you ferment the kefir, the more sour it will taste. Kefir can be kept at room temperature for 3-4 days, and for up to two weeks in the refrigerator.

Now remove the kefir grains with a spoon and place them in a sieve; rinse briefly with cold running water. The grains will increase in number and size and become a way to re-populate your kefir grain stores. One can store extra grains by freezing or drying. You may dry them by leaving them at room temperature for one day, or store in the refrigerator or freezer. These grains will stay active up to one year.

You can experiment by adding any of your favorite spices to the finished kefir, or by adding flavorings such as peppermint, butterscotch, and vanilla extracts. You may want to sweeten the kefir with stevia or the soak water of dates, raisins, figs, or prunes. Kefir may also be blended with a variety of fruits such as kiwis, cherries, bananas,

mangos, etc. In order to preserve the integrity of the culture, do not blend for more than **30** seconds.

Vanilla-Almond Kefir

Balances V,P, K All Seasons

4 cups almond kefir

1 Tbs vanilla extract

Kiwi-Almond Kefir

Balances V, P, K All Seasons

4 cups almond kefir

2 kiwis

Blend for **30** seconds and serve.

Cinnamon-Almond Kefir

Balances V and K, slightly unbalances P All Seasons

4 cups almond kefir

2 Tbs cinnamon

Warming Almond Kefir

Balances V and K, unbalances P All Seasons

4 cups almond kefir

1 tsp cinnamon

1 tsp ginger powder

Cayenne-Almond Kefir

Balances V, P, K All Seasons

4 cups almond kefir Pinch of cayenne

Sesame-Ginger Kefir

Balances V and P, slightly unbalances K All Seasons

4 cups sesame kefir

1 tsp ginger

Butterscotch-Sunflower Kefir

Balances V, P, K All Seasons

4 cups sunflower kefir

1 Tbs butterscotch extract

Vanilla-Sunflower Kefir

Balances V and P, slightly unbalances K All Seasons

4 cups sunflower kefir

2 Tbs vanilla extract

½ Tbs licorice root powder

Mint-Sunflower Kefir

Balances V and P, slightly unbalances K All Seasons

4 cups sunflower kefir Dash of peppermint oil or ¼ cup fresh mint leaves

Blend for **30** seconds and serve.

SEED CHEESE AND YOGURT

Seed yogurts and cheeses are variations of the fermentation process used to make seed sauce. Like other fermented foods, they introduce beneficial organisms to the bowel, and serve as a supply of healthy fats and proteins. Like seed sauces, they are most beneficial for fast oxidizers and parasympathetics, but should be eaten in moderation by slow oxidizers and sympathetics.

How to Make Seed Yogurt and Seed Cheese

Make a seed sauce by blending soaked nuts and/or seeds with herbs and spices. Use enough water to create a sauce-like consistency.

1. Place the seed sauce in a jar with a screen secured over the top by a rubber band. Let it stand at a temperature between 70 and 90° F
2. Friendly airborne lactobacillus organisms will automatically inoculate your blend, but the fermentation process can be aided by using a little of the seed cheese or yogurt from the last batch as a starter.
3. As the fermentation proceeds, health-promoting lactic acid is produced and the predigestion process of the protein, fats, and complex carbohydrates occurs. It is thought that the bacteria also produce B12.
4. As the seed yogurt/cheese ripens, the whey (the watery portion) begins to separate. This takes 4-6 hours. At this point what one has created is called a seed yogurt. If you want to enjoy this creation as yogurt (rather than seed cheese), don't "lose the whey," pour it into your compost bucket. You may eat the yogurt on the spot or you may stop the fermentation process by putting the yogurt in the refrigerator to eat later.
5. If you allow the process to continue, after 8-10 hours the whey completely separates from the seed "curd." It is time to make seed cheese from the creation. The whey will be on the bottom and the cheese will be on the top. Seeing bubbles in the cheese and smelling a lemony odor indicates that the seed cheese is ripe for harvesting.
6. To harvest, pour off the whey. A simple way to do this is to take a chopstick and poke a hole in the cheese along the side of the jar. Then gently pour off the whey through this hole through a sprouting bag or cheesecloth.
7. Following this, the seed cheese will empty into the sprouting bag. Squeeze the seed cheese in the sprouting bag or cheesecloth to force out the remaining whey. If you squeeze too hard, the bag may burst and the cheese will get "a whey!" If this happens, it is comforting to know that you are not the first person in the world to whom this has happened, nor will you be the last.
8. To continue to dry out your seed cheese, wring out and squeeze the seed cheese that is now in the sprouting bag. Then let the sprouting bag or cheese cloth hang on a hook for several hours for any residual whey to drip off.
9. After drying, the seed cheese can be eaten or stored in the refrigerator 3-4 days.

Seed cheeses make delightful additions to vegetable or fruit salads. (It is already predigested, so it combines well with fruits.) Since the seed cheese is still soft, it can be molded into interesting shapes and served as a spread with crackers or vegetables such as celery sticks, dehydrated beet chips, or carrot sticks.

Seed cheeses can be made even more interesting and intriguing by adding a masala at the original seed sauce stage, such as the Curry-Dill Seed Cheese detailed below. The choice of herbs makes the seed cheese heating or cooling. They can be eaten in any season.

Curry-Dill Seed Cheese

Balances V and K, neutral for P All Seasons

1 cup sunflower seeds, soaked

1½ tsp curry or ½ tsp (P)

1 tsp dill

1 cup water

Blend and follow the seed cheese process.

Ginger-Seed Cheese

Balances V and K, aggravates P All Seasons

1½ cups sunflower seeds, soaked

½ cup pinenuts, soaked

1 Tbs ginger, grated

1 cup water

Blend and follow the seed cheese process.

Curry-Beet Sun Cheese

Balances V and K, unbalances P Fall, Winter, and Spring

1½ cups sunflower seeds, soaked

¼ cup beet, grated

1 tsp curry

1 cup water

Blend and follow the seed cheese process.

Masala Seed Cheese

Doshas and Seasons vary according to masala

1½ cups sunflower seeds, soaked

1 tsp masala of your choice (see *Masala Recipes*)

Blend and follow the seed cheese process.

Seed Cheese Wraps_____

Doshas and Seasons vary according to seed cheese

Take any seed cheese and wrap in nori or cabbage leaf, or put inside a bell pepper half.

Lassi_____

Balances V, P, K All Seasons

½ cup seed yogurt of choice

1 ripe banana, mango, or slice of papaya

¼ cup fresh mint or

1 Tbs dried mint leaves

2 dates, soaked and pitted Ginger to taste

½ cups water

Blend until smooth and enjoy.

FERMENTED VEGETABLES

Sauerkraut

The sauerkrauts are fermented foods that help re-populate the colon with health-promoting, lactic acid-producing bacteria. Raw sauerkraut has these healthy bacteria, but store-bought, pasteurized sauerkraut does not. Raw sauerkraut usually has no salt or vinegar in it. It is allowed to ferment in its own juices. The only thing we may add are certain herb seasonings and EM. Depending on the spices and vegetables used, the sauerkrauts can be heating or cooling, but they are primarily a cooling summer food. The fermentation process makes the raw vegetables easier to

digest for V, so if some warming spices and V-balancing vegetables are used, the krauts are balancing for K, neutral for V if not eaten in excess, and neutral to slightly unbalancing for P, because of the sourness. Sauerkraut is acidic for the sympathetic/parasympathetic constitution. It is good in all seasons, but best for the summer.

The directions provided below constitute the basic recipe. Explore the different tastes by adding ginger, garlic, curry, or dill to different batches. It seems best to use no more than two spices. Curry and dill used in equal amounts give a special taste. One can also play with the different purple and green cabbage colors. If one is eating in a Rainbow Diet pattern, the purple cabbages make a nice addition to dinners in the evening, when purple foods are best eaten.

Materials needed:

1. a large crock or stainless steel container
2. a plate that will just fit inside the crock
3. a jar filled with water to use as a weight inside the crock to press down on the plate
4. a towel or cloth to fit over the crock
5. the Champion Juicer, a food processor, or appropriate equipment to break down the veggie fibers

Directions:

1. For sauerkraut, use three large heads of red or green cabbage or a combination of both. You can also make a smaller amount, but it should be enough to fill a small jar or crock so the fermenting process can take place.
2. For veggiekraut use hard, fibrous vegetables—carrots, beets, broccoli, cauliflower, turnips, and of course cabbage.
3. All herbs and spices are optional. Ginger, cayenne or red pepper, dill, curry, garlic, hing, and horseradish have all been used with a positive taste success; let your imagination be your guide. Grated dulse or kelp can also be used to create a “salty” taste, add minerals, and provide protection against radioactivity.
4. Remove the outer cabbage leaves and save them to put on top of the sauerkraut mix later. Wash and clean other veggies.
5. Cut cabbage and veggies in small pieces to fit into the Champion Juicer or whatever appliance or technique one uses to crush and cut up vegetables. Whether using the Champion Juicer or another grater or food processor, the main idea is to produce as much juice as possible. The juice is the medium that activates the fermentation. With the Champion Juicer use the “blank” instead of the grater; this produces more juice.
6. Put all ingredients into a crock and repeatedly push down to remove all air from the veggies. Pack down the veggies until the surface is smooth and has at least ¼ inch of juice on top of it.
7. Cover the surface with the outer cabbage leaves set aside earlier.
8. Put a plate on top of the leaves inside the crock.
9. Put the weighted jar on top of the plate.
10. Cover with the towel and set in a location that is approximately room temperature. The fermentation process takes 4 to 7 days. On warm to hot days, the process may take only 4 days; however, on cold winter days it would be wise to leave it sit for 7 days. Occasional tastes will be the main way one knows if the batch is ready. If the fermentation goes too long the kraut will have a more spoiled taste. A good sauerkraut taste will be a little on the zingy side.
11. Uncover after approximately 7 days and skim off the cabbage leaves and a small layer underneath.
12. Transfer the sauerkraut to a glass container, cover, and refrigerate. The sauerkraut is always fermenting, and if left outside of the refrigerator, this fermentation process will accelerate. The refrigerator greatly slows or stops the fermentation process. Fermented sauerkraut can be stored for several months in a cold enough refrigerator. If the vegetables get fizzy, then they are spoiled and should not be eaten. I've purchased several raw veggiekrauts from the store which fizzed and expanded when they were opened. This means the fermentation process has gone too far and they need to be added to the compost.

Curry-Carrot Kraut

Balances K, neutral for V, slightly unbalances P All Seasons, best Winter

1 small head cauliflower, chopped
1 small head red cabbage, chopped
3 cups carrot, sliced
2-3 cloves garlic, chopped, or 1 tsp sun-dried garlic
2 Tbs curry

Hot Carrot Kraut

Balances K, neutral for V, slightly unbalances P All Seasons, best Winter

1 small head cauliflower, chopped
1 small head red cabbage, chopped
3 cups carrot, sliced
2-3 cloves garlic, chopped, or 1 tsp sun-dried garlic
2 tsp fresh ginger juice
½ tsp cayenne

Carrot-Beet Kraut

Balances V and K, neutral for P All Seasons

2 heads red cabbage, chopped
2 cups carrot, sliced
2 cups beet, chopped

Remarks: For an unusual taste add 1 tsp horseradish before or after the fermentation process. Horseradish balances V and K, and unbalances P.

Ginger-Zucchini Kraut

Balances K, neutral for V, slightly unbalances P All Seasons

2 heads cabbage, chopped

4 cups zucchini, sliced
1 Tbs ginger for every 2 cups mixture

Pesto Kraut

Balances K, neutral for V, slightly unbalances P All Seasons

4 cups purple cabbage, chopped
1 bunch fresh basil, chopped
3 cloves garlic, chopped, or 1 tsp sun-dried garlic

Daikon-Ginger Kraut

Balances K and V, unbalances P Fall, Winter, and Spring

4 cups purple cabbage, chopped
2 cups daikon, chopped
2 tsp fresh ginger juice

Kim Chee

Balances K, neutral for V if not in excess, balances P All Seasons

1 head red cabbage, juiced
1 head red cabbage
5 carrots
3 beets
1 stalk celery
1 head cauliflower
2 tsp miso

In a food processor, use the S-blade to puree the vegetables or run them through the Champion Juicer, producing a pulp. Place pulp into a wide-mouthed jar, covering it with a blended mixture of cabbage juice and miso. Cover the

jar's opening with cabbage leaves, placing a weight on top of them. Allow mixture to ferment 2-3 days.

Hot-N-Spicy Kim Chee

Balances K, aggravates P, slightly unbalances V All Seasons, best Winter

- 1 head green or red cabbage, juiced
- 1 head green or red cabbage, chopped
- 5 carrots, juiced
- 5 carrots, chopped
- ¼ cup fresh ginger, grated
- 1 Tbs cumin seed
- 1 tsp dried red pepper, ground
- 1 tsp mellow miso
- ½ tsp cayenne
- 2 cloves garlic, finely chopped

Blend the carrot juice, cumin, cayenne, red pepper, and miso. Mix all ingredients together by hand and place in jar. Be sure that the vegetables are well covered by the juice. Cover the jar by placing several cabbage leaves on top. Place a weight on top of the cabbage leaves and allow to ferment **3-4** days.

Pickled Vegetables

Balances V, neutral for P, unbalances K All Seasons

- 4 carrots, chopped
- 2 zucchini, chopped
- 2 cucumbers, chopped
- 2 red or green peppers, chopped
- ½ head cauliflower florets
- ½ head broccoli florets
- 5 garlic cloves
- 2 Tbs whole coriander
- 2 Tbs cumin

½ tsp cayenne

¼ tsp ginger

Raw apple cider vinegar

Chop vegetables into bite-sized pieces and place in a 1-gallon jar.

Add mixture of 60% apple cider vinegar and 40% water to the jar, so that all ingredients are covered by liquid. Add cumin, coriander, garlic, cayenne, and ginger. Cover the jar with a towel and leave at room temperature for **3-4** days to ferment. Mixture may be stored in refrigerator for 2 weeks.

Tree of Life Kabobs

Balances V, slightly unbalances P and K All Seasons

6 zucchini, thickly sliced

6 carrots, thickly sliced

6 cucumbers, thickly sliced

3 heads of broccoli florets

3 heads of cauliflower florets

Marinade:

2 quarts apple cider vinegar

5 quarts water (ratio of vinegar to water is approximately 1:3)

½ cup virgin olive oil

2 cloves garlic

2 Tbs thyme

2 Tbs marjoram

2 Tbs savory

Celtic salt to taste

Marinate vegetables for **6** days in the refrigerator. Place on skewers and serve over a bed of sprouted quinoa. The vegetables can be stored in the marinade in the refrigerator for up to 4 weeks.

Veggie Kabobs

Balances V, neutral for P, unbalances K All Seasons

10 cherry tomatoes

10 olives, pitted

10 mushrooms

1 avocado, cubed

10 skewers

Marinade:

2 cups water

2 tsp olive oil

1 clove garlic, pressed Juice of lemon Dash of paprika Dash of chili powder Dash of dried cilantro Celtic salt to taste

Marinate vegetables for 6 days in the refrigerator. Place on skewers and serve over a bed of sprouted quinoa. The vegetables can be stored in the marinade in the refrigerator for up to 4 weeks.

DEHYDRATED FOODS

Dehydration is the best way to store food in terms of minimizing energy loss and preserving enzymes. It maintains the food in its essentially live state. However, although dehydration is the most enzyme-conserving and least disruptive of the life energy of the food, as compared to other methods of food preparation and storage, according to Kirlian photography data, the dehydration process reduces the overall energy of food by about 25%. There is also an inevitable, natural loss of vital energy over time with storage. Because of this energy loss with dehydration and storage, I primarily recommend dehydrated foods for traveling, camping, and situations in which one has to store the food to save it. We also use dehydrated food at the Tree of Life Café to create variety, texture, and to balance K.

The dehydration process is a basic one that has been used for thousands of years in the form of sun-drying of foods. In addition to sun dehydrators that one can build or buy, there are also electrically heated, warm-air-blown dryers that work quite well. The most primitive, and by far the least expensive, drying system besides the sun is a 250-watt sun lamp (normally used for suntanning). It is a thrifty idea created by Joanna Brick, which we modified together. Place the sun lamp about 18" above the food to be dried. Although the food can be left on a flat cookie pan, one can also elevate the food on a screen so there is air circulation underneath.

Dehydrated food is the best way to go for storage, camping, and travel. Dehydration can also make some foods quite tasty, and makes some tasty non-sugar cookies as well. I do not, however, recommend it as a substitute for fresh live foods. Dehydrated foods, because of their dryness, are more balancing to kapha and may unbalance vata if taken in excess. They may also unbalance pitta if they are dry and heating and not dry and cooling. They are generally more warming, particularly if a heating masala is used with them. They are good for rainy seasons and less useful in the hot, dry season.

In addition to dehydrating fruits and vegetables for storage, leftover seed sauces and grain blends can make tasty crackers when they are dried. The general process is to put some plastic film wrap or stable plastic sheets over a screen and pour on the sauces. Dehydrate until sauce is dry enough to turn over on the screen and pull off the cellophane or plastic. This allows air circulation to speed up the drying process. When the seed sauce becomes hard like a cracker, then it is ready to eat. These can be broken into smaller crackers for traveling. They will keep for several weeks. Contrary to the usual procedure for eating dried fruits and vegetables, which are better after they have been rehydrated by soaking in water, the crackers are best eaten in their dried form.

Veggie Balls

Roll any vegetable paté (see: *Nut and Seed Recipes: Patés*) into balls and dehydrate 10-12 hours. These dehydrated patés do not necessarily create a vata imbalance because the inside is still damp. This is also true for the cheese balls.

Cheese Balls

Roll any seed cheese (see *Fermented Foods: Seed Cheese and Yogurt*) into balls and dehydrate 10-12 hours.

Tamale

Balances K, slightly unbalances V and P All Seasons

2 cups fresh corn

¼ cup dried cilantro Celtic salt to taste

Blend; pour onto dehydrator sheets and dehydrate 8-12 hours.

Top with Mexican Wild Rice (see *Grain Recipes: Grain Salads*), Tomato Salsa, and Guacamole (see *Sauces, Spreads, and Dips*).

Tomato-Nori Bites

Balances K, unbalances V and P Winter

1 sheet raw nori

1 tomato, sliced and cut into pieces Tamari to taste

Cut nori into 1" squares and top with slice of tomato that has been dipped in tamari. Dehydrate 10-12 hours.

CRACKERS, CHIPS, AND CRUNCHES

Buckwheat Crunch

Balances K, slightly unbalances P, unbalances V All Seasons

3 cups buckwheat, soaked and sprouted

Dehydrate 8-10 hours. Serve this delicious buckwheat crunch with fruit or seed sauce.

Remarks: Buckwheat crunch will unbalance V if eaten by itself, but not if seed sauce is added.

Seed Spice Crunch

Balances K, unbalances V and P Winter

Seeds or nuts, soaked or sprouted Masala to taste (see *Masala Recipes*) Cayenne to taste Spices of choice to taste

Place nuts or seeds in a covered container or jar. Sprinkle spices, masala, and cayenne over nuts or seeds. Shake well and dehydrate in the sun or dehydrator 6-8 hours, or until dry and crunchy

Remarks: The dried seeds and nuts with herbs make an excellent substitute for the chip habit. The dryness and heat unbalance V and P and are better for K. Depending on how the seed or nut affects the doshas, it will be shifted by the dryness. For example, dried sesame seeds will unbalance V and balance K.

Potato Chips

Balances K, slightly unbalances V and P Winter

2 large yellow Finn potatoes, sliced

Marinade:

2 tsp chili powder

1 tsp red miso Celtic salt to taste

2 cups water

Marinate for 8 hours. Remove potatoes from liquid and dehydrate for 12 hours or until crispy.

Yam Chips

Neutral for V, P, and K All Seasons

Yams

Thinly slice the yams with a knife or use the Saladacco veggie noodle slicer (on the “thick” setting). Dehydrate 4-5 hours.

Zucchini Chips

Balances V, P, K All Seasons

1 zucchini, sliced

¼ tsp cayenne

Sprinkle cayenne over zucchini and dehydrate 8-12 hours, until crunchy

Dulse Chips

Balances K, neutral for V, unbalances P Winter

2 handfuls dulse, soaked and rinsed ¼-½ tsp cayenne

Mix dulse and cayenne and dehydrate for 4 hours, or until crunchy

Corn Chips

Balances K, unbalances V and P Winter

2 cups fresh corn

¼ cup cilantro, dried Celtic salt to taste

Blend and pour onto dehydrator sheets. Dehydrate 12 hours or until crisp.

Buckwheat Corn Tortillas

Balances K, neutral for V, slightly unbalances P All Seasons

2 cups buckwheat groats, soaked

2 cups sweet corn

1 cup carrot, chopped

½ cup parsley

½ cup cilantro

2 Tbs miso or Celtic salt to taste

1 clove garlic (optional)

2 Tbs water or as needed

Blend all ingredients in a food processor using the S-blade. For a smoother mixture, homogenize all the ingredients, except for miso and Celtic salt, in the Champion Juicer using the blank plate. Add in miso or Celtic salt to final mixture. Roll the dough into tortilla shapes and dehydrate 10-12 hours.

Fabulous Flax Crackers

Balances P, V, and K All Seasons

2 cups flaxseeds, soaked

1 Tbs cumin seed

1 tsp Celtic salt

Mix all ingredients by hand. Spread thinly onto dehydrator sheets and dehydrate 8 hours.



Basic Sprouted Bread/Crackers

See Remarks for dosha information All Seasons

2 cups winter wheat (or rye) berries, sprouted

Blend the berries in a food processor until they reach a dough-like consistency. Remove from food processor and knead with your hands. Use rolling pin to spread dough on dehydrator sheet. To facilitate creating crackers, indent the dough with a knife where desired breaks will occur. Dehydrate 8-12 hours.

To vary the taste of the crackers, add one or more of the following to two cups of wheat berries:

- a. 1 cup dehydrated tomatoes
- b. $\frac{1}{4}$ - $\frac{1}{2}$ tsp dehydrated garlic
- c. $\frac{1}{8}$ - $\frac{1}{4}$ tsp cayenne
- d. $1\frac{1}{2}$ tsp curry
- e. 1 tsp dehydrated dill
- f. $\frac{1}{2}$ tsp kelp powder
- g. 1 tsp basil
- h. $1\frac{1}{2}$ tsp masala of choice (see *Masala Recipes*)

- i. 1½ tsp curry and ½ tsp dill
- j. 1 tsp caraway seeds
- k. ½ cup unhulled soaked sesame seeds
- l. ½ cup soaked sunflower seeds

Remarks: Normally wheat balances V and P, and unbalances K. However, drying the wheat makes it more balancing for K. Rye can also be substituted for wheat in part or completely. Rye is balancing for K, but unbalances V and P. A 50% rye and 50% wheat cracker comes the closest for balancing all three doshas.

Salsa Cracker

Neutral for K, slightly unbalances V and P All Seasons, best Winter

- ½ cup tomato, dehydrated and ground
- ½ tsp hing
- ¼ tsp cayenne
- 2 cloves garlic

Blend all ingredients and add to Basic Sprouted Bread/Cracker dough. Dehydrate per instructions above.

Ginger Crisp

Balances V, P, K All Seasons

- 2 cups wheat or rye, sprouted
- 1 Tbs ginger, finely grated

Blend and dehydrate 8-12 hours.

Remarks: The heat of the ginger may aggravate P if eaten in excess. This is a very good dish for cold winter.

Thanksgiving Crackers

Balances V and P, neutral for K All Seasons

- 2 cups winter wheat, sprouted (for K use rye)
- 1 cup yam or sweet potato

1 cup raisins

1½ Tbs cinnamon

1 tsp nutmeg

Blend in food processor or homogenize in the Champion Juicer. Knead dough for a few minutes. Roll onto dehydrator sheets or put on by spoonful (be consistent with the entire batch). Dehydrate 8-12 hours, turning over halfway through the process.

Remarks: This tasty cracker balances V and P, and is neutral for K if using wheat. It balances K when using rye.

Sun and Sea Crisp

Balances V and K, slightly unbalances P All Seasons

2 cups oats, soaked

1½ cup sesame seeds, soaked

½ cup carrot, shredded

2 Tbs dulse, soaked, rinsed, and shredded

Masala of your choice (see *Masala Recipes*)

Blend ingredients and make into half-dollar-sized patties (¼" thick), using a tablespoon to scoop the dough onto the sheets.

Sunny Sea Crackers

Balances P and K, neutral for V All Seasons

1 cup sunflower seeds, soaked to slightly sprouted

1 tsp dulse, soaked and sliced into fine strips

Blend, form cracker, and dehydrate 8-10 hours.

DEHYDRATED SWEET TREATS

General instructions:

Blend the ingredients in a food processor using the S-blade or homogenize in the Champion Juicer using a blank plate. Drop dough onto a fine-mesh screen with a teaspoon, flattening slightly to create a cookie shape. Dehydrate 10-14 hours, turning the cookies over about halfway through the drying process. You may also spread dough onto the screen with a rolling pin. Flatten to a smooth surface *vs-va*" thick. Dehydrate, cut into squares, and serve.

Sweet Grain Crisps

Balances V, P, K All Seasons

2 cups oat groats, soaked

1 cup pearly barley, soaked

1 cup raisins, soaked

1 apple

1½ tsp cinnamon

Prepare as per general instructions above.

Nutty-Fruity Cookies

Doshas and Seasons depend on ingredients

Seeds or nuts, soaked

Raisins or dates, soaked, or fruit of
your choice

Prepare as per general instructions above.

Almond-Spice Cookies

Balances V, neutral for P and K All Seasons

2 cups almonds, soaked and blanched

1 cup figs, soaked

1 tsp cardamom

1 tsp cinnamon

1 tsp nutmeg

Prepare as per general instructions above.

Sunrays

Balances P and K, neutral for V All Seasons

2 cups sunflower seeds, sprouted

½ cup raisins, soaked

Prepare as per general instructions above.

Omega 36s

Balances P and K, neutral for V All Seasons

2 cups sunflower seeds, sprouted

1½ cup raisins, soaked

2 Tbs flaxseeds

Prepare as per general instructions above.

Remarks: Supplies both the omega-3 and omega-6 essential fatty acids.

Banana-Nut Cookies

Balances V, unbalances P and K All Seasons

1 cup almonds, soaked and blanched

1 ripe banana

1 tsp cinnamon

Prepare as per general instructions above.



Almond Date

Balances V, neutral for P and K All Seasons

1 cup almonds, soaked and blanched

¼ cup dates, pitted

Prepare as per general instructions above.

Remarks: Almonds in moderation are okay for V, but unbalance P and K. Dates make it more balancing for V, P, and K. Other fruit or seed combinations which work well are almond-raisin and sunflower-date. Different spices, such as cardamom or cinnamon, make for an interesting and warming taste.

Pine-Apple Cookies

Balances V,P, and K All Seasons

1 apple, grated

1 cup pinenuts, soaked

1 tsp cinnamon

Prepare as per general instructions above.

Sesame Cookies

Balances V and P, neutral for K All Seasons

2 cups sesame seeds, sprouted

1 cup sunflower seeds, sprouted

8 dates, pitted and soaked

3 tsp raw maple syrup

1 tsp vanilla extract

Prepare as per general instructions above.

DESSERTS

In the Conscious Eating Kitchen, there is very little emphasis on desserts. If you feel you need to eat a dessert on a regular basis, it may suggest that you are not really eating a dietary pattern that is most appropriate for your constitution. Although many live-food preparation books have a strong emphasis on tasty desserts, I believe that they are catering to and encouraging hypoglycemic and candida imbalances, and the general kapha imbalance in our society, in which sweets are stressed. On special occasions, there is clearly a sweet role for desserts. These fruit pies are a whole meal in and of themselves. The fruit pie recipes are the basic fruit pie patterns which can be used with any fruits._____

Heavenly Fruit-Seed Pie

Balances V, neutral for P and K All Seasons

Pie Crust

3 cups sunflower seeds, soaked

1 cup dates or raisins, soaked

Homogenize in the Champion Juicer or blend in food processor. Add 2 oz of water if using food processor. Flatten the dough into a crust on a 9" pie form, 1/4" thick on bottom and thicker around the edges.

Fruit Filler

Seasonal fruit of your choice: bananas, persimmons, peaches, apricots, cherries, etc.

Blend fruit and pour over crust about 1/2 deep. Decorate with artistically cut pieces of fruit. Fruit pie is best served cold, as this helps it to maintain its consistency.

Remarks: In the crust, almonds can be substituted for sunflower seeds for those who have type-O blood and are therefore sensitive to sunflower seeds. Try adding sweet spices that balance your dosha to either the crust or the fruit.

Persimmon Pie

Balances K, unbalances P and V Persimmon Season

6-8 ripe persimmons without seeds

1 cup almonds, soaked and blanched

1/3-1/2 cup fresh orange juice

2 dates, pitted and soaked

Prepare crust per instructions given for Heavenly Fruit-Seed Pie. Blend persimmons, almonds, orange juice, and dates until smooth and pour over crust. Swirl in a vortex in the center of pie crust.

Fig Parfaits

Balances V and P, unbalances K Spring, Summer, and Fall

6 fresh figs

½ cup pecans, soaked

⅓ cup raw maple syrup

¼ cup raspberries

2 dates, pitted

2 Tbs date soak water

Blend dates, soak water, and raspberries until smooth and set aside.

Blend nuts and maple syrup until smooth, adding water if necessary

Cut figs into quarters, leaving bottom intact, and split open.

Spoon nut creme into middle of open fig. Drizzle raspberry sauce on top. Garnish with fresh mint leaves or shredded coconut. Serves 2-3.

SMOOTHIES

Smoothies are a wonderful and delicious way to enjoy live foods. Smoothies are made by blending grains, nuts, seeds, and/or fruits. A smoothie can be a whole meal in itself if sprouted or soaked nuts and seeds are used. They are good builders and easily digestible.

Tridosha Grain Drink

Balances V, P, and K All Seasons

¼ cup raw oat groats, soaked

¼ cup buckwheat, soaked

1 tsp flaxseeds, soaked

1 tsp sunflower seeds, soaked

Blend, adding water to achieve desired consistency.

Remarks: This drink combines well with banana to make a blended drink which is especially balancing for V. It is also very balancing for V when taken warm. To warm, simply heat in a saucepan to finger-hot temperature.

Variations on this recipe include:

- a. Add 1 tsp miso before blending. Miso is particularly balancing for V and neutral for P. Ks may use ½ tsp miso.
- b. Add 1 Tbs dulse or other sea vegetable. If dulse is soaked and rinsed, it balances V and is neutral for P and K. If not rinsed, it aggravates P and K.
- c. Add 1 tsp masala of choice (see *Masala Recipes*). The Nala Masala is recommended. The masala may be added to the soak water of the grains on the second day or for both days if one does not change the water. This gives it time to permeate the grain.

Carrot-Avo Drink

Balances V, P, K All Seasons

2 cups fresh carrot juice

1 avocado

Blend until smooth. This can be made into a soup by using 1 cup carrot juice instead of 2.

Banana-Nut Shake

Balances V, neutral for K, slightly unbalances P All Seasons

1 banana

¼ cup walnuts, soaked

3 dates, pitted, or 2 tsp raw honey

½ tsp cinnamon

1 cup almond milk (see *Nut and Seed Recipes: Seed Milks*)

Blend.

FOURTEEN-DAY MENU

The following fourteen-day menu served at the Tree of Life Café, co-created with the chefs at the Tree of Life Rejuvenation Center, represents not only an exciting live-food cuisine offering, but also a sophisticated approach to personalizing your diet. With each meal, we create a potential balance of kapha, pitta, and vata energies and also a balance from slow to fast oxidizer or sympathetic to parasympathetic foods. Fast oxidizer and parasympathetic foods are those which are high in nuts and seeds, such as seed sauces for breakfast and veggie paté for lunch and dinner. Slow oxidizer and sympathetic foods are the complex carbohydrate foods, such as grains, and more simple carbohydrate foods, such as fruits and vegetables. In addition to the Ayurvedic approach and fast and slow oxidizer, metabolic and autonomic nervous system considerations, we have also included a variety of fermented foods which are both easy to digest and add beneficial bowel flora to your digestive system. These foods include kefirs, seed cheeses, a variety of sauerkrauts, and pickled foods. In this way, we provide in a healthy, fun, and balanced format, a full spectrum of international tastes, including: American, Mexican, Italian, Middle Eastern, Greek, Nepalese, Turkish, French, Japanese, Chinese, and Italian. We hope you have as much fun preparing these meals as we have presenting them to you. The Tree of Life Café is open to the public by reservation only (520-394-2520).

Conscious Eating Fourteen-Day Menu		
<u>Day One: American Cuisine</u>		
<u>BREAKFAST</u>	<u>LUNCH</u>	<u>DINNER</u>
Buckwheat Granola Cardamom Almond Milk Sesame Kefir Bowl of Fruit	Yam Burger, Mustard, Catsup Spinach-Coconut Dip Carrot-Beet Kraut Mixed Greens and Sprout Salad Sweet Dill Dressing	AMZ Soup Veggie Paté Mixed Greens and Sprout Salad Creamy Cuke Dressing
<u>Day Two: Italian Cuisine</u>		
<u>BREAKFAST</u>	<u>LUNCH</u>	<u>DINNER</u>
Date Oatmeal Porridge Sunflower-Banana Seed Sauce Warming Almond Kefir Bowl of Fruit	Pizza Mixed Greens and Sprout Salad Oil-N-Vinegar Seed Dressing	Minestrone Soup Avocado Sun Paté Mixed Greens and Sprout Salad Italian Dressing
<u>Day Three: Middle Eastern Cuisine</u>		
<u>BREAKFAST</u>	<u>LUNCH</u>	<u>DINNER</u>
Tree of Life Seven-Fruit Haroset Buckwheat Crunch Banana-Sesame Seed Sauce Mint-Sunflower Kefir Bowl of Fruit	Falafel Almond Hummus Tabouli Hot-N-Spicy Kim Chee Mixed Greens and Sprout Salad Zucchini-Lemon Dressing	Creamy Borscht Cumin-Veggie Paté Daikon-Cucumber Salad Tahini-Ginger-Dulse Dressing

Conscious Eating Fourteen-Day Menu

Day Four: Indian Cuisine

BREAKFAST

Om Seed Sauce
Lassi
Bowl of Fruit

LUNCH

Barley or Buckwheat
Kitchery
Masala Seed Cheese
Coconut Chutney
Pickled Vegetables
Mixed Greens and
Sprout Salad
Curry-Carrot Dressing

DINNER

Raita
Mixed Greens and
Sprout Salad
Curry-Apple Dressing

Day Five: American Cuisine

BREAKFAST

Buckwheat Granola
Sunflower Seed Sauce
Vanilla-Almond Kefir
Bowl of Fruit

LUNCH

Stuffed Cabbage Leaves
Veggies with Avocado-
Spinach Dip
Daikon-Ginger Kraut
Mixed Greens and
Sprout Salad
Green Zinger Dressing

DINNER

Cream of Broccoli Soup
Carrot-Almond Paté
Mixed Greens and
Sprout Salad
Sweet-N-Sour Dressing

Day Six: Chinese Cuisine

BREAKFAST

Millet Porridge
Almond-Apple Seed Sauce
Butterscotch-Sunflower
Kefir
Bowl of Fruit

LUNCH

Chow Mein
Kim Chee
Mixed Greens and
Sprout Salad
Winter Heat Dressing

DINNER

Tomato Sea Veggie Soup
Sea Veggie Paté
Mixed Greens and
Sprout Salad
Creamy Miso Dressing

Conscious Eating Fourteen-Day Menu

Day Seven: Mexican Cuisine

<u>BREAKFAST</u>	<u>LUNCH</u>	<u>DINNER</u>
Sweet Barley Porridge	Mexican Wild Rice	Tomato Soup
Sunflower Seed Sauce	Tamale	Sunny Red Pepper Paté
Cayenne-Almond Kefir	Guacamole and Salsa	Mixed Greens and Sprout Salad
Bowl of Fruit	Pickled Vegetables	Spanish Salsa Dressing
	Mixed Greens and Sprout Salad	
	Zucchini Sun Dressing	

Day Eight: Italian Cuisine

<u>BREAKFAST</u>	<u>LUNCH</u>	<u>DINNER</u>
Quinoa Pudding	Spaghetti & Sun-dried Tomato Pizza Sauce	Italian Soup
Banana-Almond Seed Sauce	Pesto Kraut	Olive Paté
Mint-Sunflower Kefir	Mixed Greens and Sprout Salad	Mixed Greens and Sprout Salad
Bowl of Fruit	Italian Pesto Dressing	Herb Dressing

Day Nine: Japanese Cuisine

<u>BREAKFAST</u>	<u>LUNCH</u>	<u>DINNER</u>
Grandma's Live Oatmeal Porridge	Nori Rolls	Sea Veggie Miso Soup
Banana-Sunflower Seed Sauce	Daikon-Ginger Kraut	Sea Veggie Paté
Vanilla-Sunflower Kefir	Mixed Greens and Sprout Salad	Carrot-Hijiki Salad
Bowl of Fruit	Creamy Miso Dressing	

Conscious Eating Fourteen-Day Menu

Day Ten: Greek Cuisine

<u>BREAKFAST</u>	<u>LUNCH</u>	<u>DINNER</u>
Amaranth Porridge	Rice Dolmas	Carrot-Sprout Soup
Banana-Sesame Seed Sauce	Curry-Dill Seed Cheese	Olive Paté
Cinnamon-Almond Kefir	Mixed Greens and Sprout Salad	Greek Salad
Bowl of Fruit	Tahini-Ginger-Miso Dressing	

Day Eleven: French Cuisine

<u>BREAKFAST</u>	<u>LUNCH</u>	<u>DINNER</u>
Sweet Aztec Porridge	Layered Quiche of Life	3-Carrot Soup
Orange-Almond Seed Sauce	Curry-Beet Sun Cheese	Ginger Seed Cheese Balls
Vanilla-Sunflower Kefir	Wilted Spinach Salad	Walnut Salad
Bowl of Fruit	Sweet Dill Dressing	Sweet Dill Dressing

Day Twelve: American Cuisine

<u>BREAKFAST</u>	<u>LUNCH</u>	<u>DINNER</u>
Buckwheat Crunch	Lasagna	Sprout Soup
Banana-Pumpkin Seed Sauce	Mixed Greens and Sprout Salad	Veggie Paté
Kiwi-Almond Kefir	Red Top Salad Dressing	Carrot-Dulse Dressing
Bowl of Fruit		Tahini-Ginger-Miso Dressing

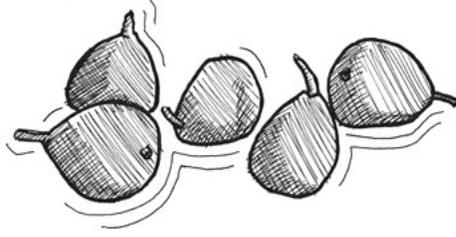
Conscious Eating Fourteen-Day Menu

Day Thirteen: Turkish Cuisine

<u>BREAKFAST</u>	<u>LUNCH</u>	<u>DINNER</u>
Wheat Treat Cereal	Tree of Life Kabob	Carrot-Celery Soup
Apple-Cinnamon Seed Sauce	Spanikopita	Beet Paté
Butterscotch-Sunflower Kefir	Mixed Greens and Sprout Salad	Buckwheat-Cabbage Salad
Bowl of Fruit	Sweet-N-Sour Dressing	Herb Dressing

Day Fourteen: Nepalese Cuisine

<u>BREAKFAST</u>	<u>LUNCH</u>	<u>DINNER</u>
Millet Porridge	Nepalese Pulau	Hot Spice Corn Soup
Sweet Golden Sun Sauce	Curry-Carrot Kraut	Daikon-Ginger Salad
Chai	Mixed Greens and Sprout Salad	
Bowl of Fruit	Winter Heat Dressing	



SOAKING AND SPROUTING

Soaking and sprouting are wonderful ways to optimize the life force and nutrient content of nuts, seeds, grains, and legumes. Most seeds can be sprouted, as well as a few nuts. Some grains such as rye, wheat, buckwheat, wild rice, and quinoa will easily sprout, while others such as oats and millet become enzymatically active in the soaking process but have difficulty sprouting. It is possible to acquire certain types of oats, millet, and rice that do sprout. The only legume I recommend sprouting is the garbanzo bean, since many sprouted legumes tend to cause gas and interfere with digestion due to enzyme inhibitors that are only partially broken down.

In the Conscious Eating Kitchen all of the nuts, seeds, and grains we use are sprouted and/or soaked. Soaking and sprouting serve several important functions. First, nutrients begin to be broken down into their simplified form. For example, proteins begin the process of breaking down into amino acids, carbohydrates into simple sugars, fats into fatty acids, while minerals chelate or combine with proteins. This significantly improves digestion and assimilation, and it is why soaked or sprouted foods are considered predigested.

Second, the actual content of nutrients dramatically increases during the soaking and sprouting process. Proteins, vitamins, enzymes, and minerals increase 300 to 1200%. For example, the zinc present in alfalfa sprouts increases from approximately 6.8 mg per 100 grams of seed to 18 mg per 100 grams dried weight in the sprout. One cup of alfalfa sprouts provides twice the USRDA for zinc.

Enzyme inhibitors, phytic and oxalic acids, and mineral chelates are washed away during the soaking and sprouting process. These chemicals function as natural defenses against bacterial, fungal, insect and animal predators in the growing process of the plant, but may interfere with digestion and assimilation when consumed. Finally, chlorophyll develops in the sprouts as they turn green.

When preparing any of the Conscious Eating recipes, it is important to note the difference between “sprouts” and “sprouted.” When growing “sprouts,” the seed or grain is soaked approximately 6-12 hours (see *Soaking Chart*). They are then germinated over a period of several days up to one week. These become greens, measuring anywhere from 2 to 6" in height. In the Conscious Eating recipes, these sprouts include alfalfa, red clover, radish, fenugreek, chia, buckwheat, and sunflower.

“Sprouted” nuts, seeds, grains and legumes are also soaked approximately 6-12 hours, but are germinated for a shorter period of time. They are sprouted for one to three days, or long enough for them to grow 1/8- to 1/4-inch tails. These include buckwheat, sunflower seeds, almonds, rye, quinoa, wild rice, barley, wheat, peas, and garbanzo beans.

The Conscious Eating recipes also call for all dried fruits and dried sea vegetables to be soaked. It is important that soaked sea vegetables are also rinsed. Soaking rehydrates the fruit or vegetable, which makes it more balancing for vata and reduces the high sugar content in many dried fruits. The soak water from dried fruits is used as a sweetener in many of the recipes.

Instructions for Soaking

1. Fill a glass or ceramic container (not plastic because it may leach into the soak water) half full with nuts, seeds, or grains.
2. Fill the container with water. The nuts, seeds, or grains will absorb most of this water and expand.
3. Soaking times vary depending upon the intended use. If the nut, seed, or grain is going to be sprouted, it has a shorter soaking time than if it is going to be consumed immediately after being soaked (*see Soaking Chart*).
4. After the specified soaking time has expired, empty the soak water (house plants love this water) and rinse the nut, seed, or grain with fresh water several times. If they are intended for consumption with out sprouting, they can be stored in the refrigerator for 2 days. (Remember to blanch almonds before consumption. See *Soaking Chart* footnote.) If the nuts, seeds, or grains are going to be sprouted, begin the sprouting process outlined below.

Instructions for Sprouting

There are several methods for sprouting, including using a glass jar, a sprouting tube, sprouting basket, sprouting bag, or organic soil. Generally, I recommend the glass jar method or organic soil, depending on the type of sprout. The glass jar method works well with all of the sprouts in the Conscious Eating recipes, except for buckwheat and sunflower sprouts (greens). These, as well as wheatgrass, are best grown in an organic soil base. People often enjoy growing a variety of sprouts in the same jar. Alfalfa and clover is one combination; fenugreek and radish is another.

Glass Jar Sprouting Technique

1. Soak nut, seed, or grain according to the *Instructions for Soaking* given above.
2. Drain and place in a glass jar with a fine-mesh screen secured over the top with a rubber band. This keeps out insects and allows for aeration.
3. Place the seeds in a dark area for 24 hours and then expose to indirect sunlight.
4. Sprouts should be rinsed 2-4 times a day, by simply filling the jar with water, lightly swishing, and draining with the screen in place. Repeat this twice. For proper drainage the jar should be stored upside down at an angle of 50-70 degrees (an angled dish rack works well).
5. When the sprouts reach their specified length, store them in the refrigerator to slow their growth and preserve their freshness.

Organic Soil Sprouting Technique

1. Soak seeds or grains according to the guidelines given in *Instructions for Soaking*, above.
2. Place organic, compost-rich soil in a shallow tray that is 2-3 inches high. Gardening “flats” work well. The soil should be loose and 1-2 inches deep.
3. Place the soaked, unhulled sunflower seeds, soaked unhulled buckwheat groats, or soaked wheat berries on the soil in a thin even layer (1 cup of grain or seed per 10 x 14-inch tray). Cover lightly with extra soil.
4. Water gently and thoroughly. Depending on the quality of the soil, you may want to add some “kelp fertilizer” to the irrigation water.
5. Cover with plastic and place in a dark area, at room temperature, for 4 days. Water daily.
6. After approximately 4 days, the sprouts need sunlight and oxygen to fully develop. Remove the plastic and place in indirect sunlight for several more days, continuing to water daily, until the sprouts are *5h* to 6 inches long. (See *Sprouting Chart* for detailed information.)
7. To harvest, cut with scissors as close to the soil as possible because the nutrients are most concentrated in the stem near the soil.

Sprouting Tip: Sometimes in humid, hot weather, mold may grow on the sprouts. The best prevention is to rinse frequently and to spray regularly with a 3% food-grade hydrogen peroxide mist.

The following charts give some brief information about the soaking and sprouting processes for the specific sprouts used in the Conscious Eating recipes.

Soaking Chart

	Soak Water Temperature	Soaking Hours for Consumption (without sprouting)*	Soaking Hours Before Sprouting
NUTS			
Almonds†	Cool-Warm	10-12	N/A
Peanuts	Cool-Warm	8-12	8-12
Pinenuts	Cool-Warm	6	N/A
Walnuts	Cool-Warm	10-12	N/A
SEEDS			
Chia	Cool	2-4	2-4
Flax	Cool	6-8	N/A
Hulled Pumpkin	Cool	6-8	4-6
Hulled Sunflower	Cool	6-8	4-6
Unhulled Sunflower	Cool	N/A	10-14
Hulled Sesame	Cool	6-8	N/A
GRAINS			
Amaranth	Warm	36-48	3
Pearled Barley	Warm	36-48	6
Unhulled Barley	Warm	N/A	6-10
Hulled Buckwheat	Cool	4-6	4
Unhulled Buckwheat	Warm	N/A	8-12
Millet	Warm	36-48	8-12
Whole Oat Groats◊	Warm	36-48	N/A
Hulled Raw Oats	Warm	36-48	N/A
Quinoa	Warm	36-48	2-4
Rye	Warm	36-48	6-10
Wheat	Warm	36-48	6-10
Wild Rice	Warm	96 (4 days)	12
LEGUMES			
Garbanzo (Chick Peas)	Warm	48-72	12
Peas	Warm	N/A	12

Soaking Chart

	Soak Water Temperature	Soaking Hours for Consumption (without sprouting)*	Soaking Hours Before Sprouting
VEGETABLES			
Alfalfa	Cool	N/A	3-6
Clover	Cool	N/A	3-6
Fenugreek	Cool	N/A	4-8
Radish	Cool	N/A	4-8
SEA VEGETABLES			
Alaria	Warm	½	N/A
Arame	Warm	½	N/A
Dulse	Warm	½	N/A
Hijiki	Warm	½	N/A
Kelp	Warm	½	N/A
Nori	Warm	½ (unnecessary)	N/A
Wakame	Warm	½	N/A
DRIED FRUITS			
Dates	Warm or Cool	½ Warm / 6 Cool	N/A
Figs	Warm or Cool	½ Warm / 6 Cool	N/A
Prunes	Warm or Cool	½ Warm / 6 Cool	N/A
Raisins	Warm or Cool	½ Warm / 6 Cool	N/A
Tomatoes	Warm or Cool	½ Warm / 6 Cool	N/A

* A small tail may appear during the soaking process; however, this is still considered soaking rather than sprouting, according to our guidelines.

† Almond skins contain tannic acid, and if eaten in large quantities should be blanched by placing the soaked almonds in boiling water for 30 seconds and then removing the skins.

◇ Whole oat groats, by law, are required to be lightly steamed before being placed on the market, in order to kill particular molds and fungi which may grow on oats. Whether or not this compromises the integrity of the enzymes present in the oats is unclear. Whole oat groats will not sprout but may be eaten after 36-48 hours of soaking and are very tasty. Hulled raw oats, which are actually raw and not steamed, are available through select suppliers. These can be soaked liked whole oat groats and eaten, but are not very tasty. They may be sprouted, but with great difficulty.

Sprouting Chart

	Amount/ 1-Quart Jar	Rinses / Day	Sprouted Days; Inches	Sprouted Days; Inches
NUTS				
Peanuts	1 cup	2	1-3 days; ½"	N/A
SEEDS				
Unhulled Pumpkin	1 cup	2	N/A, turns bitter	N/A
Hulled Sunflower	1 cup	2	1-3 days; 0-1"	N/A
Unhulled Sunflower*	N/A	N/A	N/A	7-10 days; 4-6"
GRAINS				
Amaranth	1 cup	2	2 days; ⅛"	N/A
Barley	1 ½ cups	2-3	1-2 days; 0-¼"	N/A
Hulled Buckwheat	1 cup	2-3	2-3 days; ½-1"	N/A
Unhulled Buckwheat*	N/A	N/A	N/A	7-10 days; 4-6"
Millet	1 ½ cups	2-3	1-2 days; 0-⅛"	N/A
Quinoa	½ cup	2-3	1-4 days; ¼-1"	N/A
Rye	1 cup	2	2-3 days; ¼-½"	N/A
Wheat	1 cup	2	2-3 days; ¼-½"	N/A
Wild Rice	1 cup	2	4 days; ⅓-¼"	N/A
LEGUMES				
Garbanzo	1 cup	3	2-3 days; ½-¾"	N/A
Peas	1 cup	3	2-3 days; ½-¾"	N/A
VEGETABLES				
Alfalfa	2 Tbs	2-3	N/A	7 days; 1½-2"
Clover	2 Tbs	2-3	N/A	6 days; 1½-2"
Fenugreek	¼ cup	2	N/A	8 days; 1-2"
Radish	3 Tbs	2-3	N/A	5 days; 1-2"
Wheatgrass*	N/A	N/A	N/A	7-10 days; 5-7"
* Grown in organic soil.				

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Glossary

Abstinence—restraint of appetite or desires, especially of food and drink thought to be harmful

Acetaldehyde—Breakdown from alcohol metabolism which falsely stimulates well-being

Acidosis—a physical and mental state that occurs when the body pH becomes too acidic

Acidotic coma—a comatose state that can happen when the body becomes too acidic

Adaptogen—a substance that increases resistance to a broad range of biological, environmental, psychological, and chemical stresses

Addiction—Obsessive-compulsive habits

ADHD—Attention deficit hyperactivity disorder—a brain-mind disorder that involves hyperactivity, difficulties in concentration, and cognitive disorders

Adulterate—to make impure or inferior by adding extraneous or improper ingredients

AEC—Atomic Energy Commission

Aerobic exercises—exercises that tonify the cardiovascular and respiratory systems

Affirmations—positive statements that are repeated regularly to create a positive effect

Alchemical—the transformation of substances into new substances by subtle means

Alkalosis—a physical and mental state that occurs when the body pH has become excessively alkaline

Allopathic Thinking—Treating the symptom as primary and not the total person on all levels of cause

Alzheimer's disease—pre-senile dementia

Amino acids—the building blocks that make up proteins

Amoeba—protozoan of the genus *Amoeba* occurring in water, soil, and as internal animal parasites; characteristically having an undefined and changing shape

Amylase—enzyme used for the digestion of complex and simple carbohydrates

Amyloid—a hard protein deposit resulting from the degeneration of tissue; usually associated with aging

Anabolic—the building phase of metabolism involved with the building of body tissues

Analogues— compounds that appear structurally similar, but are not the same and have a different effect on the body

Anemia—a deficiency of normal red blood cells due to a variety of factors, including an iron deficiency or a B12 deficiency

Anion—a negatively charged ion that migrates in solution to a positively charged pole; chloride ion (Cl) and iodine (I) are examples

Anorexia—loss of appetite; a mental imbalance in which the person eats less than they need because of trying to achieve a distorted body image which they perceive as healthy, but which is usually considerably underweight

Antibody—Immune proteins made by the body to counteract antigens, which are foreign proteins such as a virus or incompletely digested foods

Anti-oxidant—a substance that neutralizes the action of free radicals in the body

Anti-oxidant enzyme—an enzyme that protects the body from free radical damage by neutralizing free radicals

Aspirant—one who aspires for achievement; a spiritual student

Astringent— an herb or medicine that constricts, dries, or draws the body tissues together

Atrophic gastritis—chronic inflammation of the stomach with atrophy of the mucous membranes of the stomach

Aura—the energy field around a person which some people can see with the naked eye and which now can be photographed with special cameras

Autism— a disease with a biochemical basis in which a child does not talk and has trouble communicating with other humans in a normal manner

Autolysis—the process of self-digestion of body wastes and dead cells

Autonomic nervous system—the part of the nervous system that works independently of conscious control of the mind

Autotoxemia— filling one's own body with toxins as a result of diet and lifestyle; a state in which the body cells begin to die because of so many toxins in the system

Auxones—plant hormones

Ayurveda—the 5000-year-old science of medicine from India

Basri, Hazrat Rabia— a Sufi mystic who was vegetarian

ben Nachman, Moses—Spanish Talmudist, kabbalist, and Bible commentator (1194-1270)

Betaine hydrochloride—a supplement that increases the amount of hydrochloric acid in the stomach

Bile— a bitter, alkaline, greenish-yellow fluid made in the liver and secreted by the liver-gallbladder system into the small intestine; it contains bile salts, cholesterol, lecithin, fat, bile pigments, and mucin

Bioactive— live, organic foods that are fully matured, add energy to the human organism, and have a positive effect on the human mind and body

Biochemical Imbalance—A disorder of the physiology of a person from an altered biochemistry due to either a nutritional deficiency or a breakdown of the biochemistry from stress

Biocidic—a category of cooked foods that are stale, processed, adulterated, and/or commercially grown with herbicides, insecticides, and pesticides; foods which have a deleterious effect on the body and mind when eaten

Bio-electric—refers to electric phenomena occurring in living tissue

Bioflavonoids—Part of the vitamin C complex in its natural form; a derivative of flavonal compounds

Biogenic—live, organic foods that are not fully grown and are filled with regenerative energy; they add more energy and have a more positive effect on the human body and mind than any other food category

Biologically Altered Brain—A brain whose biochemistry, neurotransmitter pathways, and receptors are no longer functioning appropriately

Bio-spiritual—the transforming effect of spiritual energy on the human body and mind

Blood sugar imbalances—see Hypoglycemia

Bodhi tree—the tree under which Buddha was said to be sitting when he became enlightened

Bodhisattva—one whose essence is enlightenment and who out of compassion works to uplift humanity

Brahmin priests—priests of the Hindu tradition

Brassica family—the broccoli and cabbage family of vegetables

Campylobacter—a pathogenic bacteria found in 80% of chickens and 90% of turkeys in typical slaughterhouse situations; it is associated with acute gastrointestinal infections in humans with symptoms similar to that of Salmonella infections

Candida albicans—a fungal or yeast infection usually of the colon or vaginal area, but also found throughout the whole system

Carbohydrate—an organic food substance belonging to a class of compounds represented by sugars, starches, and celluloses. Complex carbohydrates are starches, and the simple sugars are the breakdown products of the digested starches such as glucose or fructose

Carbonic acid—an acid produced by normal body metabolism

Carcinogenic—cancer-causing

Carnivore—one who eats flesh food

Catabolic—the destructive phase of metabolism involved with the breaking down of body tissues

Catalase—an anti-oxidant enzyme that breaks down peroxidases

Catalyst—a substance that increases the rate of enzymatic reactions

Cathartic—a medicine used as a purgative to clean out the bowel

Cation—a positively charged ion which is attracted to the negative pole; calcium

(Ca⁺⁺) and magnesium (Mg⁺⁺) are examples

Cellular metabolism—normal metabolic processes of the cell

Cerebrospinal fluid—the fluid surrounding the spinal cord and the brain

Certified organic— although different in various states, means food that has been grown in soils in which no chemical fertilizers have been used for three years, and the food has not received spraying of any herbicides, pesticides, or synthetic chemicals

Chelating—the use of substances to draw radioactive materials and other toxins out of the intestinal tract, blood stream, or tissues

Chlorella—a blue-green algae

Cholinesterase—an enzyme found in the blood and nervous system which plays an important role in the transmission of nerve impulses

Chlorophyll—the green pigment of plants; it resembles hemoglobin in structure except it has a magnesium in it instead of iron. It collects sunlight energy and converts CO₂ and water into carbohydrates

Cis—the curved biochemical structure of a fatty acid that is biologically active; it is fatty acids as they are found in their natural state

Clostridium perfringens enterotoxin—a bacteria that grows in wounds and gives off a toxin that causes gangrene

Co-enzyme—factors that aid the functioning of enzymes

Coagulate—to clot

Cognizant—fully informed

Colchicine— a medicine for the treatment of gout

Colloid—a fluid solution in which the particles are evenly distributed

Commercial foods—foods grown in soils in which chemical fertilizers have been used, and foods that have received pesticide and/or herbicide treatment or have gone through other forms of processing so that the food is not in its natural state

Compulsions—repetitive actions that one feels psychotically compelled to take

Constitution—the basic genetic psychological and physiological make-up with which one is inherently endowed

Convulsion—an involuntary paroxysm of muscle contractions which may be related to brain seizure, metabolic imbalance, or other causes

Corona—the energy around the body that looks like a halo; usually seen around the crown of the head

Cosmic— relating to the universe as a whole

Cosmic energy— energy that permeates the entire universe

Cross-linking—when free radicals react with the protein molecules in a cell or in the tissues, the protein chains become linked together and tangled in a way that disrupts their function

Cytoplasm—the protoplasm of a cell, located outside the nucleus

Dark field microscope—a high-powered microscope that is able to see details about cells and organisms in the blood

Dark Reactivation—the process by which the DNA cell automatically checks and repairs itself when the blood is clean and free of impediments

Dead Sea Scrolls—scrolls discovered in the vicinity of the Dead Sea near the remains of the ancient Qumran community; these scrolls are thought to be written by the Essenes and tell much about their life and offer insights into the Torah and the New Testament

Deficient Diet— a diet low in essential nutrients, such as vitamins, minerals, enzymes, proteins, fats, and carbohydrates

Degenerative disease—the result of a chronic disease process in which the body is slowly breaking down or malfunctioning; arthritis is an example

Deionization— a process of treating water in which all the ions are removed so that the water is essentially distilled

Denatured— usually refers to protein that has been heated and lost the required molecular shape needed to function properly; in essence, having lost its nature

Deranged— insane; not working properly

Detoxifiers—substances or healing processes that help the body discharge toxins

Developmental abnormalities—abnormalities that occur while in the uterus

DHA—Docosahexaenoic Acid, an essential omega-3 fatty acid necessary for brain, nervous system, and retinal development

Diabetic acidosis—overly acid physical state that occurs when diabetes is out of control

Disaccharides—two simple monosaccharides linked together

Disciples—students of a teacher; often refers to the twelve disciples of Jesus

Diverticulosis— an infection in the pockets of the colon

Divine Cosmic Energy—the universal energy of God

DNA—genetic material in the cell nucleus

Dopamine—a neurotransmitter that is mind and mood activating and boosting

Dopomenergic—that which stimulates the dopamine receptors

Dosha—according to Ayurveda, one of the three forces called vata, pitta, and kapha which can go out of balance

Dosha personality/constitution—the constitutional and personality characteristics of a person that tend to go out of balance the easiest

Dysfunctional—that part of the organism or personality which is not working properly

Dyslexia—an impairment of the ability to read

Electrocardiogram—a test of the electrical patterns of the heart

Electroluminescence—the light given off by a living organism; the electromagnetic energy given off by the cells which can be measured by Kirlian photography

Electrolytes—soluble minerals in the body that are capable of carrying a current; essential for the functioning of the cells

Elixir—a special preparation that brings good health

Endocrine glands—glands such as the adrenal, pituitary, and thyroid whose secretions pass directly into the blood stream

Endorphins—natural opiates produced in the body that reduce pain and create euphoria

Endotoxin—toxins produced within the microorganism which do not leave the cell until it disintegrates

Enteric—pertaining to the intestine; often referring to a coating on a pill that protects it from being digested before it gets to the small intestine

Entropy—part of the second law of thermodynamics, which says that structures become progressively chaotic; in reference to biological systems, it is the progressive disordering of the human organism we call aging

Enzyme—a biologically, chemically and energetically active protein complex that is made by a living organism which accelerates metabolic processes, digests food, helps to detoxify the body, and protects it against free radicals

Epidemiology—the study of the occurrence and distribution of disease

Equilibrium—the balanced state of all the biological, emotional, and psychological processes of the human system

Esoterica—secret knowledge

Essence Self—The eternal higher self or true self, the “I Am” presence that is unlimited by ego, mind, concepts, or definitions

Essenes— a Jewish sect that goes back to the time of Enoch and which formed communities several hundred years .B.C.; spiritual community in which Jesus was raised and became the leading teacher of vegetarianism and the rejecting of animal sacrifice; experts in how to live a healthy life

Essene Tree of Life—the symbolic interpretation of the Tree of Life found in the garden of Eden with its roots grounded in the seven earthly natural forces: living planet, angel of the earth (topsoil and regeneration), universal life force, joy, sun, water, and air; and the branches reaching to the seven heavenly and angelic forces: Divine presence, angel of eternal life, creative work, peace, power, love, and wisdom; humanity is put in the trunk or the very center of these forces

Essential amino acids—those amino acids that the body cannot produce on its own and must take in by diet

Essential fatty acids—those fatty acids that the body cannot produce on its own and must take in by diet

Essential minerals—minerals the body must have for health

Etheric—refers to the subtle energy body that can be measured and occasionally seen directly surrounding the physical organism

Evocation—the calling in of specific archetypal energies through the artful use of

color, sound, light, music, scent, symbol, and/or ritual

Extracellular—that which is outside of the cells

Extracellular fluid—the fluid in the body which is outside of the cells; the inner ocean of the body that bathes and nourishes the cells

Fast Oxidizer—a metabolic type that rapidly metabolizes carbohydrates

Fermented foods—foods predigested by the enzymatic action of bacteria; these ferments not only are easier to digest but contain lactic acid produced by the bacteria that is healthy for the body

Flavonals—raw food components that enhance health

Fletcherizing—chewing your food until it becomes liquid

Flight or fright gland—the adrenals

Fluidity—the ability to flow freely in the moment, to change “masks,” roles, beliefs, and emotional positions at will

Food enzyme stomach—that part of the stomach where the food digests itself from the live intracellular enzymes within the food. No gastric secretions take place there; it is the uppermost part of the stomach.

Four transition stages—four stages of becoming a vegetarian

Free radicals—a type of atom that is highly reactive because it is electrochemically unbalanced due to an odd electron; this electron reacts with the electrons of the atoms in the cell structures and other biological elements in a way that disrupts their process

Free radical scavengers—biochemical components that nullify free radicals

Freedom—Unlimited by any addictions, fears, or concepts, so one can be the true expression of who they are on every level of body, mind, and spirit. A state of non-identification with body or mind. *See Surrender.*

Fruitarian—a person who eats only fruits

Gandhi, Mahatma—the father of modern India; a proponent of *ahimsa* or dynamic nonviolence

Gastroenterology—the study of the stomach, the intestine, and their diseases

Gastrointestinal toxins—toxins in the intestines produced by bacteria growing

on incompletely digested food

Genetic mutation—the disruption of the normal genetic material or DNA such that it communicates a new biological message; often this new message results in biological defects

Germ cell—the reproductive cells of the male and female; the sperm and ovum

Germ plasma—the specific protoplasm out of which the new individual is to be developed; the material of the seed

Gibberellins—a class of plant hormones with an enhancing effect on the human immune system

Glutathione peroxidase— an antioxidant, anti-free radical enzyme

Gnosticism—the doctrine of some early Christian sects that valued inquiry into spiritual truths above faith

Goitrogenic—anti-thyroid factors

Gonadotropin—a gonad-stimulating hormone

Greenhouse effect—the excessive release of carbon dioxide into the atmosphere, which is resulting in the warming of global temperatures

Guru Nanak—the founder of the Sikh religion

Harmony—a natural state of being in which body, mind, feelings, and spirit are unified and linked to Essence Self and the larger pattern of perfection. Harmony is the reflection of a higher order of reality.

Hatha yoga—the part of yoga that focuses on limbering, strengthening, and breathing exercises

Heart knowing—the knowledge that is encoded in feelings rather than mental concepts. The moment-by-moment guidance that is received through innocence, trust, and surrender to the Divine.

Heaven—a vibrational frequency (rather than a place) of limitless bliss and unconditional love. The vibration of ecstasy that is now being birthed on Earth. The place where dreams come true—that is, the vibration in which one's dreams and the life one lives are one and the same.

Hemagglutinin—a special immunological biological protein that causes the clumping of red blood cells

Hemoglobin—the iron-carrying part of the red blood cell

Hesperin— an active part of the vitamin C complex as it is found in nature

High redox potential—results when a molecule has a high amount of energy to transfer to other molecules

Hijiki—a sea vegetable

Hinduism—the main religion of India

Hippocampus—*See* Nucleus accumbens

Histamine—a protein complex associated with allergy reactions

Holistic—a full-spectrum approach to being healthy in body, mind, and spirit

Hologram—A multidimensional image that is created when a coherent light source is beamed through a mirror onto the surface of a photographic plate. Even when separated into its smallest components, each part still contains all the information integral to the whole.

Homeopathy—the medical science based on the theory that “like heals like” when miniscule, specially prepared doses of medicine are used

Homeostasis—the maintenance of a steady balanced state in the individual by coordinated physiological processes in the body

Hunzakuts—a predominantly vegetarian people living in the Himalaya who are famous for their good health and longevity

Hydration—the amount of water in the body based on the chemical combination of water and some other substance in a definite molecular ratio

Hydrocarbons—the atomic building blocks of organic materials

Hydrogenated oils—oils to which hydrogen has been added; the hydrogen converts the unsaturated oil to saturated oils which become solid

Hypertrophy—to become enlarged from overuse

Hypochondria—excessive worry about one's health

Hypoglycemia— a physiologic disorder in which the body is not able to balance the blood sugar; it results in physical, emotional, and mental symptoms

Hypothyroidism— a low thyroxin secretion from a poorly functioning thyroid

Immune system—the part of the organism that resists invasion and infection from elements foreign to the natural elements of the body

Immunodeficiency—a deficiency in the function of the immune system

Indican—a substance occurring in the urine that comes from intestinal putrefaction and thus is a measure of bowel toxicity

Indigenous Cultures—peoples who are the original inhabitants of a geographical area

Indole—a substance produced by putrefying bacteria in the colon; it breaks down to indican

Inhibitory enzymes—those enzymes that inhibit the activity of other enzymes

Initiation—portal to the direct experience and knowing of larger spiritual holograms; the focusing of energy in a pattern that serves evolutionary processes

Inorganic mineral salts—minerals found in nature that do not have any life force or are not in an organic complex

Interstitial—the small area in between tissues or parts of an organ; situated between the cellular components of an organ or structure

Intracellular—that which is found in the cell

Intrinsic factor—a substance excreted by the stomach wall that is needed for the absorption of B12

Ionizing—that which produces ions; often used in the term “ionizing radiation” in which ionic particles are produced by high-intensity radiation

Irradiated—that which has been subjected to radiation

Irradiated foods—an example of humanity being out of touch with nature

Isotopes—radioactive elements; any of two or more forms of an element having the same or very closely related chemical properties and the same atomic number but different atomic weights (or mass numbers)

Jainism—a religion in India that is intensely focused on *ahimsa* or dynamic nonviolence

Jaundice—a diseased condition of the liver in which bile pigments are released into the system and the person looks yellow

Judaic Christians—the early followers of Jesus; they were vegetarians and often Essenes

Kapha—a dosha energy that is related to the energy of water and mucus

Kelp—a sea vegetable

Ketones—breakdown products from the metabolism of fats and alcohol

Kirlian photography—a special photographic process that can document the electromagnetic field of bio-luminescence around an animal or plant

Klamath Lake—the location in Oregon where the blue-green algae called *Aphanizomenon flos-aquae* is harvested

Kosher—in the Jewish religion, the rules for what foods one can eat and how to prepare them

Koran—the Islamic holy scriptures

Krebs cycle—the final metabolic path through which foods are processed to produce energy, water, and carbon dioxide

Krishna—a Hindu deity

Lactobacillus bifidus—a healthy bacteria found in the bowel which protects against candida and parasites. It makes B12 as well.

Lactovegetarian—a vegetarian diet that includes dairy products

Lankavatar—a Buddhist holy scripture

Law of Adaptive Secretion—only the digestive enzyme concentration that is needed is secreted

Law of Moses—the Ten Commandments and other laws from the Five Books of Moses

Leukocytosis—an increase in the white blood cell count

Lignands—a special plant fiber that boosts the immune system

Linoleic acid—an unsaturated essential fatty acid; an omega-6 fatty acid

Linolenic acid—an unsaturated essential fatty acid; an omega-3 fatty acid

Lipase—a class of enzymes that digests fats and oils

Lymphatic system—consists of lymph vessels and lymph fluid nodes, which are part of the immune system and return blood proteins back to the circulatory system

Macrobiotic— a way of eating that balances the yin and yang in foods at 50/50; roots in Japan, but developed in this country since the early sixties

Magic—the art of sensing and shaping the subtle, unseen forces that flow through the world, awakening deeper levels of consciousness

Mahaparinirvana Sutra—a Buddhist scripture

Maimonides, Moses—a great Jewish sage, physician, rabbi, and Torah scholar who lived first in Spain and then Egypt (1135-1204); also known as Rambam

Materialistic-mechanistic theory of nutrition—a theory developed in the early 1800s which is the predominant theory of AMA-style mainstream nutrition today; it sees food in mechanical terms rather than energetic terms

Melancholia—a state of being depressed

Melatonin—a substance produced by the pineal gland that helps us adjust to the cycle of the day; it possibly has functions we do not fully understand yet

Meridian—energy circuits in the human body according to acupuncture

Meso-health—the state of appearing in good health on the surface, but not actually being in optimal health; it leads to early onset of degenerative diseases

Meso-limbic—section of the brain associated with emotions and feelings of well-being

Messianic Epoch—the prophesied time during which the Messiah comes to Earth and guides the whole planet into the golden age of peace and God

Metabolic—the biochemical process within the cells that produces energy for the body

Metabolic heat—the actual heat given off by the process of metabolism

Metabolic type—a form of understanding one's constitution through types of metabolism

Methionine reductase— an antioxidant enzyme that neutralizes free radicals

Methoxylated bioflavonoids— live food factors; a class of flavonals thought to have a stronger anti-inflammatory effect than cortisone; good for removing

heavy metals, car exhaust, and decreasing red blood cell clumping; part of the vitamin C complex

Methylmalonic acid—if blood levels of this substance are elevated, it suggests a deficiency of B12

Microbe—a small organism that lives in the body naturally or by invasion; bacteria, virus, fungus, and amoebas are examples

Midrash—the discovery of meaning other than literal in the Bible; Jewish commentaries on Hebrew scriptures

Milk intolerance— a bad reaction from drinking milk, usually resulting from allergies or absence of the enzyme lactase needed for milk sugar digestion

Miso—a fermented soybean paste

Molecular bonding—bonding between molecules

Monoamine oxidase—an enzyme found in high concentrations in the neurological system

Monosaccharides—a simple carbohydrate that is made of only one building block; glucose is an example

Monosodium glutamate (MSG)—a taste enhancer that has been associated with allergic and neurological reactions

Montanist—a follower of Montanus, a Bishop of the second century who claimed that the Holy Spirit dwelt in him and used him as an instrument for guiding people in Christian life

Morphogenic field—an archetypal species thoughtform field that shapes all of a species from the present into the future; it has shape but not energy

Muhaiyadeen, Bawa—a vegetarian, considered an Islamic saint

Multiple sclerosis—a degenerative disease of the nervous system

Mutagenic—substances or processes which cause genetic mutation

Myelinization—the process of building myelin (of which the neural sheath is composed) during the development and repair of the nerves

Myristicin—the liquid constituent of nutmeg oil

Myth—a transitional metaphoric construct leading one to a more expansive,

unified truth

Nadis—the subtle and energetic nerve channels in the Yogic system

Natural opioids—endorphins

Nazarenes—thought to be a subgroup of the Essenes

Neuralgias—pain in the nerves

Neurotoxicity—poisonous to the nerves

Neurotransmitters—the neurochemicals that are involved in the transmission of nerve impulses

Nobelitin—a methoxylated flavonal

Nori (laver nori)—a sea vegetable

Nucleus accumbens—section of the brain associated with emotions and the pleasure centers

Omnivore—a person who eats flesh food, eggs, dairy, and all vegetarian food

Open system—any paradigm or way of viewing the world and the universe that engenders such qualities as expansiveness, integration, and unification while discouraging such qualities as judgement, limitation, and restriction. In the new paradigm, human beings themselves are working toward becoming fully open systems.

Optimal blood pH—7.46

Orthomolecular—the use of vitamins and minerals to improve mental and emotional states

Osteoporosis—calcium loss from the bone structure

Otsego vision—vision by Helen White in 1863 which forms the core of the Seventh-Day Adventist diet and health practices

Ovolactovegetarian—one who eats eggs, dairy and vegetarian foods, but no fish, chicken, or red meat

Oxalic acid—a substance found in certain foods like spinach and beet tops that temporarily combines with calcium

Oxidation—the process of combining with oxygen

Paciferans—live plant factors which are an antibiotic-like substance

Pancreatic polypeptides—amino acid chains made by the pancreas which help with digestion

Para-amino salicylic acid—an anti-microbial drug, especially for tuberculosis

Paracelsus—a famous Swiss physician of the sixteenth century

Parasite—an organism that grows on another organism

Parseeism—the name given to the religion of followers of Zoroaster who live in India

Path of Innocence—a spiritual direction characterized by a willingness to trust the Divine by following moment-by-moment guidance. On this path, one finds freedom from the past and regains the primal innocence of one's original state of being.

Pellagra—a vitamin B3 deficiency that causes mental, gastrointestinal, and skin disorders

Pepsin—a digestive enzyme

Peptide bonds—links between small chains of amino acids

Peristalsis—the muscle contractions of the gastrointestinal tract

pH—the measure of acidity or alkalinity

Phenol—a toxic chemical that is sometimes produced with bowel toxicity

Philo of Alexandria—a historian who studied the Essenes

Phlegm—mucus

Phobias—specific fears

Photosynthesis—the process of plants using sunlight to make simple carbohydrates from carbon dioxide and water

Phytase—the enzyme made by the body that dissolves phytate complexes

Phytates (phytic acid)—a substance found in different vegetables, beans, and grains which binds certain minerals, especially zinc

Picocurie—100th of a microgram

Pitta—the dosha energy associated with fire; metabolism

Pituitary gland—a small oval endocrine gland attached by a stalk to the base of the brain; has a posterior and anterior lobe; secretes growth hormone and other hormones necessary for body growth, development, and function

Pliny the Elder—naturalist and historian who studied the Essenes

PMS—premenstrual syndrome; the occurrence of symptoms such as bloating, swelling, irritability, sadness, and breast tenderness before the onset of menses

Polychlorinated biphenyls— an environmental toxin

Post-Traumatic Stress Disorder—emotional and anxiety problems that remain after an individual has experienced trauma

Prakruti— according to Ayurveda, an individual's inherited constitution; inborn tendencies that influence personality

Prana— another name for energy; often associated with breath, but can refer to cosmic energy

Precondition—a condition necessary for something to happen

Precursors—that which comes before in a chain of steps

Prefrontal lobe—the part of the brain near the front that is associated with awareness

Progenitor cryptocides—a mutable organism that is thought by some to be a cause of cancer

Presence—a state of consciousness characterized by awareness, simplicity, openness, and the ability to be fully present in the moment. Presence means bringing the resonant field of one's total being into the resonant field of the present moment.

Primrose oil— the oil from primroses; it is high in omega-6 GLA

Prostaglandins—biochemical agents that are thought to mediate most of the body processes; particularly associated with the immune system, inflammations, and allergies

Protease—an enzyme group that digests protein

Psycho-spiritual danger—a factor or energy that is a threat to the mind and the spirit

Psychophysiology—that which pertains to the functioning of the body and the mind

Psychosomatic complex—that which pertains to connection between mind and body

Ptyalin—enzyme in the stomach that digests starches

Pylorus—the bottom part of the stomach and specifically the valve that opens from the stomach into the small intestine

Pyorrhea—infection of the gums

Pyridoxine—vitamin B6

Pyroracemic acid—a normal organic acid in carbohydrate metabolism

Pythagoras—a Greek sage, philosopher, scientist, mathematician, and inventor of the Pythagorean theorem who advocated a live-food vegetarian diet; his disciples had to fast forty days on water before he would initiate them into the higher teachings

Qurban— dietary laws in Islam

Rabbi Abraham Isaac Kook—Chief Rabbi of Palestine from 1921 until 1935; taught vegetarianism

Rainbow Adventurer—a being who is on a quest or adventure in life, making choices in mythical alignment with Divine will and according to one's larger purpose

Rajasic—a diet and lifestyle that lead to outgoing and/or aggressive activity

Rama—a Hindu deity

Rambam—another name for Moses Maimonides

Resonance—the congruent mutual response elicited in bodies of similar structure and frequency, as when the sound of one tuning fork causes another fork to vibrate with a similar tone, or the spirit of one person awakens that of another

Reward cascade—the synergistic sequences of neurotransmitter activation and pathways which result in a feeling of well-being, inner joy, and love

Rutin—part of the vitamin C complex; strengthens vein walls

Saccharomyces cerevisiae— yeast that can be eaten

Sadduce—a Jewish sect

SAT—scholastic aptitude test

Sattvic— the diet and lifestyle that support the spiritual life

Saturated fat—fat which has all its carbon chains filled with hydrogens; usually is opaque

Satya Sai Baba—one of the few Indian teachers today who has transcended cultural limitations to support a live-food diet

Self-empowerment—taking one's self-authority as a co-creator with divinity to express one's essence and truth. Expressing the beauty and power of one's full presence, without the need for outside confirmation, recognition, or approval.

Self-reflection—the act of looking deep within self to reveal the truth of one's being. Honestly looking in the mirror of self in order to access the truth found in the clear light of self-observation.

Sentient—living organism

Shadow—the unknown or unseen. In an individual, the unexpressed, unacknowledged, or rejected parts of the self that may be perceived as flaws, weaknesses, imperfections, or problems. These are actually gifts in disguise, indicating those things that stand between the self and the light.

Shivapuri Baba—an Indian mystic who ate vegetarian raw foods almost his whole life and lived to be 137 years old

Sikhism—an offshoot of Hinduism founded in the 1500s that abolished the caste system

Skatole—a bowel toxin

Slow oxidizer-a metabolic type that metabolizes carbohydrates slowly

SOD (superoxide dismutase)—an antioxidant enzyme that destroys free radicals

Solanin—a toxin found particularly in potatoes that have turned green after exposure to sunlight

Somato-nervous system—that which applies to the body-mind system

Spiritualization process—the movement of the Divine energy in the human organism in a way that accelerates the healthy flow of energy in the body, mind, and spirit; the energy that enhances the transformation of the person into a

spiritual being on every level

Stasis—stuck; lack of movement

Structured water—water that has the highest energy; usually found in fruits and vegetables

Subtle Organizing Energy Fields (SOEFs)—the energy matrix that connects the organism to the cosmos and is the template for the physicalization of the human body

Sulfonolipids—lipids with sulphur in them; often found in blue-green algae

Superconductor—a medium that conducts energy with very little resistance to slow it down or make it lose energy through friction

Surangama Sutra—Buddhist scriptures

Surrender—a yielding to the Essence Self, letting go of the need to control and manipulate reality in order to realize one's full potential. A state of mind and heart characterized by openness and trust in the universe. *See* Freedom.

Symbiotic—two organisms that live in conjunction with each other

Synchronicity—a seemingly inexplicable “coincidence.” Two or more non-causally linked, apparently unrelated events that are nevertheless connected by impact and meaning. Synchronicities are not coincidences—they are a result of communication within the larger pattern.

Synergistic—working together to create an effect

Synergy—the combination of different parts into a unified pattern in which the whole is greater than the sum of its parts. A unified action that is unrehearsed. A divinely inspired improvisation.

Szent-Györgyi—a Nobel laureate; Hungarian biochemist who first isolated vitamin C

Tagamet—a drug for ulcers

Tahini—sesame nut butter

Talmud—commentaries on the Five Books of Moses

Tamasic—a lifestyle and diet that create a negative, lethargic, anti-social attitude and mind

Tangeretin—a live-food element found in tangerines that prevents blood sludging

Tannic acid—an astringent substance used to tan leather which is also found in certain foods

Taoism— a spiritual path originating in China that is based on continually moving toward harmony with the universal and natural forces; it uses the principles of yin and yang as a guide

Tarahumara Indians—a vegetarian culture in Mexico noted for the longevity of its members

THMs (Trihalomethanes)—a cancer-causing group of chemicals formed by the interacting of the chlorine in chlorinated water with tiny decaying organic elements in water

Thymus gland— an important gland for the immune system; located in the upper chest above the heart

Thyroid— a ductless gland in the front of the trachea that secretes thyroxin and regulates cellular metabolism and growth

Tikkun—the teaching that humanity must work with God to uplift the world

Torah —the Five Books of Moses; the most sacred scriptures in the Jewish tradition

Tourette's Syndrome—a genetically based brain-mind disorder with many symptoms including explosive swearing and tics

Toxemia—excess of toxins in the system

Toxoplasmosis— a disease caused by the protozoan *Toxoplasma*; in children it often takes the form of an infection in the brain

Traditional Chinese Medicine (TCM)—the traditional system of Chinese medicine based on acupuncture and herbs

Trans fatty acids—fatty acids that have been processed and changed from their biologically active curved shape to a biologically inactive straight shape

Trappist—an order of monks associated with the Catholic Church; they have a tradition of vegetarianism

Trichinosis—a disease caused by the ingestion of pork containing *Trichinella spiralis*; characterized by painful swelling and stiffness of the muscles,

exhaustion, fever, and diarrhea

Tridosha— includes all three doshas; a food that balances all three doshas

Triglyceride— a combination of glyceride and three fatty acids

Trust—a state of surrender to the divine self, knowing that one is supported on one's journey toward wholeness. Trust implies the understanding that the lessons one is given, no matter what their appearance, are serving one's highest evolution.

Tryamine—a protein complex that causes constriction of the blood vessels and uterus

Trypsin—an enzyme for the digestion of protein that is released in the small intestine

Tryptophan—an amino acid widely distributed in animal protein with a little in plant protein; it has been used to aid sleep

Ultraviolet light (UV)— light that is beyond the violet part of the spectrum; has an extremely short wavelength; specifically needed to stimulate certain physiological processes in the body

Unconditional love—one's original state of being, free from all limitation, judgement, and definition. In this state, one steps into the freedom of the larger view, which offers acceptance and allowance for how oneself and others are choosing to grow.

Undulant fever—brucellosis; often caught from livestock

Unstructured water—water that holds the least amount of energy; distilled water is highly unstructured

USDA—United States Department of Agriculture

Vata—the dosha associated with the air element in the body; movement of muscles and nervous system and activity of the large intestine

Vedas—the most ancient of the Hindu scriptures

Vegan —a person who eats no flesh food, dairy, or eggs nor uses any product from an animal

Vilcabamban Indians—a vegetarian group of people living in Ecuador who are noted for their good health and longevity

Virulent—extremely poisonous or injurious; means “highly malignant” when used in reference to a disease rapid in its course; able to overcome the natural defenses of the host; means “highly infectious” when used in reference to a microorganism

Viscosity—measure of how easily a liquid flows

Wakame—a sea vegetable

Will—the focused desire to create or manifest something in the present moment. When one acts with heart and mind aligned, one's personal will is in natural alignment with divine will.

Yang— associated with heat, moisture, activity of mind and body, aggressiveness, male energy

Yin—associated with cold, dryness, quiet mind and body, passivity, female energy

Yogananda, Paramahansa—a teacher from India who settled in the Los Angeles area and who included many of the teachings of Jesus and devotion to Jesus in his work

Zend Avesta—the main scripture of Zoroastrianism

Zero Point Process— a seminar that teaches a person how to dissolve all limiting thoughts and identities; the wisdom part of the Tree of Life seminars which sees ego as a case of mistaken identity

Zeta energy—the energy associated with the degree of structure in a colloidal system

Zoroastrianism—the religion of the Persians before their conversion to Islam, founded by Zoroaster (Zarathustra); the first religion in recorded history teaching the principles of a balanced life, including vegetarianism and ecological awareness

Appendix 1

EM™: A Boon for the New Millennium

The Tree of Life Rejuvenation Center, founded/directed by Gabriel Cousens, M.D., has been chosen as the first integrated EM™ (effective microorganisms) site in the United States. We are working closely with EM Technologies and Dr. Higa, discoverer of EM™, to create an environmentally sustainable, holistic healing center that uses EM™ as one modality to bring harmony to body, mind, and spirit. With the help of EM™, we are living in greater harmony with the natural environment and one another. We are honored to experientially introduce others to this powerful vehicle for transformation.

EM™ (effective microorganisms) is a most incredible group of microorganisms that we have been given for the healing and transformation of the planet. These microorganisms can increase crop production two to ten times, help to revitalize soil, help to soften soil (especially hard desert soil like ours at the Tree of Life Rejuvenation Center), help remove fungus, algae, and other contaminants from the water, and even improve the physical, emotional, mental, and spiritual aspects of human health. EM™ rejuvenates the planet, the people on it, animals, plants, water, and the soil on every level.

At the most basic level, EM™ brings the primordial cosmic resonance of the universe into our bodies and resonates us back into the grand harmony of our primordial Divine resonance. According to Dr. Higa, the person who discovered the combination of organisms that make up EM™, it has the nuclear magnetic resonance of Quan Yin, known in Japan as Kanno Bodhisattva, the resonance of unconditional compassion. The power of this resonance creates a field around us that transmutes all dissident energy into harmonious energy. In this way, EM™ brings healing to body, mind, and spirit. The organisms responsible for this transformation include photo-synthetic bacteria, various other bacteria, healing yeast, and fungus. The nuclear magnetic resonance of EM™, according to Dr. Higa, changes the subatomic particles of whatever it comes in contact with, enhancing and transforming the energy pattern of living organisms. Dr. Higa believes that this process creates what he calls “syn-entropy” meaning “the reversal of entropy,” or the reversal of the degenerative process. In other words, EM™ reverses the aging process and raises our life force function to a new level.

In his paramount book, *An Earth-Saving Revolution*, Dr. Higa, Ph.D., horticulturalist, points out that there are two dynamic and intrinsic opposing forces in nature: the force of regeneration and that of degeneration. The forces of regeneration activate all things with life and vitality, helping us to build, support, and maintain good health. Forces of regeneration are, in essence, the life force present in the soil as well as all living beings. The forces of degeneration are the dynamic of breakdown, decay, decomposition, pollution, and contamination, which cause sickness, disease, and death. Both of these opposing forces are driven by the power of different microorganisms. The microorganisms in EM™ are the anabolic or regenerative organisms that bring life force back into all life including soil, plants, animal life, and human life.

Dr. Higa began his EM™ research in the 1960s by studying the biological effect of EM™ on the soil. It changes the life force in the soil by becoming the dominant organism group in the soil and thus brings the soil back to its normal healthy form. EM™ regenerates the soil by replacing the pathogenic organisms—the organisms of degeneration that grow in pesticided, herbicided, and nutrient-depleted soil. In other words, EM™ mimics the biological action we often see in a healthy forest.

EM™ is presently being used with significant agricultural success in over 80 countries worldwide. In 12 of these countries the ministries of agriculture are actively supporting it. The results have been outstanding. It can boost crop growth and yields between two and ten times. It makes natural compost, eliminates harmful insects, and heals unhealthy organisms in the compost and the soil while boosting the growth of healthy natural organisms. In the last 20 years, EM™ has been linked with nature farming, an approach to farming for healing the soil that started in Japan. It also helps reclaim waterways, rivers, and ponds. EM™ has been used in several areas to clean up sewage systems because it is able to eat up the harmful organisms that grow in the sewage. In essence, EM™ brings the life force back into the soil and water. EM™ is the active energy of living systems.

The beauty of EM™ for agricultural use is that it can turn dead soil into living soil in a predictable manner, obviating the need to use pesticides, herbicides, and synthetic fertilizers, which are forces of degeneration for the soil as well as for the people who are exposed to them. With EM™, composting becomes unnecessary and the need for animal manure as a fertilizer is eliminated. EM™ does the composting right at the site. All that is needed is the

nitrogen from cut weeds and grasses. One simply adds EM™ to the cuttings, which then become the fertilizer. In addition to the soil-nourishing capacity of EM™, it actually eats the pesticides and herbicides in the soil as part of its effective action, including highly toxic PCBs and dioxins.

EM™ also offers a very effective way for farmers who are using pesticides, herbicides, and other forms of toxic chemistry to productively switch to organic farming. The process takes about three to four years, yet with the use of EM™, farmers do not suffer the yield reduction commonly experienced during that transition time. On a larger scale, EM™ offers an opportunity to feed the hungry and starving people of the world by teaching them about sustainable agriculture and giving them power to feed themselves.

EM™ has many powerful effects in creating healing for the planet on a physical level. Not only does it replace chemical fertilizers and pesticides as well as remove the residue from the soil, but in addition, the nuclear magnetic resonance of EM™ neutralizes almost all dissident energies including X-ray radiation energy and even high-powered 120 AC energy. Some of the research in Russia connected with the Chernobyl radiation disaster is showing that EM™ neutralizes the radiation in the soil so that the radioactive particles cannot be incorporated into the biological systems of plants, animals, and humans. There is also much evidence that EM™ actually transmutes the radioactive materials so that they are no longer radioactive. In Japan, they have even experimented with the use of EM™ in cars and found an improvement in gas mileage of about 15% thereby reducing harmful emissions. In my 1983 Volvo, after using one EM™ treatment, my miles per gallon increased from 19 to 25.3.

The results of using EM™ to repair the natural environment and create safety for life on Earth are astounding.

EM™, in its various forms, is also very healing for human beings. One form of EM™, called EMX™, has been found to boost the immune system, neutralize free radicals, and move all toxins out of the body. Its positive nuclear magnetic resonance effect builds the cells and repairs the DNA structure so that it operates optimally, and thus helps to improve function and enhance the rejuvenation process. Dr. Higa believes that EM™ actually helps clean the DNA and transmute it to a higher-resonance frequency. He believes it actually increases the vibration rate of the genes to make the “super person.”

In Japan, EM™ helps the healing of cancer by weakening the cancer cells, decreasing free radicals, and strengthening the T-cells and the rest of the immune system. Mrs. Higa has used it successfully for the treatment of hyperactive children. When these children take in EM™, use it in the garden, spray it in their rooms, and wash dishes and laundry in EM™, the report from Japan is that they get calmer. Some research has also shown that EM™ is helpful for healing all addictions. Dr. Higa has developed a special formula of EM™ called Rejuv-EM™ for the Tree of Life which is used in the healing of diabetes and other chronic health conditions. Dr. Higa claims that adult-onset diabetes can heal in as little as three months. The Rejuv-EM™ seems to help with many chronic degenerative diseases. It does this because it activates the healing potential of all our cells.

From a Kabbalistic point of view, EM™ plays an important role in our conscious evolution. It is taught that as our bodies become more complex, they become more conscious. Yet the spiritual light of the complex forms such as human beings is lower than the spiritual lights of the simple forms, such as the EM™ microorganisms, especially the photosynthetic bacteria. The simple forms are considered to contain the highest lights of the sparks of God because their sparks originated in the earliest moments of creation. In essence, the teaching is that the closer to the original oneness of God, the brighter the spiritual light. Sparks of simple forms, such as EM™, carry the most transcendent forms possible of awareness, but the vessels of these simple forms cannot consciously express the full measure of the light. The bright spiritual sparks of the simple forms, often used as food, such as EM™, help to elevate human consciousness because they add their more primordial light to our own light. These primitive foods add a spark of light to the soul and thus a new increment for the expansion of consciousness. The lower, simpler organisms in the food chain nurture the body and carry a spark of consciousness that feeds the soul. It is taught that “man does not live by bread alone, but by everything that proceeds from the mouth of God.” What proceeds from the mouth of God are sparks of light within the simple foods that enliven the soul. EM™ is a powerful form of this soul food.

At the Tree of Life Rejuvenation Center we are integrating EM™ in a fully holistic way. We are using it in our gardens and orchards, to purify our pond used for a *mikvah* (ceremonial bath), to help clean the “wetlands” (our natural sewage system), for pest control, to clean and disinfect sinks and toilets, and even in our EM™-infused therapeutic hot tubs. The EM™ hot tubs have proven to be a powerful experience for people. Some feel so energized by the EM™ hot tub that they need to take the hot tubs in the morning rather than at night. Some of us actually feel the powerful energy of Quan Yin embracing us. We have also introduced the EM™ into our fermented kefir and other fermented foods. It definitely seems to help the energetic quality and taste. So far we have not seen any side effects for any of the EM™ products nor have any been reported in the literature in more than **10** years that EM™ has been used clinically. We are continuing to experiment with the uses of EM™ to create a powerful experience of rejuvenation for all who come to the Tree of Life to heal and awaken.

EM™ comes in a variety of formulas for various uses. Several mixes are generally used in the garden to increase

soil fertility and repel pests. (If you are interested in using EM™ effectively in gardening, I strongly recommend you participate in the two-day EM™ seminar that we will be offering periodically at the Tree of Life Rejuvenation Center.) EMX™ is an antioxidant supplement drink that is a powerful rejuvenator of body, mind, and spirit and is used in the treatment of disease. Rejuv-EM™, especially developed for the Tree of Life, is a special combination of the many EM™ formulas and offers an optimal healing and rejuvenating effect. EM™ jewelry can be worn to create a vibrational field around the wearer. EM™ ceramic forms are available for purifying and increasing the vibration of drinking water. EM™ also comes as skin creams, shampoos, massage oils, and a variety of other health products.

I am very pleased that the Tree of Life Rejuvenation Center has been chosen as the first integrated EM™ site in the United States. I believe that our observations and experience with EM™ will be a great service to humanity. Already, I feel that EM™ has begun to elevate the vibration of the earth, water, food, and health of the people at the Tree of Life. May it do so for all.

For a list of EM™ products or EM-related seminars, please contact the Tree of Life Rejuvenation Center or view our Internet Product Catalogue at www.treeoflife.nu.

Appendix 2

Raw-Food Resource List

Raw Kitchen Gadgets

Champion Juicer
Plastaket Manufacturing Company
6220 East Hwy 12
Lodi, CA 95240
Phone: 209-369-2154
Source for: the Champion Juicer

Vita-Mix
8615 Usher Rd
Cleveland, OH 44138-2199
Phone: 800-848-2649
Source for: the ultra powerful Vita-Mix
blender

The Green Power Juicer
Downey, CA 90241
Phone: 888-254-7336
Website: www.greenpower.com
Source for: Green Power Juicer as well as
Green Life Juicer

HealthForce Regeneration Systems
P.O. Box 5005
Rancho Santa Fe, CA 92067-5005
To Order: 1-800-537-2717
www.healthforce.net
Source for: juicers and dehydrators
Salad Shooter
National Pesto Industries, Inc.
3925 N. Hastings Way
Eau Claire, WI54703-3703
Phone: 800-877-0441
Source for: Salad Shooter device that electrically slices and grates almost all veggies, nuts, and seeds

International Specialty Supply (ISS)
Phone: 820-2-SPROUT (800-277-7688)
E-mail: spouts@infoave.net
Source for: large-scale commercial sprouting
equipment, professionals only

Raw-Food Products

Ejuva Cleanse
Steve Hurwitz

237 Miramar Dr.
Santa Cruz, CA 95060
Phone: 831-457-1323

Lifeway Foods, Inc.
6431W Oakton St.
Morton Grove, IL 60053
Phone: 847-967-1010
Source for: kefir starter, an active culture for
making kefir
Jaffe Bros., Inc.
P.O. Box 636
28560 Lilac Road
Valley Center, CA 92082
Phone: 619-749-1133
Source for: wide variety of natural foods;
organic

Nature's First Law
P.O. Box 900202
San Diego, CA 92190
To Order: 800-205-2350
www.rawfood.com
Source for: Everything! Books, juicers,
Vita-Mix blender, exotic live foods

The Sprout House
17267 Sundance Drive
Ramona, CA 92065
Phone: 800-SPROUTS
Website: www.SproutHouse.com
Source for: organic sprouting seeds and
sprouting supplies

Greensward Nurseries & New Native Sprouts
P.O. Box 1413
Freedom, CA 95019
Phone: 408-728-4136
Source for: certified organic wheatgrass and
12 varieties of sprout via mail order

Gold Mine Natural Food Company
3419 Hancock Street
San Diego, CA 92110
Phone: 800-475-FOOD
Source for: Celtic/unrefined sea salt, miso
(unpasteurized), and seaweeds
Rejuvenative Foods
P.O. Box 8464
Santa Cruz, CA 95061
Phone: 408-462-6715
Source for: nuts, seeds, grains, dried fruits,

snacks, etc.

SunOrganic Farm
P.O. Box 2429
Valley Center, CA 92082
Phone: 888-269-9888

www.sunorganic.com Source for: organically grown and high-quality seeds, nuts, grains, beans, herbs, and spices

Sproutable Quinoa—White Mountain Farm
8890 Lane 4
North Mosca, CO 81146
Phone: 800-363-3019

Pinetree Garden Seeds
P.O. Box 300
New Gloucester, ME 04260
Phone: 207-926-3400
Source for: open-pollinated vegetable seeds

Good Eats
P.O. Box 756
Richboro, PA 18954
Phone: 800-490-0040
Website: www.Goodeats.com
Source for: organic sprouting seeds and natural foods
Walnut Acres
Penns Creek, PA 17862
Phone: 800-433-3998
Source for: mail order for natural foods and organic sprouting seeds

Gourmet Greens
Chester, VT
Phone: 802-875-3820
Website: www.GourmetGreens.com
Source for: nationwide next-day delivery of organic sprouts

Sproutpeople
225 Main St.
Gay Mills, WI54631
Phone: 608-735-4735
Website: sproutpeople.com
Source for: organic sprouting seeds and sprouting supplies

Snacks Alive
Santa Cruz, CA 95063
Phone: 888-760-9353

Website:

www.users.aol.com/rawgirHe/snacksalive.html

Source for: raw, dehydrated, unrefined sweet treats

Raw Restaurants and Catering

Tree of Life Café

P.O. Box 1080

Patagonia, AZ 85624

Phone: 520-394-2520

www.treeoflife.nu

(Call for reservation)

Organica Restaurant

1224 9th Ave.

San Francisco, CA 94122

Phone: 415-665-6519

Beverly Hills Juice Club

8382 Beverly Blvd.

Los Angeles, CA 90048

Phone: 323-655-8300

Enzyme Express

1330 East Huffman Road

Anchorage, AK 99515

Phone: 907-345-1330

Garden Taste Restaurant

1237 Camino Del Mar

Del Mar, CA 92014

Phone: 619-793-1500

The Vegetarian

431 West 13th St.

Escondido, CA 92025

Phone: 760-740-9596

Karyn's Fresh Corner

3351N. Lincoln

Chicago, IL 60657

Phone: 773-296-6990

The Raw Truth Café

3620 East Flamingo Rd.

Las Vegas, NV 89121

Sunfired Foods

245 Flatbush Ave., Ground Floor

Brooklyn, NY 11217

Phone: 718-622-1000

Arnold's Way
4438 Main St.
Philadelphia, PA 19127

Delights of the Garden
2616 Georgia Ave. NW
Washington, D.C. 20001
Phone: 202-319-8747

Caravan of Dreams
405 East 6th St.
New York, NY
Phone: 212-254-1613

4th Dimension Juice Bar
279 Church St.
New York, NY 10013
Phone: 212-965-0468

Elaine's Pure Joy Kitchen
Catering by Elaine Nigro
Santa Cruz, CA
Phone: 408-358-609

Raw Networks and Publications

Tree of Life Update
P.O. Box 1080
Patagonia, AZ 85624
Phone: 520-394-2520
Website: www.treeoflife.nu
Just Eat an Apple Newsletter
Nature's First Law
P.O. Box 900202
San Diego, CA 92190
Phone: 616-229-8259

South Bay Living Food Community

Institute for Vibrant Living

707 Continental Circle, Suite 335

Mountain View, CA 94040

Phone: 650-961-9541

San Diego County Living Foods
Helene Idels
3564 Sky Haven Lane
Oceanside, CA 92056
Phone: 619-260-6968

San Francisco Live Food Enthusiasts

San Francisco, CA

Phone: 415-751-2806

Raw Food Network
RAW: Living Foods Lifestyle Magazine
Jason Aberbach and Janice Herradora
124 N. Norris Ave.
Tucson, AZ 85719
Phone: 520-792-9283
www.rawfoodsnetwork.com

American Natural Hygiene Society

P.O. Box 30630

Tampa, FL 33630

Phone: 813-855-6607
Living Health Network
Habib Bailey
1538 SE 122nd Ave., Apt. 49
Portland, OR 97233
Phone: 503-256-8351
Raw_Immortal@hotmail.com

Living Light House
Dennis Knicely
Los Angeles, CA
Phone: 310-395-6337

Rhio's Raw Energy Hotline

New York, NY

Phone: 212-343-1152

www.rawfoodinfo.com

Canadian Natural Health Association

439 Wellington St. W., Unit 5

Ontario, Canada M5V 1E7

Phone: 416-977-2642

Karen Knowler
The Fresh Network
PO Box 71, ELY CB7 4GU
England
Fresh@Karenkeasynet.co.uk

Raw Times
Website resource for the raw lifestyle
Website: www.rawtimes.com
Raw-Food Instruction, Lifestyle Training, and Retreats

Tree of Life Rejuvenation Center
P.O. Box 1080
Patagonia, AZ 85624
Phone: 520-394-2520
E-mail: healing@treeoflife.nu
www.treeoflife.nu

Ann Wigmore Institute
P.O. Box 429
Rincon, Puerto Rico 00743
Phone: 787-868-6307
Fax: 787-868-2430

Ann Wigmore Foundation
P.O. Box 399
San Fidel, NM 97049
Phone: 505-552-0595

Ann Wigmore Foundation-Boston
196 Commonwealth Ave.
Boston, MA 02116
Phone: 617-267-9424

Optimum Health Institute-San Diego, CA
6970 Central Ave.
Lemon Grove, CA 91945
Phone: 800-993-4325
Website: www.OptimumHealth.org

Optimum Health Institute-Austin, Texas
Rt. 1, P.O. Box 3391, Cedar Lane
Cedar Creek, TX 78612
Phone: 512-303-4817
Hippocrates Health Institute
1443 Palmdale Court
West Palm Beach, FL 33411
Phone: 800-842-2125
www.hippocratesinst.com

Hippocrates Health Center of Australia
Elaine Ave, Mudgeeraba 4213
GoldCoast, Queensland, Australia
Phone: 07-5-530-2860

Naples Institute for Optimum Health &
Healing
2335 Tamiami Trail N.
Naples, FL 34103
Phone: 800-243-1148
www.NaplesInstitute.com

Creative Health Institute
918 Union City Rd.
Union City, MI 49094
Phone: 517-278-6260

All Life Sanctuary
Viktoras Kulvinskas, director
P.O. Box 2853
Hot Springs, AZ 71914
Phone: 800-927-2527 ext. 00205
Website:
www.naturalUSA.com/viktor/sanctuary.html

Living Light Culinary Arts Institute
Cherie Soria, Director
704 N. Harrison
Fort Bragg, CA 95437
Phone: 800-484-6933 ext. 6256
Super Sprouts, Inc
205 Spadina Ave.
Toronto, Ontario, Canada M5T 2C8
Phone: 416-977-7796
www.supersprouts.com

Sproutman
Steve Meyerowitz
Private Consultations
Phone: 413-528-5200
Fax: 413-528-5201

Email: Sprout@Sproutman.com
www.Sproutman.com

Elysa Markowitz
TV Star of *Elysa's Raw and Wild Food Show*
17551 Mountainview Road
Desert Hot Springs, CA
Phone: 760-251-7488
E-mail: elysatv@aol.com

Loving Foods
Reneé Underkoffler
P.O. Box 576
Paia, HI 96779
Phone: 808-573-4207
www.lovingfoods.com

Living in the Raw
Rose Lee Calabro
Santa Cruz, CA
Phone: 831-768-7400
www.rawlivingfoods.com

Sharon Faulkner
Mill Valley, CA
Phone: 415-388-4709
Cher Carden
Health Educator
New York, NY
Phone: 212-242-5127

Loreta's Living Foods
Live Food and Wheatgrass Juicing
Consultation
Phone: 610-648-0241

Price Pottenger Nutrition Foundation
P.O. Box 2614
La Mesa, CA 91943-2614
Phone: 619-574-7763

Food & Water, Inc.
Activists for protection of food sources
and the environment
389 Vermont Road
Walden, VT
Phone: 800-EAT-SAFE

Raw Friends

Joe Alexander
257 22nd St.
Fayetteville, AK 72071
Phone: 501-442-6194

Steve Adler
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Dklein@living-foods.com

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Wendy Limber
43S.W. Watercrest Way
Stuart, FL 34994
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Phone: 561-333-4013

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Phone: 732-432-4839
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Ruidoso, NM 88357

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Minneapolis, MN
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Dayton, OH 45429

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Portland, OR

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Jayne@earthworld.com

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U7598@lvh.com

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1515 16th St.
Galveston, TX 77550
Phone: 409-765-8858

Ralph Blake
4/41 Byron St.
Elwood, Victoria 3184
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Achute Rana
P.O. Box 1847
Katmandu, Nepal
Abr@jai.mos.com.np

Sebastien Patenaude
216 Loyola
Repentigny, Quebec J6A 5X2
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Phone: 450-581-4069

Bob Harrison
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Phone: 514-739-3830

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Canada
Phone: 450-534-1782
sonia.cote@sympatico.ca

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7 Henley House
Friern Park, London
England N12 94E
Phone: 01-81-446-2960

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Central Fisheries, Woodview
Castle Ford, W. Yorks
England WF10 1PX
alan@rahowa.demon.co.uk

Helmut Wandmaker
04838 1301 Vermietung/Verpachtung
Tellingstadt 25782
Germany

Florian RAAB
Munich, Germany
fruitflo@gmx.de

Balta
El Cano, La Hiniesta
Apartado 186 490 89
Zamora, Spain

About the Author

Gabriel Cousens, M.D., is a holistic medical doctor, a psychiatrist and family therapist, and a licensed homeopathic physician in the state of Arizona. Dr. Cousens uses the modalities of nutrition, naturopathy, Ayurveda, homeopathy, acupuncture, and psycho-spiritual counseling, blended with spiritual awareness, in the healing of body, mind, and spirit. He is a researcher and practitioner in the field of rejuvenation, specializing in the natural healing of many chronic degenerative diseases including depression, “the addictive brain,” chronic fatigue, candida, hypoglycemia, diabetes, hypertension, and arthritis. On the path to vibrant health, Dr. Cousens supports and inspires clients to integrate a holistic lifestyle that includes an individualized optimal health diet, exercise, meditation, and nutritional and medicinal supplements.

A cum laude graduate of Amherst College, where he was captain of an undefeated football team, Dr. Cousens was selected as an All New England lineman and one of eleven National Scholar Athletes inducted into the National Football Hall of Fame. He received his M.D. degree from Columbia Medical School in 1969 and completed his psychiatry residency in 1973.

Dr. Cousens was the Chief Mental Health Consultant for the Sonoma County Operation Head Start and a consultant for the California State Department of Mental Health. He is listed in the *Who's Who in California*, *Who's Who among Top Executives*, *Strathmore's Who's Who*, and *National Register's Who's Who* and is a former member of the Board of Trustees of the American Holistic Medical Association (AHMA).

Dr. Cousens is the author of many books including *Conscious Eating Spiritual Nutrition and the Rainbow Diet*, *Sevenfold Peace*, *Depression-Free for Life*, and *Tachyon Energy: A New Paradigm in Holistic Healing*, co-authored with David Wagner, the creator of the Tachyon process. He is a frequent guest on popular radio talk shows and has published articles in health journals and popular magazines in the areas of depression, biochemistry, school health, clinical pharmacology, hypoglycemia, Alzheimer's disease, and live-food nutrition.

A Senior Essene teacher, Reiki Master, and meditation teacher since 1973, Dr. Cousens has presented seminars on many topics including health and nutrition, psycho-spiritual healing, meditation, and spiritual awareness throughout the United States, Canada, and Europe. As a spiritual facilitator, Dr. Cousens received much of his training and experience during the seven years with his first major spiritual teacher, Swami Muktananda. In 1981, Swami Prakashananda, the first person that Muktananda declared a liberated being and Dr. Cousens' second major spiritual teacher, recognized him as a “yogi of real spiritual attainment” who has “realized the innate perfection.” Dr. Cousens is also a student and teacher of Kabbalah and a Sundancer in the Lakota Sioux Native American tradition.

Dr. Cousens is the founder/director of the Tree of Life Rejuvenation Center in Patagonia, Arizona, an innovative rejuvenation, spiritual, eco-retreat center committed to the integration and renewal of body, mind, and spirit. There he individually consults with clients and facilitates self-healing programs that empower and inspire participants to take transformational responsibility for their healing and awakened living. Dr. Cousens is also the founder/director of the Essene Order of Light a non-profit service organization dedicated to the healing and transformation of the planet. Projects include: an established quarterly meditation for world peace at the United Nations, training world peace-workers, establishing holistic orphanages and garden-centered schools in developing nations, and a natural healing program for Native Americans with diabetes.

As a world peace-worker, holistic physician, and highly trained spiritual facilitator, Dr. Cousens weaves his comprehensive, unique background into his holistic healing and writing approach, supporting and inspiring people into the sacred joy of being free and fully alive.

Other Books by Gabriel Cousens, M.D.

Spiritual Nutrition and The Rainbow Diet. Boulder, Colorado: Cassandra Press, 1986.

It is considered by *Meditation Magazine* to be “The best book on diet from both a health and spiritual point of view ever to see print.” This book describes in detail how proper diet can be an excellent aid to spiritual life. It presents a new scientific model and way of thinking about nutrition. *Spiritual Nutrition and The Rainbow Diet* addresses the spiritual, scientific, intuitive, and subtle aspects of nutrition. The book is available at your local bookstore on request, or it can be directly ordered from Essene Vision Books, P.O. Box 1080, Patagonia, AZ 85624, or by calling 520-394-2519.

Cost is \$13.95 plus \$2.50 shipping.

Sevenfold Peace. Tiburon, California: H.J. Kramer, Inc., 1990.

According to Robert Muller, former Assistant Secretary General of the United Nations and Chancellor of the University of Peace, *Sevenfold Peace* "... gives us golden keys to human fulfillment: body, mind, and soul in harmony with humanity, the earth, and the heavens. It is an excellent manual for our evolutionary transcendence into the third millennium. I love *Sevenfold Peace!*" *Sevenfold Peace* integrates the ancient wisdom of the Essenes with the urgent need of humanity today to understand how to live in a peaceful way. *Sevenfold Peace* is a holistic approach to peace that includes peace with: God, the earth, culture, community, family, mind, and body. It helps you become a peacemaker by learning how to create peace in every aspect of your life. Ask for this book at your local bookstore or order it from Essene Vision Books, P.O. Box 1080, Patagonia, AZ 85624, or call 520-394-2519. Cost is \$4.95 plus shipping.

Tachyon Energy: A New Paradigm in Holistic Healing Berkeley, California: North Atlantic Books, 1999.

Dr. Cousens along with co-author David Wagner, creator of the Tachyon Process, introduce the tremendous healing power of what physicists call tachyon energy—the cosmic energy prior to light. Learn the physical, emotional, and spiritual benefits of Tachyon and how to amplify this cosmic energy to aid in your healing process and that of others.

Depression-Free for Life. New York: Murrow Publishers, 2000.

Dr. Cousens shares his highly effective, 5-step, drug-free approach to healing depression. This unique program acknowledges that all depression is not alike—it has multiple and often surprising physical causes. Readers learn to customize Dr. Cousens' program to fit their unique depression profile, rebalancing the "natural drugs of the brain" through this highly effective combination of amino acid therapy, vitamin and mineral supplementation, and diet and lifestyle changes. Unlike drug therapy, which only soothes symptoms, *Depression-Free for Life* actually repairs depression at its biological source, restoring the opportunity to awaken to the sacred joy of living.

Join the Support Network for Conscious Eating

Become a subscriber to the *Tree of Life Update* published by Gabriel Cousens, M.D., and the Tree of Life Rejuvenation Center. This newsletter, inspiring conscious eating and conscious living, is an opportunity to receive health and spiritually related articles by Dr. Cousens, delectable live-food recipes, a schedule of Tree of Life events and Dr. Cousens' nation-wide seminars, and other information that nourishes the body and soul. To subscribe to the biannual *Tree of Life Update*, please use the form on the following page. Stay informed and be supported by the Tree of Life Website: www.treeoflife.nu. This continually updated site gives you an exciting view of the Tree of Life Rejuvenation Center, innovative information about holistic health, news about upcoming Tree of Life events, in-depth information about Gabriel Cousens' Whole Person Healing holistic health program, a raw-food resource list, and a catalogue of products that support vibrant living. It is a sourcebook for living "the raw experience."

Discount for Group Book Sales

Conscious Eating has become increasingly popular for use in nutrition workshops, schools, study groups, for health practitioners to give or sell to their clients, as well as for gifts to friends to introduce them to vegetarian and live foods. As a way of supporting this movement, we are now offering a 30% discount (\$22.75 per book) for six or more *Conscious Eating* books ordered at one time. In addition, six or more of Dr. Cousens' other books ordered at one time are offered at 25% off the cover price. For more information, call 520-394-2519.

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My comments about *Conscious Eating*:

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