HEALTH UNLIMITED

by

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TABLE OF CONTENTS

INTRODUCTION

Are you tired of not feeling as good as you would like to? Or do you feel pretty good but wish to feel great? Then this book is for you. In these pages you will find the information you need to take control of your health and improve it dramatically.

Too many of us have relinquished control of our health. At the first sign of illness we rush off to the doctor who prescribes a pill with no explanation. We take the pill, feel better in a few days or weeks and then forget the whole incident. But this is not always the smartest course to follow. To gain or maintain health you must understand how you may be causing most of your illnesses. Then you must learn how to take action to build good health.

The purpose of this book is to teach the philosophy and methods needed to get well without medical care if possible. It is exciting to realize how often the body can heal itself from health problems without drugs and surgery. Many arthritics can become free of pain without medications. Heart patients can often avoid coronary bypass surgery. People suffering from chronic sinus problems, allergies, and asthma can begin to feel great. The list of health problems which can be resolved by simple lifestyle changes is quite long.

In practice there is nothing as satisfying as seeing a patient go from poor to good health. A person who has achieved good health is a wonder to behold with shiny clear eyes, soft glowing skin and a bouncy energetic step. A healthy person feels great most of the time, has lots of energy to share with spouse and children and has much vigor at work. Since physical health is impossible to achieve without mental health, a healthy person also has a positive mental attitude.

People will sometimes say that they are too busy to be concerned with their health. But this is a dangerous attitude. You must institute preventive health measures or you may suddenly find your supposedly firm foundation of good health ripped out from underneath. Would you wait until your car died by the side of the road before you had the engine tuned-up? No. It is even more hazardous to take your health for granted since, if you lose your health, you may also lose the ability to work, take care of a family, and maintain a home. Maintaining health must be our number one priority!

There are those who think that they are “too far gone” to bother trying to improving their health. “I am hopeless” they say. But nothing could be further from the truth. If you are alive then you can improve your health! I have seen people in wretched shape who have dramatically improved the way they feel.

To be truly healthy must you live like a monk in a cave with a multitude of sacrifices, denials, and limitations? No. The steps that you need to take to achieve better health are actually pleasant, comfortable and fun. There are no major sacrifices. Life does not have to become serious, somber and empty of fun.

A health-building lifestyle program does require some changes but they are generally easy. For example, biting into a juicy sweet naval orange is delightful. Walking briskly around the block is exhilarating. Reducing the stress of life is relaxing. It is so wonderful to feel healthy that the minor sacrifices you need to make are insignificant.

I do not claim that the information provided by this book will make all drugs and surgical procedures obsolete. Of course there are times when standard medical care will be necessary. With pneumonia, antibiotics can save lives; with cancer, chemotherapy may prolong life for years; with severe crippling hip arthritis, surgery can restore mobility. But many people choose drugs and surgery when they could have selected a safer and healthier alternative. With more information an alternative path can often be followed. I strongly suggest that you consult with a doctor who specializes in alternative methods to determine if you can recover your health through natural means.

The happy truth is that you can often feel better without using drugs and surgery. When this is the case, you will be able to use this book as a guide. The first section, The Basics, will explain how your body works to heal itself when needed and how you can listen to your body to determine what it needs. The second section, How Trouble Develops, will show you how illness is caused and how it advances, for example, from a mild cold to the flu to arthritis to a heart attack.

The third section, The Problems, will discuss the most common and distressing illnesses from which people suffer. This section will apply the basic concepts of the first two sections to specific health problems.

The fourth section, How to Unleash Your Body's Healing Powers, will discuss the methods which you will need to use to build health. I will discuss nutrition, exercise, stress reduction, and other important measures. Also in this section you will find a find a discussion of diet and menu plans, which will give you the details of how to eat for health. You will find that you can eat healthfully and enjoy it.

In the back of the book you will find a bibliography. There are references to many articles in standard medical and scientific journals. These are important because such articles are the foundation of modern scientific knowledge and truth. If you or your doctor want to know more then go to a medical library and read these articles.

The path to good health is easy to comprehend and simple to follow. The results are dramatic. Turn the page and learn how you can feel better than you ever imagined possible.

LISTEN TO YOUR BODY

Your body is speaking to you right now. Listen to its message and learn how to build vibrant health.

Your body is not some dumb hunk of protoplasm. It is a marvelously intelligence self-healing miracle in action, far more sophisticated that the most advanced computer. No doctor can create the ingenious healing that takes place after an accident or surgery.

We know not what our bodies can do for us. Most people take their body for granted and never become aware of how the body functions with great complexity every moment to sustain life.

Every moment that you are alive there is a virtual miracle happening within you. In the face of extremes of cold and hot temperatures, your body stays within a few degrees of normal. Minute adjustments are made to maintain normal blood pressure, acidity, oxygen content, calcium levels, and literally thousands of other variables every second. The body exerts an enormous effort every moment to maintain survival at the highest possible level of health.

You must develop great faith in the ability of your body to run its own affairs in the healthiest way possible. If you have this faith and become sick then you will look to your body and not doctors and hospitals for the solution. Since your body contains a computer more complex than has ever been imagined and houses chemists more sophisticated than those found at the greatest universities on earth, recognize that your body's healing processes deserve deep respect.

One of the major purposes of this book is explain that your body can almost always heal itself without any outside interventions. Most the symptoms of illnesses are direct evidence of healing activity. Learn to listen to your body when your are sick. If you can read the signals sent to you from your body then you will know how to help and not hinder your body's healing activities.

The body produces symptoms to send messages to your conscious awareness. Pain tells you that there is trouble. When you get other symptoms such as nausea, vomiting, diarrhea, cough, sneezing, fever and fatigue, your body is sending you a message. Always remember that symptoms are messages and not diseases. Don't be satisfied with health care that solely eliminates symptoms. If you had a fire in your house would you be satisfied with turning off the fire alarm? Of course not. But this is exactly what happens when you take pills that only get rid of symptoms.

This book will help you learn how to listen to your body. You will learn that the pain of inflammation is evidence of a healing process in action. You will learn how to help your body complete the healing process rather than taking drugs.

The greatest doctor of all lives within your body. When you are sick the doctor inside tells you what you need to do to regain your health. Once you learn how to listen you will be on the path to feeling better than you ever dreamed possible.

WHAT IS HEALTH?

We all want to be healthy but do we know what health is? Usually the answer is no. There are few classes on health in colleges and almost none in medical schools. Most people do not know how to define health.

Health is more than just feeling good. If you feel good one day and then are sick the next, you were not truly healthy when you felt good. It takes a long time to go from being healthy to having the symptoms of illness.

Dorland's Medical Dictionary says that health is "a state of optimal physical, mental, and social well-being, and not merely the absence of disease and infirmity." Clearly, feeling good is not the same as being healthy.

Our society suffers from a tragic lack of knowledge about health but we have great expertise about disease. Scientists have categorized and described diseases, studied the microscopic changes found in diseases, and researched cures for the symptoms of diseases. Yet we are literally dying from lack of knowledge about health.

But not everyone in our society is ignorant about health. A true health revolution began in the United States in the mid-1800s and continues to this day. Doctors of all types are involved. Instead of curing disease these doctors work to build health so that the body can have the vigor to heal itself. One of the greatest doctors of this health revolution was Herbert Shelton.

Dr. Shelton defines health as “the correct condition and action of all the vital powers and properties of the living body, and this necessitates the proper development and vigorous function of all the organs and tissues of the body and a close adherence to the laws and requirements of life. It is the normal or natural state of all organic existence and is always found where the laws and conditions of life are observed."

Dr. Shelton further states that "the universal tendency of all organic existence, animal or vegetable, is towards health. Every organ and tissue in the living body is striving ceaselessly to maintain itself in as ideal state as possible. To this there is no known exception. Life strives always toward perfection. It is as natural to be healthy as it is to be born."

"If the laws of life are complied with-if the conditions of healthy life are present-there is no power known to man which can prevent him from manifesting superb health. If these conditions are not present, the body must manifest as much health as the conditions present will permit. If health is already impaired, and the laws and conditions of healthy life are complied with, there is nothing that will prevent the living organism from returning to normal health, unless the destruction of vital parts or exhaustion of vital power have progressed beyond the body's power of repair and recuperation."

So health is the normal condition of life when one carefully fulfills the requirements of life. Health is a state of optimal physical and mental functioning and not merely the absence of symptoms.

How do you know if you are healthy? Many people will say that feeling good is proof of good health but this can be a dangerous error. Mayor Richard Daley of Chicago felt robust and vigorous at the time of a thorough physical examination in 1976. Doctors checked his height and weight, blood pressure and pulse, listened to his heart, lungs, and abdomen, looked at his eyes, ears, nose, and throat, performed extensive analysis of blood and urine, and checked the heart with an electrocardiogram.

After the test results were studied, Mayor Daley was given a "clean bill of health" which was no surprise to him since he felt great. The big surprise came just one week later when he dropped dead of a massive heart attack! Is it possible that he could have gone from good health to a fatal heart disease in one week? No. Mayor Daley was in terrible health when he had his complete examination but there were no symptoms at that time. Heart disease develops for years before a fatal heart attack occurs.

Examining someone for evidence of disease is not a reliable way to determine if the person is in good health. A complete analysis of lifestyle habits is also required. If the exam turns up no apparent problems but the history finds a diet of mainly high fat meat and soda pop, good health does not exist.

When people say they are feeling fine but they never exercise sufficiently, get enough rest or relaxation, you can be sure that good health does not exist.

Because of confusion over the meaning of health, most people believe that they restore health when they suppress symptoms of disease, that aspirin cures a headache, laxatives cures constipation, and anti-inflammatory drugs cure arthritis. Yet these drugs cure disease about as well as turning off a fire alarm cures a fire! The symptom is not the disease. Relief of symptoms is not the same as restoration of health.

Most people take better care of their automobiles than of their own bodies. No one waits until the car breaks down to get a tune-up. After 12,000 miles the car gets a tune up even if it is running as smooth as silk. But most people do little to enhance health until there is a breakdown. Take steps to safeguard your health even when you are feeling good. When you are ill you must help your body heal itself (extinguish the fire) and not just hide the symptoms (turn off the fire alarm).

We are alarmed about the rate of cancer, heart disease, diabetes, stroke, arthritis, asthma and other chronic diseases, together with acute diseases such as the common cold, flu, bronchitis, pneumonia and sinusitis. We have a long way to go before we can say that we live in a land of healthy people.

Fortunately our society is moving in a healthward direction. People are trying to eat more healthfully, exercise more often and reduce their stress. Many have learned that *good health is a matter of choice, not chance*. We can each choose to live more healthfully and thereby become more healthy. Good health results from healthful living, not symptomatic cures. You can learn to build health in the true meaning of the word. Read on and learn how to unleash your body's healing power.

HEALTH PHILOSOPHY

What is health philosophy? Webster's Dictionary says health philosophy is a study of the general principles and laws which underlie all knowledge and reality of health. If you want to build and maintain health then you must have a clear understanding of health philosophy.

It is not sufficient to have a working knowledge of healthful lifestyles. You need to understand the basic health principles or your commitment to healthful living practices may falter at a time of crisis. A clear health philosophy is the strong foundation we need to build a sturdy structure of health.

Must health philosophy be so complicated that only doctors can understand it? Absolutely not. The average person can easily understand the basics. Common sense is all that is needed. College education is totally unnecessary.

Some people do not want to be mentally involved with their health. They prefer to go about life without thinking about the requirements of health or the causes of disease. If a symptom such as pain suddenly appears, they go to a doctor who will “cure” them with little discussion. They do not want to know the cause of the pain, the nature of the problem which caused the pain, the way the alleged cure will solve the problem, or what steps must be taken in the future to prevent a recurrence. They want a doctor who will make all the decisions.

But the type of person just described is becoming rare. Most people want to know what is going on when sickness appears. They want to know how the problem was caused, what is going wrong inside the body, how they can recover good health and prevent a recurrence. Such people will not tolerate the type of doctor who gets angry when asked too many questions. Many people will fire a doctor says "if you want to know so much, go to medical school!"

Every person has a fundamental need to understand the requirements of health and the causes of illness. Never settle for less than a clear understanding of these issues. You must understand the basics of health philosophy If you truly desire to take control of your health and become as full of vitality and vigor as possible.

Rule number one: *The foundation of health philosophy, is that healing is a process accomplished by the body and only by the body.* We live in a world of supposed cures. One pill will cure headache, another an upset stomach. One will cure a skin disease, another a sore throat. But external substances cannot exert curative actions on the body. Drugs are lifeless and therefore cannot act. When such substances are taken the body acts on them. In our confusion, we usually say that the drug acted on the body and that the body reacted. But this is impossible: a lifeless drug cannot act. Only a living being can act. When you take a drug, the body will act on the drug. One of two things will happen when a drug is ingested: the body will either speed up or slow down the pace of a normal activity. When either of these two changes takes place, a sick person will feel different. But this does not mean that the health condition has been cured. All that results is a change in symptoms and not a resolution of the cause of the symptoms.

Body actions that make up the process of true healing are completely different from the body actions that follow the ingestion of a drug. Health problems cannot be cured by swallowing foreign chemicals. The body is the only source of healing. When an illness develops the body will automatically and spontaneously takes steps to heal itself. Though you may feel better when you take drugs, your health has not really improved.

Let's consider some examples. It is common for a person suffering from constipation to take a laxative. The laxative is a powerful chemical irritant, so irritating that when it finds its way into the intestine the body will feel insulted and will vigorously eliminate the irritant along with all the contents of the intestinal contents. Would it be accurate to say that the laxative cured the constipation? No. The constipation developed because the intestine had been overworked and exhausted. The laxative did not make the intestine stronger or healthier in any way. In fact, since the chemical irritation of the laxative provoked the exhausted intestine to work very hard, the problem of constipation will be more severe following the use of the laxative. The intestine will ultimately be weaker, not stronger.

Patients with heart failure often take digitalis. After the patient swallows this drug, the heart will suddenly begin to beat with greater strength. Is the heart failure cured? No. The heart had failed due to exhaustion and digitalis cannot recharge the heart. Imagine a farmer using a horse to plow his field. At the end of the day the horse is exhausted and lies down in the field. The farmer wants to finish the plowing, so he whips his horse into action. The horse gets up and finishes the task of plowing.

Did the whipping strengthen the horse? It may seem so since the job did get finished. But no whip can strengthen a horse. More work may get done by using a whip, but the exhausted horse will only get more exhausted and weak. Months and years of such treatment will reduce the overall amount of work which the horse will be able to accomplish.

Giving digitalis for a weak heart is the same as whipping a tired horse in the field. The whip does not strengthen the horse nor does the digitalis strengthen the heart.

What if a person has a headache and takes an aspirin? The pain will disappear, but was the problem cured? No. The pain arose from a troubled area of the body much like a warning light comes on in a car if the oil level is too low. The aspirin only removed the awareness of the problem, not the problem itself. No one would disconnect the oil warning light instead of adding oil when the alert light went on yet some people do this every day with their headaches.

Earlier I noted that the use of drugs can only result in an increase or decrease of the pace of normal body actions. Laxatives and digitalis result in an increase in intestinal and heart activity, respectively. Aspirin results in a decrease in the function of the nerves which convey the message of pain from a troubled area of the body to the center in the brain which registers pain. The use of each of these drugs will make a person feel better. But, such drug use will not produce even one tiny bit of real healing.

Pneumonia and other infections may seem to be exceptions to the rule that drugs do not cure diseases. However, upon deeper analysis, we find that the rule holds true. Antibiotics will destroy the bacteria involved with the infection, but they will not cure the cause of infection which is lowered body resistance. Infections sometimes are so severe that antibiotics are needed but these drugs do not improve resistance to infections and, therefore, are not true cures. Only the body itself can increase health and resistance to the point where infections stop occurring.

If you want to achieve good health, you should work to support your body's healing processes instead of looking for cures. Provide your body with the normal raw materials of life and do not obstruct the healing process. Eat healthy food in the right amounts, exercise regularly, get plenty of rest, avoid excessive stress, drink pure water and breathe pure air, and expose your body to natural sunlight for appropriate periods of time.

Unlimited good health is a product of healthful living, not cures. Though healthful living of itself cures nothing, it unleashes the body's healing powers which can do more than all the doctors in the world combined together.

Rule number two: *The body always acts in its own best interests.* When a person becomes acutely ill, many uncomfortable and distressing symptoms develop: vomiting, coughing, fever, sneezing, diarrhea, pain, muscle tension, etc. These symptoms arise from vigorous expression of the healing power. The body eliminates waste material from the intestines or lungs because the brain determined that health would be improved by some vigorous spring cleaning. Attempting to suppress such symptoms with drugs makes one sicker, not healthier. There are rare exceptions, such as pneumonia, but this rule holds true 99% of the time.

Rule number three: *The short term effect is opposite to the long term effect.* A cup of coffee appears to give you more energy but the long term effect is more fatigue. Coffee does not give the body any energy, rather it causes a massive release of stored energy which leaves the body further depleted.

This rule has been called the law of stimulation. Apparent stimulants actually weaken the body. Laxatives weaken an exhausted intestine, and digitalis weakens a worn out heart. The short term effect of greater intestinal and heart activity leads to the long term effect of increased weakness and exhaustion. No external substance can give energy to the body. The energy

surge following the use of coffee, laxatives, and digitalis comes from the body, not from the drug. Foods are not drugs and so do not stimulate the body. Food provides the body with raw materials from which the body can create energy.

The flu is another example of the short term effect being the opposite of the long term effect. One feels terrible while the lungs and sinuses discharge large amounts of waste material. The intestines may eject material from both ends with vomiting and diarrhea. The short term feeling is one of severe illness. Yet the long term effect is better health. The flu is a time of vigorous elimination of waste material. When the body harbors less of the waste material that had accumulated for months, overall health level will improve.

Rule number four: *Drugs and surgery should only be used as a last resorts.* Drugs are powerful chemicals all of which have many negative side effects. One hundred changes in body function may follow the use of a drug but only one may be desirable. The ninety-nine unwanted changes are the side effects.

Because of the side effects, a healthy person who takes a drug will inevitably get sick because of the side effects. Yet some expect that the same drug will only produce health in a sick person. This is impossible. Drugs do not build health; they suppress symptoms at great cost. Turning off the fire alarm (the symptom) with a drug will not extinguish the fire (the cause of the symptom). Drugs can save lives in some cases, but there is more harm than good 90% of the time drugs are given.

These are the basics of health philosophy. Those who do not understand them remain confused with no direction and poor health. But you can learn about health philosophy, take control of your health, and feel much better than you ever imagined possible.

TOXEMIA

Toxin or poison overload, called “toxemia," is an age-old concept that you must understand to protect your health. Many health problems come from toxemia.

Toxemia results from accumulation in the body of chemicals which are toxic in any amount, or chemicals which are not toxic in normal amounts but become toxic when they are present in excessive amounts. Toxic chemicals inflict damage on the body.

Chemicals which are toxic when present in any amount include arsenic, lead, lye, mercury, asbestos, botulism poison, etc. These chemicals will cause severe illness. Lead poisoning from eating paint chips, for example, causes severe brain damage.

Chemicals which are not toxic when present in normal amounts but which become toxic when present in excessive amounts may cause severe illness. To understand this picture the body as a funnel with food being poured into the larger opening. There are only three things the body can do with the food: burn it for energy, use it for building blocks, or eliminate it via the intestines, kidneys, lungs, skin and other routes. But, as represented by the smaller end of the funnel, the body has only a limited capacity to process foods.

The body makes hundreds of changes to the food between the top and the bottom of the funnel. Chemical A is converted to chemical B which is converted into chemical C, then D, then E, etc. When you eat too much the funnel gets overloaded causing a backup. The result is a great increase in the amounts of all body chemicals (A, B, C, D E, etc.) known as “intermediary metabolites” (IM’s) Many of these chemicals are known to be toxic when present in excessive amounts, and they frequently cause illness.

For example, it is well known that IM’s accelerate the aging process by causing the development of cross linkages between protein molecules. Cross linkages cause joint stiffness, wrinkling and overall deterioration of the body.

Biochemists are very familiar with some of the most common IM’s such as pyruvic acid, malic acid, fumaric acid, and alpha ketoglutaric acid. These chemicals are known to be disease producing when present in excessive amounts. Eating more food than your body can handle causes a buildup of such chemicals which results in damage to the body.

Hundreds of scientific studies have shown that eating a relatively small amount of food will delay aging. This is because the body is able to completely process all of the food when less is eaten so there is no buildup of the IM’s which speed up the aging process.

There are many other normal body chemicals which cause disease when present in excessive amounts. Cholesterol is one of the most famous. It is needed to form chemicals to assist digestion and absorption of fats, manufacture many hormones which regulate body function, and construct the membranes which enclose all body cells. Dietary sources of cholesterol are meats, dairy products, and eggs. If excessive amounts of these foods are eaten the blood cholesterol level will soar and the risk of a heart attack or stroke will increase.

Triglycerides are the fats in food and in the bloodstream. They are an important source of energy for the body. Triglycerides come from the saturated fats in animal foods, the unsaturated fats in vegetable foods and from sugars and starches via conversion in the liver. An elevated triglyceride level makes the blood cells become sticky and clump together. This reduces blood flow and can cause a heart attack, stroke or other serious problem.

Uric acid is another chemical which is normally present in the bloodstream. It comes from eating meats, drinking alcohol, breakdown of body tissue and production within the body. High levels of uric acid in the bloodstream will cause a serious form of arthritis called gout.

Glucose is blood sugar. It comes from the breakdown of starch and sugar, or conversion from fat and protein. An elevated level of glucose causes a corresponding increase in the level of insulin. The result is damage to the blood vessels, nervous system, muscles and eyes. This damage can cause a heart attack, stroke, numbness, weakness, impotence, cataract and blindness.

Homocysteine is a chemical that comes from the breakdown of protein. The walls of blood vessels will become

irritated If blood levels of homocysteine become too high from eating too much protein. Such irritation leads to the buildup of fat deposits which can cause a heart attack or stroke.

There is no question that you must understand toxemia to protect and improve your health. The concept of toxemia was developed in the early 20th century by John H. Tilden, M.D. He stated that stress from daily habits or from the environment will excessively strain the body. This strain will affect both the mind and the body and lead to overall exhaustion which Tilden called enervation. When enervation develops, the body becomes too weak to efficiently eliminate toxins of any type through the liver, lungs, intestines, kidneys, or skin.

Inefficient elimination leads to retention of toxins. Toxemia develops when there is an excessive accumulation of normal or abnormal chemicals.

A continual rise in toxin levels will inevitably exceed the body's level of tolerance. The body will attempt to eliminate the toxins when the point of intolerance is reached. Symptoms of elimination include sneezing, coughing, vomiting, diarrhea, skin secretions and dark urine. These symptoms are evidence of a health building process and should be welcomed as evidence of vigorous healing.

The body may not have the strength to do an effective job of cleansing and elimination if it has been overwhelmed for years with toxins. Chronic illnesses develop when toxins are present for a long time. One common example is heart disease from a buildup of cholesterol.

Advanced toxemia will irritate all areas of the body. Some parts of the body are weaker than other parts because of heredity or previous health problems. The weaker parts will show signs of disease first. The same toxins may cause a lung problem in one person but a kidney problem in another.

Dr. Tilden discovered many causes of enervation and toxemia. Nutritional causes include overeating, eating the wrong foods, vitamin and mineral deficiencies, use of coffee, tea or alcohol. Emotional causes include worry, jealousy, rage and fear. Miscellaneous causes include toxins produced by bacteria, an unfriendly environment, injuries, postural tension, physical defects, physical excesses and the unpoised state.

The solution for toxemia is to support the body as it attempts to solve the problem. The body does not need to be actively cleansed by laxatives, enemas or similar measures since it is fully capable of cleansing itself. We should stop fighting the body when it tries to eliminate toxins through coughing, diarrhea and other means of elimination. Taking drugs to stop the mucous flow of a cold or to stop diarrhea will stop the necessary and health building elimination of toxins from the body.

The only time to take drugs is the rare occasion when the intensity of the elimination process itself becomes life threatening. For example, a child with severe diarrhea lasting for more than two days can become dehydrated and die without drugs. An elderly patient with a severe cough from pneumonia could also die without drugs. But, these are the rare exceptions to the general rule that it is safe to weather the storm of an elimination crisis without taking drugs. It is best to have a knowledgeable doctor supervising your care.

When the body is permitted to complete the elimination then the toxins will be flushed from the body. Great health simply springs forward when the burden of toxemia is lifted.

INFLAMMATION

Arthritis, gastritis, sinusitis and bronchitis are diseases of different body regions. Yet they are more alike than different since all are inflammatory conditions. Any disease name which ends in "itis" is an inflammation.

Whether it is found in the joints or the throat or elsewhere, inflammation has the same purpose and result. The list of inflammatory diseases is quite long since this process can occur in any area of the body. Naming the condition requires using the name of the tissue and adding "-itis" to the end. "Arth" means joint, so arthritis is inflammation of a joint. "Gastric" means stomach, so gastritis is inflammation of the stomach.

From the way in which inflammatory conditions are named, it would seem that they are all different diseases. For instance, bronchitis is obviously not identical to tonsillitis. But, since the basic process which occurs in the tissue is identical wherever it is found, conditions of inflammation are the same throughout the body. The causes are the same, the mechanics are the same, and the results are the same. When you understand the nature of inflammation in a joint, you understand the nature of inflammation in the intestine, pancreas, brain, or wherever it occurs.

What is inflammation? Robbins' *Pathologic Basis of Disease*, a top medical textbook, says that inflammation is the local reaction of tissue to injury. Inflammation has been understood for centuries. In 1793, a Scottish surgeon wrote what is now considered obvious: inflammation is not a disease but a response by the body that has a health-building effect.

Robbins' says that inflammation "serves to destroy, dilute, or wall-off the injurious agent and the tissue cells that it may have destroyed. In turn, the inflammatory response sets into motion a complex series of events which, as far as possible, heal and reconstitute the damaged tissue. . . Without inflammation, bacterial infections would go unchecked, wounds would never heal, and injured tissues and organs might remain permanent festering defects."

Inflammation is, therefore, a healing activity which is initiated by the body when the need presents. For example, consider the case of a splinter that becomes lodged in the skin. The splinter is clearly an injurious agent. Nerves to the skin register the presence of the splinter and alert the brain. As a result, the brain activates the inflammatory process to destroy the splinter. Blood will be rushed to the area to provide white blood cells which release chemicals to digest the splinter. The extra blood causes the skin to become reddened and swollen. The area will feel hot and painful. Within a few hours or days, the splinter will be dissolved.

Inflammation can only arise when there is a need for it in the form of some agent which is harmful to the body. The activities of inflammation are basically the same wherever they occur. The characteristics which distinguish inflammation in one area of the body from the same process in a different area result from the nature of the involved tissue, and the degree of intensity of the inflammation.

It is clear that inflammation is a health-building process, initiated only when the brain perceives a need for such action. Since inflammatory diseases are commonplace, it is crucial to understand the basic nature of inflammation and to follow a rational path to resolution of the problem. With a splinter, we should first attempt removal with sterile tweezers and needle. If the splinter is too deep, we should let the body destroy it from within by the actions of inflammation.

Most of the inflammatory conditions are internal. Since we cannot remove irritants from joints with tweezers, we must depend upon the effectiveness of the inflammatory process.

Inside the body, the injurious agent which the body tries to destroy with inflammation is usually a chemical toxin. Toxemia, the presence of irritating toxins in the body, is extremely common (see chapter on toxemia). Toxins are found in the bloodstream, in the tissue spaces between cells, and within cells. When the body becomes excessively irritated by the toxins, it will turn on the inflammatory process.

The best way to deal with an inflammatory disease is to help it along. Since inflammation is the body's chosen form of treatment for toxemia, we do not need to attempt to treat toxemia with any other methods. The best course to follow is

one of complete rest. With proper rest, we do nothing which interferes with the inflammatory process.

Complete rest involves resting the digestive system by eating a minimal amount of food and/or fasting, resting the body by staying home from work and not exercising, and resting the mind by not worrying and fretting. When we eat less, the body will live on non-essential substances within the system. The first to be burned for energy will be the accumulated toxins. Most of the toxins are normal body chemicals which, because they are present in excessive amounts, have a toxic effect. Conserving energy by resting the body and mind allows the body to direct all available energies to the healing process.

In actual practice, these measures are quite effective. Arthritis, bronchitis, sinusitis, colitis, gastritis, myositis and many other inflammatory conditions resolve rapidly under the "complete rest" system of management. The chances of success, and the degree of safety, are greatly increased when one is supervised by a doctor familiar with these methods.

How do most doctors deal with inflammatory diseases such as arthritis and gastritis? Based on the fact that inflammation is a health-building process, you might assume that no doctor would ever try to halt this healing activity. But, unfortunately, you would be wrong. An incredible misunderstanding has developed: many doctors believe that the inflammation, not the cause of the inflammation, is the problem. Therefore, an attack is made on the inflammatory process, not on the injurious agent which caused the inflammation.

Why the attack on inflammation? Because the symptoms of inflammation can be alarming. There can be a disturbing amount of pain, swelling, redness, heat, and disability associated with inflammation.

Unfortunately, the symptoms of inflammation are often regarded as the disease. The pain of inflammation, therefore, is treated as if it were the disease, instead of evidence of the body's effort to destroy the disease-producing agent.

This is the rationale behind modern treatment of inflammatory diseases. Tons of anti-inflammatory drugs are swallowed by sick people every day. Examples of such drugs are cortisone, aspirin, Naprosyn, and Motrin. There are many others, with new ones appearing on the market every year.

Doctors mistakenly believe that the pain is the disease, not the symptom of disease, so when the pain is gone the disease is thought to be cured. But stopping the inflammatory process is no more sensible than turning off a fire alarm instead of extinguishing the fire.

When the body becomes excessively loaded with toxins, the brain will initiate a series of measures to expel and destroy toxins. Sneezing, coughing, diarrhea, vomiting and a runny nose are all forms of elimination. The inflammatory process is designed to destroy toxins within the body. Such healing activities should not be suppressed with drugs. Rather, they should be supported with proper lifestyle changes.

When inflammation is stopped by improper treatment, the toxins which the body was trying to eliminate will remain locked up in the bloodstream and tissues. The chronic toxemia which results will cause diseases which can be quite severe such as disabling arthritis and life-threatening heart disease.

We should respect the inherent wisdom of inflammation and not attempt to halt this process except in extreme cases. Rarely, an inflammation will cause more harm than good and it is beneficial to suppress this process with drugs. In the other 95% of cases of inflammatory diseases, the body, if properly supported, will complete the healing inflammatory activity it initiated and restore the organ or tissue to good health.

If you learn to cooperate with your body when it is trying to heal itself, you will develop a higher level of health than you have ever imagined possible. Find a doctor who understands that inflammation is good for you, and follow the path to true health.

PROGRESSION OF DISEASE AND PATHOLOGY

The medical term for body changes caused by disease is “pathology,” defined by *Dorland's Medical Dictionary* as the "structural and functional changes in tissues and organs of the body which cause or are caused by disease." A pathological condition of the body occurs when the body or one of its parts is not functioning normally and healthfully.

In the last two chapters we discussed toxemia and inflammation. The purpose of this chapter is to connect toxemia with inflammation and discuss a model of disease which explains how one phase of pathology progresses to another phase.

In the chapter on toxemia we explored the concept of enervation. Enervation is a state of overall body fatigue and exhaustion. When the body is enervated, it cannot perform its functions to the normal degree. Enervation is caused by overeating, eating the wrong foods, excessive stress, too little exercise, insufficient rest, etc.

The result of enervation is toxemia. If the causes of enervation are not halted, toxemia will develop. When the body is fatigued, it will do an incomplete job of removing toxins. Therefore, the toxins will accumulate. The pathological condition of enervation has progressed to the pathological condition of toxemia.

When toxemia is present toxic chemicals will irritate body tissues. Toxins accumulate in all areas of the body, including the bloodstream which bathes every body tissue. Each of us has certain areas in the body which are weaker than other areas. Usually this is determined by inheritance: if your parents have heart trouble, you will probably have a tendency to develop heart problems; if your parents have sinus trouble, you will probably have relatively sensitive sinuses; if your parents have stomach problems, you will probably have a stomach which is easy to irritate.

Persistent toxemia will progress to the stage of irritation. When body tissues are chronically exposed to toxins, they will become irritated.

When irritation is present for a prolonged period of time, the body will initiate a healing effort to destroy the toxins which are responsible for the irritation. This healing effort is called inflammation. The body will rush white blood cells to the area of irritated tissue and these cells will release powerful enzymes to destroy the irritating toxins. Inflammation is a healthful activity.

Sometimes the body cannot do the job solely with inflammation as its main healing activity. If the inflammatory process cannot do the complete job of toxin destruction, the body will initiate other activities to help. We call these activities "vicarious elimination."

Acts of vicarious elimination include vomiting, sneezing, diarrhea, coughing, discharge of mucous from the nose, and excretions of waste by the skin. We tend to look at these activities as destructive actions which must be suppressed by nose sprays, cough syrups, and other drugs. But these actions are initiated by the body to eliminate harmful toxins. The liver filters toxins out of the blood, and then it discharges these toxins through the bile ducts into the upper small intestine. If these toxins are sent "downstream", they will pass through and bathe the tissues of approximately 35 feet of intestine. The body may choose, therefore, to spare this large area of intestine from irritation and send the toxins "upstream" a few inches into the stomach. The body will then discharge these chemicals with vomiting.

When vomiting occurs, it is because the body wishes to eliminate toxins which are present in the stomach and upper small intestine. The same is true with the other activities of vicarious elimination. When coughing occurs, the lungs are trying to cleanse themselves. When diarrhea occurs, the intestines are trying to unload waste materials.

Unfortunately, the symptoms of healing and cleansing are usually regarded as the disease itself. The pain of inflammation, the discomfort of vomiting and diarrhea, the irritation of coughing, the nuisance of a runny nose, these and all other symptoms of healing are often suppressed with drugs. Such suppression prevents the body from cleansing itself of irritating toxins. When the toxins remain in the body for a prolonged

period of time, the pathological state of vicarious elimination will progress to the pathological state of ulceration.

Prior to the onset of ulceration, very few body tissues have been destroyed. Irritation, inflammation, and vicarious elimination do not involve any significant tissue destruction. But when irritating toxins are present for too long a period of time, tissue destruction will occur. Such tissue destruction is called ulceration.

With significant ulceration, the body will be unable to build enough new cells to replace the ones which have been destroyed. To fill in where cells have been destroyed, the body will produce scar tissue. An example is cirrhosis of the liver which occurs after large-scale liver destruction by alcohol. The pathological condition of ulceration has progressed to the pathological condition of scar tissue, also called fibrosis or induration.

Up to this point, there has been a tremendous progression of pathology. The initial stage of enervation which can usually be corrected by simple dietary changes and extra rest has progressed to the stage of fibrosis where body tissues have been destroyed and cannot be replaced. If the causes of disease are not halted at this point, the pathology may progress to the final stage of cancer. Chronic irritation by toxins may finally disrupt normal cells so much that they will go "haywire" and become cancerous.

The eight stages of pathology described above are a hypothetical explanation of how disease is produced in the body. There may be cases where this explanation does not apply. However, in most cases it will apply, and it is extremely useful in understanding how the body works.

Let's consider an example. Alcohol is a toxin to the body. A person who drinks excessively will weaken his body, thereby producing the state of enervation.

Because alcohol is a powerful toxin, its presence in the body will produce the pathological condition of toxemia. If such toxemia persists, the stage of irritation will result.

Imagine the lining of the stomach being exposed to the toxic impact of alcohol. Severe irritation will commonly result. If the irritation persists, the body will attempt to protect itself with inflammation.

The process of inflammation is initiated by the body to destroy the toxic chemical alcohol. The stomach lining will become reddened as the body rushes more blood and defensive white blood cells to the area. The inflammatory process is quite painful so the person who drank too much alcohol will be aware of what he has done to himself.

If the inflammatory process cannot complete the cleansing by itself, the body will initiate the process of vicarious elimination. In the stomach, this will take the form of vomiting. Anyone who has had too much to drink has experienced the displeasure of vomiting when the stomach attempts to free itself of irritating toxins.

If the stomach is not able to protect itself from the toxin alcohol through the processes of inflammation and vicarious elimination, stomach cells will be destroyed. This is the pathological stage of ulceration. A stomach ulcer can be caused by excessive drinking.

When healing of a stomach ulcer occurs, scar tissue is usually formed. The stomach cannot completely heal an ulcer with normal stomach cells. Scar tissue is used, constituting the stage of fibrosis.

If the irritation of the stomach continues past this point, severe derangement of stomach cells can occur. As a result, cancer cells may form. Cancer is the final and irreversible stage of pathology.

The theme of this book is that most diseases are the direct result of unhealthful lifestyle practices. Such practices first result in enervation. If they are continued, the pathology will progress from enervation to toxemia, then to irritation, then inflammation, vicarious elimination, ulceration, fibrosis, and finally, cancer. Certainly there are exceptions to this concept of the progression of pathology but, in most cases, disease can be best understood utilizing this model. If you always remember the steps of this progression you will have a much more profound understanding of the causes and solutions of health problems.

HEART DISEASE AND STROKES

Cardiovascular diseases, primarily heart attacks and strokes, are responsible for more deaths in the U.S. than any other illnesses including cancer. The underlying cause of cardiovascular diseases is atherosclerosis, the buildup of fat in blood vessels. This buildup blocks the blood flow to the heart and brain which starves these vital tissues of oxygen and causes cells to die. A heart attack occurs when heart muscle cells die, and a stroke occurs when brain cells die.

Where does the fat come from that blocks the blood vessels? In the 1980s, this question has been conclusively answered. Atherosclerosis comes primarily from eating the wrong foods, especially high cholesterol foods.

In 1977, the National Institutes of Health (NIH) began a program of "consensus development." When there is a pressing issue at hand, the NIH will gather together a group of about a dozen experts who will analyze all the facts at hand and come to a group conclusion, or "consensus."

In 1984, the NIH held a consensus development conference to discuss the relationship of high cholesterol foods to a high blood cholesterol level, and the effect of a high blood cholesterol level on the risk of cardiovascular disease. The group of experts concluded that a diet high in saturated fat and cholesterol will raise the blood cholesterol level. Also, an elevated blood cholesterol level will increase the risk of heart attacks and strokes.

The NIH experts strongly feel that all Americans should reduce their intake of saturated fat and cholesterol, and that people at a high risk of developing cardiovascular disease should make drastic dietary changes. The foods which should be eaten in far smaller quantities than is usual in the U.S. are meat, eggs, and dairy products.

Incredibly, despite the weight of evidence to the contrary, there are still some who claim that a high fat diet does not cause fat deposits in blood vessels and cardiovascular diseases. They will advise you to eat all the eggs and cheese you want without worrying about your heart. This advice is, however, totally irresponsible in light of the fact that scientists have definitely proved the connection between a high fat diet and heart disease. I suggest you follow the position advocated by 99.9% of all scientists, not the thinking of the 0.1% minority.

How common is atherosclerosis? Since it kills over 550,000 Americans each year, it must be quite common. In reading medical literature, I was startled to find out that atherosclerosis is quite frequently found, even in young people. For instance, in the Korean War, autopsies were performed on 300 servicemen who died in action, average age 22. Significant amounts of fatty deposits were found in the blood vessels of over 77% of these young soldiers.

From this, we can assume that the average American has potentially dangerous amounts of fat buildup in his blood vessels from a very early age onward.

Scientific evidence has proven that meat, eggs, and dairy products, due to their high saturated fat and cholesterol content, are the main culprits in heart disease. But scientists have also found that more fat will be deposited in blood vessels if the walls of the blood vessels have previously been irritated or injured.

One of the most common causes of such irritation is a high protein diet. Americans are known to eat 3 times more protein than they need (see chapter on protein). A diet excessively high in protein will increase the level of homocystine in the bloodstream which will irritate the walls of blood vessels, causing fat to be deposited. Therefore, a high protein diet must also be avoided.

Many people, by changing their diets, will be able to avoid fat accumulation in blood vessels. But what can be done if the fat deposits are already present? Will coronary bypass surgery be needed to remove the clogged blood vessels and install new ones? In most cases, the answer is no because the body has a tremendous capability to remove the fat deposits which have been formed.

In the past, scientists thought that the cholesterol in the fat deposits could never be removed. Recently, however, studies have proven that the cholesterol is mobile and will frequently move out of and into the deposits. Researchers have marked this cholesterol in order to monitor its movements.

The usual sources of blood cholesterol are the diet and production by the liver. When a person fasts and drinks only water, these sources contribute no cholesterol to the body. Nonetheless, the cholesterol level in the blood will rise. Where does the increase come from? Scientists have concluded that it comes from breakdown of deposits in blood vessels.

During World War II, when fatty foods were in short supply in Europe, the death rate from cardiovascular diseases went down. At autopsy, people who died had far less fat deposits in their blood vessels than expected. Researchers believe that the wartime low fat diet gave the body a chance to dissolve the fat deposits.

Autopsies on people who have died of "wasting" diseases such as cancer have also found far fewer deposits of fat than expected. Cancer patients are usually of normal weight or overweight before they lose many pounds in the months before death. With the weight loss, the body breaks down many of the fat deposits in blood vessels.

In experiments with monkeys, the type of animal most similar to man, it has been proven that a high fat, high cholesterol diet will cause a buildup of fat in blood vessels. If the diet is then changed to one low in fat and cholesterol, the fat deposits will be broken down and eliminated.

Therefore, we can conclude that it is scientifically proven that the body can break down fat deposits in blood vessels when given a chance. To accomplish this, you need to eat less high fat foods such as meat, eggs, cheese, milk, butter, mayonnaise, shortening, etc. Eat 3-4 times more of the low fat foods such as fruits, vegetables, and grains (rice, bread, oats, etc.) Consider fasting, but only under supervision by an experienced doctor.

As is the case with all health problems, diet is not everything. Exercising sufficiently and reducing stress will also decrease the risk of cardiovascular diseases.

In England, researchers studied 16,882 male middle-aged executives. They found that the men who exercised vigorously on a regular basis had one-third the risk of heart disease of the men who did not exercise. In another study, it was found that men who ran the most miles had the healthiest blood cholesterol levels. The speed was not as important as the distance run.

Many scientists have found that a high stress lifestyle will increase the risk of cardiovascular diseases. "Type A" people who are more aggressive, hard-working, achievement-oriented, time-conscious, impatient, and irritable usually have a higher risk of heart attack than "Type B" people who are better able to relax.

Heart attacks and strokes kill more Americans than any other diseases. Yet they can be prevented with a healthful diet, regular exercise, and sufficient relaxation. When fat deposits have already developed, the body can eliminate them if a healthful diet is used. Treat your heart right and it will give you a full lifetime of vigorous, consistent service.

HIGH BLOOD PRESSURE

The TV ad says: "High blood pressure afflicts millions of people. Don't assume that your blood pressure is normal. High blood pressure has no symptoms; it is a silent killer. If your pressure is high, you may not know it until a devastating heart attack, stroke, or kidney disease strikes. See your doctor regularly to have your blood pressure checked. And, if it is high, follow your doctor's recommendations and take your drugs religiously."

High blood pressure is extremely common. It is also dangerous. Even mildly high pressure increases the chance of a stroke, heart attack, and kidney disease. 140/90 is considered the upper limit of normal blood pressure. Yet the Insurance Company 1979 Build and Blood Pressure Study found that when the first number in the blood pressure equation is between 138 and 147, the risk of death from strokes, heart attacks and kidney failure is 36% higher in men and 22% higher in women than when the reading is lower. When the second number is between 88 and 92, the risk of death is 38% higher in men and 33% higher in women. Therefore, we should not feel safe with a blood pressure reading of 140/90, the upper limit of so-called normal. If the reading is higher than 140/90, the danger is even greater.

Drugs are the common remedy for high blood pressure. Just take the drugs the rest of your life and you'll be fine. Sounds simple, doesn't it? Yes, except for one fact: all blood pressure medications have serious side effects ranging from cancer (Reserpine) to anemia and jaundice (Diuril) to heart failure and mental depression and nausea (Inderal). What a choice people are given! Choose between these side effects and a stroke.

Fortunately, however, you need not be caught between a rock and a hard place. There are many solutions for high blood pressure besides drugs.

Ninety percent of all people with high blood pressure have what is called the "essential" type. This basically means that the cause is not known. Kidney disease has been ruled out. It is the essential type of high blood pressure that responds well to non-medical remedies. At least 16% of all Americans between the ages of 18 and 79 have essential high blood pressure. And, in older age groups, the incidence is 40%.

Many lifestyle changes will result in lower blood pressure. For instance, one medical doctor fasted 683 overweight people and reported his results in a scientific journal. At the start of the fast (water diet), 48% had high blood pressure. Yet, within 2 to 4 days, it was "rare for the blood pressure not to be normal." Occasional fasting, then, is an excellent way to control blood pressure. It is safe if done under careful supervision. But don't just drop your medication and fast at home. If a proper diet is eaten after a fast, the blood pressure will remain lower.

What other lifestyle changes will lower blood pressure? First, salt must be eliminated from the diet. This includes salt added at the table, plus hidden salt found in most processed foods (cheese, butter, bread, pastries, etc.). Eat large amounts of high potassium foods (fruits and vegetables). This will help neutralize the harmful effects of sodium.

Second, eat fewer calories and reduce to thin weight. It has been estimated that if obesity were controlled in the white population of the U.S., the number of people with high blood pressure could be cut in half. Calorie intake and resultant body weight are probably even more important than salt intake. For instance, one study found that when obese patients ate a diet low in calories but average in salt content, 70% achieved normal blood pressure.

Third, exercise regularly. Again, scientific studies have proven that regular exercise will help control blood pressure. In one study, a group of men exercised intensely for about one-half hour 2 times per week under careful supervision. A significant drop in blood pressure was noted after 6 months. Another study used weekly exercise sessions lasting 2 hours. One hundred eighty-one sedentary middle-aged men did calisthenics, jogged, or played volleyball during a 6 month program. At the end of the experiment, all participants, both those with and without high blood pressure, experienced a drop in the pressure.

But, if you have been sedentary for years don't plunge in to a 5 mile a day running habit. See your doctor for a checkup and then build up slowly.

Fourth, learn to control stress. Hatha yoga, biofeedback, meditation, visualization techniques, breathing exercises and other methods will lower blood pressure. In one study, patients were hooked up to biofeedback instruments which let them know by the level of a sound how tense they were. Simultaneously, the patients were taught to relax by paying attention to the process of breathing, by becoming consciously aware of every muscle, and by being certain that each muscle was relaxed. Mentally, the patients repeated the word "relaxed" with every expiration. This entire program was practiced 3 times per week, one-half hour every time, for 3 months. Patients learned how to relax as evidenced by the biofeedback instruments. The result was a significant drop in both blood pressure and in the use of blood pressure-lowering drugs. The benefit lasted as long as the patients practiced the relaxation techniques.

So, in the case of high blood pressure, as with many other diseases, the cause and solution are in the lifestyle. 90% of all people with high blood pressure can solve their health problem in a safe and natural way.

CANCER

Cancer is the scourge of the 20th century. The diagnosis of cancer is often like a death sentence. Even with all the advances in cancer research, over 50% of the people who develop cancer die within five years.

Remember when considering the subject of cancer that cancer is not just one disease, but a multitude. Each type of cancer varies in type of treatment, length of time one might live, cause, and many other factors. Even though cancer of the breast and of the lung are both cancers, the differences are greater than the similarities.

When it comes to cancer, the most hopeful aspect of discussion is prevention. Once the condition has developed, there are no viable answers outside of the medical world. Chemotherapy and surgery, although distasteful, are usually the best remedies. Laetrile, megavitamin therapy, herbal remedies, DMSO, colonics, and other such approaches are of no proven value. Until scientific proof is presented, I recommend that people not waste time and resources in these directions.

What about prevention? Can we work to prevent cancer? Happily, the answer is yes. First, we should discuss some of the theories on how cancer is caused.

There are two main intriguing theories from the scientific literature. The first is the oxygen starvation theory. Normal body cells require oxygen to live, yet most cancer cells do not need oxygen. Some studies have found that when normal cells are deprived of oxygen then these cells have two choices: die or convert to a type of cell which does not need oxygen. The cells choose the latter path, yet this conversion results in a more primitive form of cell which grows uncontrollably. In this way, a cancer is formed. The most common cause of oxygen starvation is fat deposits in blood vessels.

The other theory of cancer development is the toxin concept. If normal cells are exposed repeatedly to irritating and toxic chemicals from a poor diet, the cells will convert to a cancer form to survive.

There are many other theories of cancer development. Some scientists think that the body's system of resistance, the immune system, stops working properly and fails to destroy cancer cells as they develop in the normal course of life. Others believe that abnormal hormone levels will cause cancer cells to develop. There are almost as many theories as there are scientists. The bottom line is that no one knows for sure why cancer develops.

But scientists do know about measures that can be taken to prevent cancer from occurring. What can you do to protect yourself?

The first, and most obvious, is quit smoking. We all know that this is the number one step in cancer prevention.

Second, avoid a high fat diet. Eating large amounts of meat, dairy products, and eggs, besides increasing the risk of a heart attack, will raise the risk of cancer. Specifically, cancer of the breast, colon, skin, and prostate occur more frequently in people who eat too much fat.

To prevent heart disease, people have been advised to substitute unsaturated fats such as vegetable oils for the saturated fats found in animal foods. When this substitution is made, the risk of heart disease will decline, but the risk of cancer will increase. A diet high in unsaturated fats is, therefore, not healthful. Instead of substituting one form of fat for another, it is best to reduce the total amount of fat in the diet.

The third measure which we can take to prevent cancer is to eat large amounts of fruits (especially citrus), vegetables, and whole grains (rice, bread, oats, etc.). The best vegetables are broccoli, cabbage, cauliflower, brussel sprouts, and carrots. There are protective factors against cancer found in these foods that have not been definitely identified. Taking vitamin and mineral tablets is no substitute.

Four, avoid overeating. Eating too much has been shown to be a major cause of cancer. In experiments, 100 rats, bred so that all develop cancer by the age of one year, are separated into 2 groups. One group is given all the standard rat chow they can eat, while the other group is given the same food but only in limited amounts. All rats in the first group, but only 20% of the rats in the restricted group, develop cancer. This type of experiment has been performed at the finest cancer research institutes in the world many times.

Five, avoid foods containing nitrate, a chemical used to keep meat pink and to inhibit bacterial growth. Nitrate is found in preserved meats (bologna, hot dogs, salami, etc.), fish, and some cheeses. It has a proven connection with cancer.

Six, avoid saccharin, for it has been proven to cause cancer. If you are convinced that this is not true, it is because of a high-powered advertising campaign by the saccharine manufacturers to discredit the testing which showed that saccharine causes cancer. When saccharine was tested, doses were used that are far in excess of what the average person could consume. But only 100 rats were used to see if saccharine could cause 1 cancer in 10,000 people. Because 10,000 rats could not be used, the dose of saccharine was increased to compensate. This method is recognized as valid by all cancer researchers.

Seven, do not broil or barbecue foods. This type of cooking results in formation of benzopyrene, a powerful cancer-causing chemical, especially in sausages, fish, beef, steak, ribs, pork chops, and chicken.

Eight, avoid foods containing food colorings. Many of these chemicals have been found to cause cancer and have been removed from foods. Public interest groups such as those formed by Ralph Nader are presently trying to get other colorings banned since they have been linked with cancer. Better to be safe than sorry: with a little effort, you can totally eliminate these chemicals from your diet.

Nine, wash food carefully to eliminate as much of the insecticide residue as you can. Endrin, found on apples and wheat, has been linked to cancer.

Ten, minimize intake of salt-cured, salt-pickled, or smoked foods.

Eleven, consume alcohol beverages only in moderation, or not at all.

Overall, close to 90% of all cancers are caused by lifestyle and environmental factors. Following the ten anti-cancer measures outlined above will decrease the chance of cancer by approximately 90%.

Though the news about cancer treatment is often negative, the facts concerning cancer prevention are very positive. Doctors may not have great success in treating cancer, but you can probably avoid getting this disease in the first place by following a few simple suggestions. As always, an ounce of prevention is worth a pound of cure.

DIABETES

Diabetes is a common ailment in the U.S. It has been estimated that approximately 4.2 million people in our country have diabetes. Four out of every five diabetics are over 45 years old.

Most people believe that the cause of diabetes is unknown, the only successful treatment is drugs, and the common diabetes medications are effective and safe. Unfortunately, these are dangerous misconceptions.

Is the cause of diabetes unknown? No. In 85% of cases, the cause is clearly known to be overweight in combination with an inherited tendency for diabetes which would never be expressed if the person were of normal weight. When people who develop diabetes in adulthood lose enough weight, all evidence of diabetes disappears and no drug treatment is needed.

The only exception is with children who develop what is called juvenile diabetes, constituting about 15% of all cases of diabetes. Weight loss is usually not recommended since these diabetics are already thin. Medication is required. Occasionally, a juvenile diabetic can be helped with dietary changes, but this is the exception.

In one study, a doctor followed the course of diabetes in an obese woman who lost weight and then gained the weight back months later. In the beginning when the woman weighed 209 pounds, her blood sugar and insulin levels were abnormally high as is found with severe diabetes. The woman then went on a strict diet and lost 80 pounds. Measurements of blood sugar and insulin levels showed that they were normal. Eight months later, the woman again weighed 209 pounds as a result of extreme overeating. With this weight gain, the blood tests again showed evidence of severe diabetes.

Scientists consider this case typical of all cases of adult-onset diabetes. Clearly, then, the main cause of this condition is overweight. There is no mystery. But, once the condition has developed what should a person do? Should drugs be used? Since almost all adult-onset diabetics can eliminate the illness with dietary changes, drugs are usually not necessary, but some people feel that the diet changes are more painful than taking drugs for a lifetime. Medications seem to be a safe and easy answer.

But this is not the case. All diabetes medications cause some degree of harm to the body. In fact, a study done in Poland found that the death rate of diabetics was highest in those treated with insulin (which must be injected), next highest in those treated with oral drugs (those taken through the mouth), and lowest in those treated with diet alone.

When insulin was first developed, it was regarded as a wonder drug. Yet, although injected insulin will lower the blood sugar level, it will also raise the risk of heart attacks, strokes, and high blood pressure. Apparently, high levels of insulin increase the amount of fat deposited on the walls of blood vessels.

The oral diabetes drugs also increase the risk of heart disease and stroke. So we must conclude that there is a price to be paid for drug treatment.

Therefore, it is clearly superior to control diabetes with diet instead of drugs. With dietary changes, it is possible to eliminate almost all evidence of diabetes in the 85% of cases suffering from the adult-onset type of this condition.

For many years, diabetics were told to eat less carbohydrates. This class of food includes starches and sugars. With digestion, the starches are broken down into sugars. Diabetics have high blood levels of sugar, so it was thought that if they ate less of the foods that turn into sugar, they would reduce the blood level of sugar.

But, in the 1970s, the experts changed their minds and concluded that they had been wrong about carbohydrates. Studies began to show that a high carbohydrate diet was better for diabetics since it "turned on" the body systems needed for proper handling of sugar. Also, the low carbohydrate diets that had been used for years were found to greatly increase the risk of heart disease and strokes because they were so high in fats.

Further studies have shown that the best type of high carbohydrate diet is one that is also high in dietary fiber. Fiber is that part of food which cannot be digested. The fiber helps the body to maintain lower blood levels of sugar and fats. The high

fiber carbohydrate foods are vegetables, fruits, grains, and cereals.

The Pritikin center for diet and exercise recently published a study with 60 diabetics. The therapeutic diet consisted primarily of high fiber carbohydrates such as vegetables, grains, and cereals. The diet was very low in fatty foods such as meats, dairy products, and eggs. Subjects were encouraged to walk daily, and at the end of the study the average amount of time spent walking was almost two hours per day.

This program led to a dramatic improvement for almost all patients. Close to 90% of the diabetics who had been on drugs before initiating this diet and exercise program required no drugs at the end.

Therefore, the most modern scientific research has proven that the healthiest diabetic diet is one that uses very small amounts of high fat and refined low fiber carbohydrate foods. It is easy to get fat by eating these foods since they supply many calories relative to how full you feel after eating them. One candy bar contains 250 calories but it will not fill you up as much as if you eat three apples supplying the same number of calories. High fat and refined carbohydrate foods also interfere with the body's effort to maintain normal blood sugar levels, and they elevate blood fat levels.

The high fat foods are meats, dairy products, eggs, oil, nuts and seeds. Refined carbohydrate foods are cookies, candy, cake, soda pop, white bread, white rice, donuts, etc.

The foods to eat a lot of are vegetables, fruits, and whole grains (whole wheat bread, brown rice, etc.). The quantity of food must be kept low enough that normal weight is maintained. Exercise will help with this goal.

Adult-onset diabetes is an excellent example of the fact that most major diseases can be controlled by lifestyle changes. Diabetics can choose between a healthy life or one punctuated by blindness, heart attacks, amputations, and other serious problems. We cannot rely upon drugs to prevent these complications. But a healthful diet can change adult-onset diabetes from a dangerous life-threatening disease to simply a bad memory.

HYPOGLYCEMIA

Are you tired all the time? If so, chances are that someone has told you that you may have hypoglycemia. That "someone" was probably a well-meaning friend, but it could have been a doctor.

What is hypoglycemia? It is low blood sugar. Typical symptoms which occur when the blood sugar level drops below normal are sweating, shaking, fast heartbeat, nervousness, weakness, fatigue, hunger, nausea, headaches, restlessness, and unclear thinking.

I am sure that halfway through this list many readers have begun to suspect that they have hypoglycemia. But most people will occasionally have headaches, fatigue, restlessness, and other typical symptoms of hypoglycemia even if they do not really have this disease. The list of conditions which will cause these symptoms includes anemia, heart disease, brain tumors, the flu, and many other common illnesses.

How can you know for sure if you have hypoglycemia? Since you cannot depend on the symptoms, other methods must be used. The standard test for hypoglycemia is the glucose tolerance test. With this test, a person will fast for 10 hours and then have his blood sugar level checked. Next, a large dose of sugar is swallowed in the form of syrup. One-half hour later, the blood sugar level is again tested. Following this, the blood sugar level is checked every hour for 5-6 hours.

After fasting 10 hours, the blood sugar is expected to be normal. When the sugar is ingested, the blood sugar level will rise rapidly. After a few hours, the level should return to normal. If the sugar level drops way below normal before returning to the normal level, hypoglycemia may be present.

This test is used almost universally but there are some major problems with it. One is that the patient is usually not asked how he felt during the course of the test. If he felt perfectly fine when the blood sugar dropped below normal, then we cannot say that his hypoglycemic-like symptoms are from hypoglycemia. We can only be sure that the symptoms are from hypoglycemia if they occur when the blood sugar level is low.

The other major problem is that the glucose tolerance test is performed in an artificial situation. Very few people would fast for 10 hours and then drink a large quantity of overwhelmingly sweet syrup. It might even be safe to say that it would be normal for people to get sick from this type of experience.

Many people erroneously consider themselves to be hypoglycemic based on symptoms alone. Others make the error of depending upon the unreliable glucose tolerance test. Fortunately, however, there is a very simple way to definitely determine if hypoglycemia exists.

If you suspect hypoglycemia, have your doctor give you a written prescription for a blood sugar test. With this test, you only need to have blood checked one time, you do not need to fast, and you don't have to drink sugar syrup. Keep the prescription handy, and when you feel the symptoms that you think may be related to hypoglycemia, immediately go to the laboratory and have your blood sugar level checked. If your sugar level is normal *at the exact time* that you are feeling weak, shaky, tired, etc., then your symptoms are not from hypoglycemia. If your sugar level is below normal, then you may have hypoglycemia.

When hypoglycemia is tested for in this way, it is very rare to find that the symptoms are from low blood sugar. For every one case of true hypoglycemia, there are probably 100 people who blame their symptoms on hypoglycemia when there is another cause altogether. Most people who suspect that they have hypoglycemia in fact are suffering from toxemia (see chapter on this subject).

But let's say that we actually have found someone with hypoglycemia. The next step is to determine which type since this will determine what course of action the person will need to follow to solve his problem.

There are two main types of hypoglycemia. The first type is called fasting hypoglycemia since it occurs when a person has gone many hours without food. The second type is called non-fasting or reactive hypoglycemia since it occurs after a person has eaten the wrong food, and it is a reaction to this food.

Fasting hypoglycemia is very rare and serious. People with this type of hypoglycemia are usually extremely ill and in need of hospitalization due to the underlying condition which is causing

the low blood sugar. The typical causes of fasting hypoglycemia include excessive intake of drugs used by diabetics to lower the blood sugar level; serious adrenal gland, liver, or kidney problems; chronic alcoholism; and tumors in the pancreas gland.

Non-fasting hypoglycemia is slightly less rare than the fasting type. It usually results from eating too much sugar. Since sugar requires very little time to be digested, it easily rushes from the intestines into the bloodstream. The blood sugar level will then shoot up and, in response; the pancreas gland will secrete a large amount of insulin to lower the blood sugar level. Sometimes, too much insulin is secreted and the blood sugar level is knocked down too far down. When the sugar level drops way below normal, the common symptoms of hypoglycemia occur.

Hypoglycemia of any type is extremely rare. But, if it is found that you have hypoglycemia, what should you do? The standard remedy is proper diet, and the typical diet used is one high in protein. A high protein diet is used because protein is converted very slowly into blood sugar, and therefore it will not rapidly elevate the sugar level as will regular white sugar. No excessive secretion of insulin will result so the blood sugar level will not drop below normal.

But, even though a high protein diet will help stabilize the blood sugar level, it will also cause many serious health problems. The list of such problems includes acceleration of the aging process, increased buildup of fat in blood vessels (which is the cause of heart attacks and strokes), and the brittle bone condition called osteoporosis (see chapter on protein). Fortunately, there is an alternative to the high protein diet which will solve the problem of hypoglycemia without causing other health problems to develop.

The best diet for hypoglycemia is one high in complex carbohydrates such as vegetables, grains and cereals (brown rice, whole wheat bread, etc.). Complex carbohydrates (starches) take a long time to digest. Therefore, the sugar which is formed when these foods are digested will slowly trickle into the bloodstream, as opposed to the rush of sugar which results from eating simple carbohydrates such as sugar. A diet high in complex carbohydrates will solve the problem of hypoglycemia without causing any new health problems as is found with the high-protein diet.

The "bad" carbohydrates, the ones which will cause hypoglycemia and should be avoided, are sugar, honey, cake, candy, soda pop, and all other super-sweet foods. The best results come from a diet which is high in vegetables, moderate in grains and fruits, and low in high fat foods (meats, dairy products, eggs, nuts, seeds, etc.).

Since fruit is sweet, should it also be avoided? No. Since the sugar in an unprocessed piece of fruit is attached to fiber, it is absorbed into the bloodstream slowly. Because of this, fruits do not usually cause hypoglycemia. When fruit is juiced, however, the fruit sugar is released from the fiber. Therefore, juices can cause almost as much trouble as white sugar, and they should be avoided.

There is scientific evidence that alcoholic and caffeinated beverages can cause hypoglycemia. The martini taken for relaxation, and the coffee used to produce a "lift" in energy, may knock the blood sugar level down low enough to cause hypoglycemic symptoms. Therefore, it is best to avoid these beverages.

Hypoglycemia is a rare but troublesome condition. Don't assume that you have it just because your symptoms are typical of hypoglycemia. And don't rely on the glucose tolerance test. Ask your doctor to use the simple test outlined above. And, if you have hypoglycemia, follow a diet high in complex carbohydrates, not in protein, such as the one described in this book. You will find that hypoglycemia is easy to diagnose accurately and easy to eliminate through healthful living.

SLOWING THE AGING PROCESS

For centuries, people have been looking for ways to live longer. They have tried medicines, elixirs, special foods and waters, megavitamins and other products of the laboratory. Countless other potential answers to aging have been experimented with for centuries.

To the disappointment of many, these supposed anti-aging potions do not work, and many are harmful. Gerontologists (experts in aging) have investigated anti-aging potions and foods in depth and have found them all to be worthless.

But there is a way that you can prolong your lifespan by changing your diet. Scientific evidence shows that you can live longer by eating less food.

Scholars of the Bible and of general history do not find this surprising. In 3800 BC, the following inscription was made in an Egyptian pyramid: "Man lives on one fourth of what he eats. On the other three fourths lives his doctor." In the Bible, Ecclesiastes 37:31 says: "Many have died of gluttony, but he who is careful to avoid it prolongs his life." Temperance in eating and drinking to prolong life also was discussed in the early Chinese writing of Huang Ti.

In the 20th century, hundreds of scientists have studied the effect of food restriction on aging. The first large scale research was done in the 1930s by a doctor at Cornell University. Dozens of experiments showed that when one group of animals was fed an adequate diet in restricted amounts, while another group of animals was allowed to eat all they wanted of the same food, the restricted group lived 50% longer. Lifespan was prolonged because there was lower incidence of chronic diseases.

Since the 1930s, the research at Cornell has been confirmed many times in all forms of life from protozoa to fish to rats. The general conclusion is that if the amount of calories is restricted so that no excess fat accumulates, the length of life will be significantly prolonged.

But what about the effect of diet in human beings? Obviously, scientists cannot study people directly by locking them in laboratories and juggling their diets for a lifetime.

However, insurance company statistics indirectly support the research work done with non-human forms of life. Such statistics show that overweight people have higher risks of heart disease, strokes, kidney and liver diseases, appendicitis, problems in pregnancy and childbirth, hernia, degenerative joint diseases, cancer, and lung diseases.

Therefore, the scientific community has concluded that overeating in both animals and human beings will increase the risk of many diseases and shorten the lifespan. It is a fact that "the longer the belt line, the shorter the life line."

There are five main theories which explain the nature of the aging process. Eating less food has been proven with each theory to prolong lifespan.

The cross-linkage theory of aging explains the wrinkling of the skin and stiffening of the joints which occurs later in life. With aging, increased numbers of fibers (cross-links) form between particles of connective tissue (collagen). This causes a loss of elasticity, and makes the tissue more brittle. Studies have shown that the process of cross-linkage can be retarded by restricting food intake.

The endocrine gland theory of aging states that aging is a normal process that may be speeded up by increased thyroid gland activity. Such an increase would make the organs work harder, and therefore age faster. Eating less food decreases thyroid gland activity.

The growth rate theory of aging holds that the body which grows at the fastest rate will live the shortest amount of time. Experiments have shown that overeating speeds up the growth rate, while eating the amount of food which the body actually needs will slow the growth rate and prolong the lifespan.

The genetic code error theory proposes that the more the cellular genetic code of DNA and RNA is used, the sooner it will show age-related imperfections. The genetic code is the inner "computer program" of the cell which determines the type of work to be done by each cell. Eating less food, and especially avoiding an overdose of protein, will reduce the use of this code, thus delaying the onset of age-related imperfections.

The last major theory of aging addresses the accumulation of waste products inside the cells. It is thought that such

substances are harmful enough to speed up the aging process. Eating too much food will increase the amount of waste products inside cells.

The conclusion is that eating the proper amount of food and avoiding overeating will prolong the lifespan for many reasons that can be theoretically explained and understood.

The best time to start an anti-aging dietary program is at birth. Breast-feeding will help since it provides for slower growth when compared to other types of feeding, and this will prolong the lifespan. It is best to feed an infant with nothing besides breast milk for the first 4-6 months of life.

In adult life, there are many ways to cut down on the amount of calories without feeling hungry all the time. Strive to fill up on low calorie foods at the expense of high calorie foods. This means eating mainly fruits and vegetables. One pound of celery contains 58 calories; one pound of apples, 242 calories; one pound of whole wheat bread, 1100 calories; one pound of cheese, 1840 calories; one pound of steak, 1760 calories.

The high calorie foods are almost always high in fat. The list of high fat foods includes oils, shortening, butter, margarine, bacon, salad dressings, meats, poultry, fish, dairy products, nuts, and eggs. A diet plan can only be low in calories if very minimal amounts of high fat foods are eaten.

Studies have shown that an intake of vitamins higher than the recommended dietary allowance (RDA) will prolong the lifespan. But, since the diet described in this book supplies such a higher level of vitamins, supplements are not needed. Eating 1 1/2 carrots and 2 oranges per day would provide 3 times the RDA of vitamin C and 1.7 times that of vitamin A. Also, since the diet is rich in vitamin E (dark green leafy vegetables, nuts, and legumes are rich in E), and low in polyunsaturated fatty acids which increase the need for E, there is no need for vitamin E supplements.

As with most aspects of health, diet is not everything. Exercising vigorously 4-5 times per week will help keep body weight at a minimum, and will have many other anti-aging effects. You can live longer, enjoy better health and have more energy simply by making easy changes in the way you live. The true “Fountain of Youth” is within your reach.

OSTEOPOROSIS

Osteoporosis is a serious problem which occurs primarily in women. After menopause, when the level of estrogen secretion falls, women lose bone at a fast rate. As the bone becomes more porous and brittle, it becomes much easier to break. A brush up against a table or a fall to the ground may fracture a bone. What can be done to prevent osteoporosis, or reverse it once it is present?

Many people believe that osteoporosis is caused by a dietary deficiency of calcium, and that a cure can be produced by taking large amounts of calcium. But the truth is not so simple. Osteoporosis is not purely a calcium deficiency disease, and calcium supplements have not consistently been proven to strengthen bone.

In fact, osteoporosis is not primarily from loss of bone calcium, but rather from loss of the fibers in bone upon which calcium is deposited.

Nonetheless, some studies have shown benefit from maintaining adequate amounts of calcium in the body. But ingesting large amounts of calcium is not the best way to assure optimal body calcium levels.

A dietary calcium deficiency is often cited as the cause of osteoporosis because statistics show that most Americans do not consume the Recommended Dietary Allowance (RDA) of 800 milligrams (mgs) of calcium per day. But the story does not end here. The 1980 edition of Recommended Dietary Allowances also says that "adults remain in calcium balance despite lower calcium intakes." The World Health Organization is quoted as saying that "a practical allowance for adults should be between 400 and 500 mgs per day because there appeared to be no evidence of calcium deficiency in countries in which calcium intakes were of this order." The observation is made that: "Studies have shown that men adapt with time to lower calcium intakes and maintain calcium balance on intakes as low as 200-400 mg per day."

Why, if a level of calcium much lower than 800 mg per day is totally adequate, does the National Research Council recommend this amount? Because of the "high levels of protein and phosphorus provided by the United States diet." Studies have found that "calcium losses can be substantial when protein intake is high" and "high phosphate intakes ... enhance bone loss in mice and rats."

The RDA text clearly states that people who consume less than the usual amount of protein and phosphorus will be safe with a calcium intake "considerably" lower than 800 mg per day. Meats and dairy products are the primary sources of both protein and phosphorus, so if we do not overdose on these foods we will not develop a calcium deficiency if less than 800 mgs per day are consumed.

A considerable amount of scientific research implicates meat and dairy products, when consumed excessively as is common in our country, with causing heart disease, cancer, strokes, and other health problems. When we reduce the amount of meat and dairy foods to the degree which will protect against these illnesses, we will easily be able to be healthy with 400-500 mgs of calcium per day at the very most. This is a better way to protect bone from osteoporosis than to eat large amounts of meat and dairy products and take calcium supplements.

It is ironic that the food most often promoted as preventing osteoporosis, namely milk, is a potential cause of osteoporosis because of its high content of protein and phosphorus.

Treating osteoporosis with calcium supplements has never been consistently proven to be helpful. In one recent study, 103 post-menopausal women filled out diet questionnaires and were divided into three groups based on calcium intake: those with an intake below 550 mg per day, those with an intake between 550 mg and 1150 mg per day, and those with an intake above 1150 mg per day. All of the women were given supplements of 500 mg calcium per day to be used in addition to their normal dietary intake. After two years, all three groups showed a similar worsening of osteoporosis.

In another study, a group of 14 women with osteoporosis were given a 1000 mg supplement of calcium daily for 8 days. Changes in chemicals excreted in the urine seemed to indicate a slowing of the osteoporotic process.

The conclusion from these two studies is unclear. A high calcium intake may or may not help prevent or reverse osteoporosis. Since there is a slight possibility that calcium balance is a factor, we should be sure that we have enough calcium in the body.

There are two ways to increase the amount of calcium in the body. The first is to ingest more calcium in the form of food or supplements. The second is to eat less protein which will result in less calcium being lost in the urine. The pros and cons of these two methods lead to an obvious conclusion as to which one is superior.

A high calcium intake will increase the chance of kidney stones and decrease the absorption of manganese and zinc, two important minerals. Therefore, it is best to avoid a high calcium intake if there is an alternative way to assure adequate calcium supplies in the body.

A high protein intake will increase the risk of heart disease and strokes, accelerate the aging process, and cause more calcium to be eliminated from the body (see chapter on protein). Therefore, it is best to avoid a high protein intake.

Since both high calcium and high protein intake cause many health problems, it is best to avoid overdoses of both nutrients. If a low but safe amount of protein is ingested, the calcium requirement will be so low that a supplement will not be needed to maintain optimal calcium levels in the body. This is the most rational and healthful course to follow.

Estrogen is often prescribed to help prevent osteoporosis. But estrogen has side effects that are more dangerous than osteoporosis. The list of the side effects of estrogen includes uterine cancer, gall bladder disease, blood clots (which may cause a heart attack), liver tumors, elevated blood pressure, and worsening of diabetes.

If you do not have osteoporosis, you can do quite a bit to prevent it. We have already discussed the healthful anti-osteoporosis diet which is low in protein. This diet is high in foods such as vegetables, grains, nuts, and seeds which contain the necessary amounts of calcium. But another major factor is exercise.

Exercise has been proven to strengthen bone in the same way that it strengthens muscle. For instance, it is commonly found that a right-handed tennis player will have larger muscles in his right arm. One study of such tennis players found that the bone in the right arm will also be larger from the extra activity. The rule "use it or lose it" applies here. The bones of the body require regular exercise to maintain their strength and density. This does not mean you need to run ten miles a day. A brisk walk of one mile per day and using the upper body to do yard and house work will probably do the job.

Sufficient vitamin D is needed so that the intestines will absorb the calcium we eat. With moderate exposure of the skin to the sun, the body will produce plenty of this vitamin.

Once osteoporosis has developed, there are no proven remedies. But if we eat properly and exercise regularly, we can either prevent or slow the progress of this condition. (See the chapter on calcium and dairy products for more information relevant to a discussion of osteoporosis.)

ALLERGIES AND ASTHMA

Spring comes, the air warms, flowers bloom, trees leaf out and many people wheeze and sneeze so much that they long for winter. Is there hope for allergy sufferers, or must they spend months with tissue paper and antihistamines at hand?

Allergies and asthma are considered by many to be purely the body's reaction to inhalation or ingestion of irritating substances. Pollen, house dust, cat hair, dairy products, eggs: these are all common examples of noxious substances.

But, as is true with infections (see chapter on infectious diseases), one cannot look at the irritating substances in a vacuum. They must be considered relative to the health and resistance of the body. A healthy body is better able to deal with environmental irritants such as dust and pollen.

Food allergies are another subject altogether. Most foods to which people are allergic are abnormal foods in a human diet. Cow's milk products are the most common food to which people are allergic. But, cow's milk is specifically designed for baby cows, not baby human beings. There are vast chemical differences between cow's milk and human milk. Cow's milk clearly is not a normal food for human beings, so if people become ill after eating cheese or drinking milk, there should be no surprise.

The most common foods to which people are allergic are cow's milk products, wheat and other cereals, eggs, chicken, beef, fish, and citrus. There are many tests for food allergies, including skin and blood tests. But the most reliable approach is an elimination diet which uses the body as the laboratory.

Most of the foods to which people are allergic can be found in the typical daily menu. Therefore, most people will have some amount of the irritating food inside the body at all times. Since the food provokes allergy symptoms, some degree of symptoms will be present at all times. Typical symptoms include abdominal pain, vomiting, diarrhea, asthma, runny nose, and skin rashes.

With an elimination diet, all of the common allergy-producing foods are avoided for 1-2 weeks. During this period of time, most allergy-related symptoms will disappear. After the symptoms have subsided, foods are introduced one at a time. For two days, the relatively safe foods which have been eaten on the elimination diet will be eaten with milk. Then, for the next two days, milk is omitted and wheat is substituted. Each suspected food is tested in this way. When the person eats a food to which he is allergic, the symptoms will be very clear since there has been a complete absence of symptoms for the past week or two on the elimination diet. In this way, a diet can be created which is free of all foods to which the patient is allergic.

Allergies to environmental substances such as pollen and dust are common. In contrast to food allergies, it is not abnormal for human beings to be exposed to such chemicals. Therefore, the approach with environmental allergens is to strengthen the body so much that it is not troubled when exposed.

People who become extremely ill during pollen season invariably are on a poor diet with insufficient exercise and rest plus an overdose of stress. They resemble a forest after a long drought: one tiny spark will produce a catastrophe. But, after a few months of sensible eating, sufficient physical activity, plenty of rest, and a reduction in stress, the person will become more like a drenched forest: lighter fluid and matches could not start a fire.

It is rare for someone to become totally free of allergic symptoms. But when progress has been made to the extent that a person sneezes once or twice when mowing the lawn instead of becoming paralyzed with asthma, both doctor and patient will be satisfied. This is the common outcome of a health improvement program with allergic people.

Asthma is considered an allergic-type illness. People who eat a food that is inappropriate for human consumption, or who inhale irritating pollens in conjunction with a weakened system, are thrown into a crisis. The muscles around the bronchial tubes (the pipes that carry air from the throat to the lungs) tighten up so much that air cannot get into or out of the lungs. The person feels like he is suffocating. Emergency rooms are very familiar with asthma since people sometimes come for treatment to save their lives.

The drugs used with asthma range from theophylline and marax to cortisone. Most doctors feel that there is no alternative

to drugs for asthmatics. Yet this is far from the truth. The same measures that work with other allergy sufferers also work with asthmatics. If one eats rationally and learns to relax, asthma will usually disappear. Depending on the case, this may be easy or difficult to achieve. But, under the direction of an experienced doctor, good results are almost always achieved. Rare failures are usually linked to years of cortisone use. This drug, often called the king of all drugs, is also the king killer of all drugs. As miraculous as the short term results of cortisone use may seem to be, the long term results are equally disastrous. Problems commonly seen are destruction of bone, muscle, skin, glands, and many other tissues. The body's healing power is weakened so much that a health-building program will have much less impact. The morale: avoid cortisone as much as humanly possible.

In 1980, I worked with a man suffering from severe asthma. The results were so dramatic that I wish to share the details with you.

This man, Jim Worster (not the actual name), was 65 years old and retired from his work as a PhD college professor. He had been suffering from severe asthma for 7 years. His symptoms were a continuous loud wheeze on breathing, a frequent harsh barking cough, and a gurgling sound in his lungs from fluid buildup. It was so difficult for Jim to breath that he was exhausted most of the time. Previous treatment consisted of aminophylline for 7 years, and marax for 1 year.

The patient came in on 9-14-80. For the first two weeks, he ate exclusively raw vegetable salads and oranges. At the end of this period of time, his symptoms were much less severe. During the next 2 weeks, Jim fasted, drinking only distilled water. Two days after beginning the fast, all of Jim's asthma symptoms disappeared and he stopped taking all drugs. The fast was ended on 10-12-85, and then Jim ate only fruits and vegetables for two more weeks. At the end of this period, Jim was discharged free of any symptoms of asthma, needing no drugs, and 11 pounds lighter.

In the fall of 1980, I received a letter from Jim dated 11-26-80. In it he stated: "I think I may say that my session (of diet and fasting) was one of the most exciting experiences of my life, and it was doubly gratifying to experience such relief of my asthmatic condition. My thanks to all of you."

Another case which illustrates the effectiveness of proper diet is a little boy who we will call Bill. His parents brought him in at the age of 10 months. Bill had suffered from chronic severe middle ear infections for 4 months, had taken antibiotics every day, and now was being considered for surgical placement of tubes in the ears to improve drainage.

To resolve this problem, Bill was fed only fruits and vegetables for two weeks. After one week, his parents took him off of the antibiotics. When the two week period ended, Bill was completely well. He had no fever, no ear infections, and no chronic fatigue as before. His diet was broadened to include grains, cereals, and small amounts of chicken and fish but no dairy products. Two years have now passed and Bill has doubled in size and experienced no further ear infections or health problems of any type.

With allergies and asthma the message is the same as with most health disturbances: improve your health by living more healthfully and you will say goodbye to most or all of your problems. The majority of allergy and asthma sufferers will be able to give up their medications and feel great.

INFECTIOUS DISEASES

What is the cause of infectious diseases? With such illnesses the body has apparently been invaded by dangerous bacteria and viruses. Most people have been taught that bacteria and viruses are the sole cause of infections. Is this the truth?

No. The top medical pathology textbook, written by Robbins, states that: "Bacterial disease-producing potential is relative to the resistance of the host (the human body). Man lives in a relatively delicate state of balance with his microbial environment. He is in constant contact with a wide range of bacteria, viruses, fungi, and indeed, all manner of microbiologic agents with whom he lives in a state of commensalism (mutual cooperation)." The author further states that bacteria and viruses are present on all body surfaces and in every body opening (ears, nose, throat, etc.) at all times and that, under normal conditions, these organisms are harmless.

Harrison's *Principles of Internal Medicine* states that the mere presence of an infection-causing organism in the body does not "lead invariably to clinical illness. Indeed, the production of symptoms in man by many parasites (such as viruses and bacteria) is the exception rather than the rule, and the subclinical infection or the 'carrier state' is the usual host-parasite relationship." The terms "subclinical infection" and "carrier state" mean that the bacteria or virus is living in the body but causing no illness whatsoever.

Harrison's further states "even rabies virus infection, which was at one time believed to nearly always cause progressive fatal disease in nearly all instances, has been shown to produce a significant number of subclinical infections in both animals and man." Rabies virus traditionally has been considered one of the most dangerous of all organisms. Yet even this virus can be found living in perfectly healthy men and animals, and be incapable of causing disease.

The list of bacteria and fungi which can be found living on a healthy body includes streptococci, the alleged cause of "strep" throat, and Candida, the alleged cause of many serious yeast infections. Since such dangerous organisms can be found living in healthy bodies, how can anyone claim that they are the sole cause of disease?

The only logical conclusion is that bacteria and viruses are not the sole cause of infection. An infection will not develop unless the body's resistance to infection is lowered due to poor health. Instead of waging war on bacteria and viruses, we should try to increase resistance.

To do this, one must improve health, and health can only be improved by living more healthfully. Healthful living consists of eating the right foods in proper amounts, exercising regularly, avoiding excessive stress, getting plenty of rest, breathing unpolluted air, and drinking pure water. If a person were to follow these practices exactly as required, he would gain almost complete immunity to infectious diseases.

Science has clearly shown that malnutrition will lower resistance. Deficiencies of protein and/or vitamins will lead to infections. But such deficiencies are almost never found in the United States. Third world countries are the usual locale.

But there is a form of malnutrition that is epidemic in our country: overnutrition. Scientific and historical studies have proven that overeating can cause infection.

In the 1830s in England, each jail had to tell the government every year exactly how much it had spent on each prisoner for food. It was found that the more food consumed, the greater likelihood of infection. In a World War II concentration camp, almost 100% of "well-fed" German guards died of typhus while only 30% of "malnourished" Russian prisoners died. Resistance was higher in the prisoners since they ate less food, but not so little an amount as to cause protein or vitamin deficiencies.

In a laboratory experiment, mice were infected with bacteria and then divided into two groups. One group was allowed to follow its inner instinct and not eat, but the second group was force-fed. The result was an increased death rate and shorter survival time in the mice that had eaten.

There are many possible reasons why overeating increases the chance of infection. When excess food is eaten, there is a buildup of excess food material inside the blood vessels, and inside and surrounding every one of the millions of cells in the body. When this material accumulates in too great an amount,

the cells of the body will not be able to work properly, resistance to infection will be lowered, and bacteria and viruses will be more able to thrive.

Another possible reason is explained by the "garbage can" analogy. When a garbage can is full, flies will swarm and maggots will proliferate. If the garbage can is empty and clean, flies will not propagate. When people overeat, there is a build-up of waste products which attract bacteria and viruses. If the body is not overloaded with food, it will efficiently remove waste products and the attraction for microorganisms will disappear. Bacteria and viruses may be nature's scavengers which aid the body in removing excess waste material.

Whatever the reason, it is known that overeating will increase the chance of infection. But diet is not everything. Stress, in the form of divorce, marriage, loss of job, change to a different job, change in residence, etc., also can increase the chance of infection. During a period of stress, the adrenal glands secrete more of certain hormones which suppress the functioning of the body's defensive systems, thus allowing unchecked bacterial and viral growth. One study found that with excessive stress, people are four times more likely to have a respiratory infection than if no serious emotional shock had been experienced.

Lack of rest is also a factor to consider. When the body gets too little rest, all of its functions are compromised. The elimination systems (liver, kidneys, etc.), are not able to do their full job of removing body waste products. Such materials will then accumulate excessively, and this may help cause an infection as mentioned previously. Also, lack of rest robs the body of the energy it needs to destroy bacteria and viruses.

What course should be taken if an infection develops? Resort to drugs only if the infection is severe, such as pneumonia, kidney infection, etc. If the infection is not this severe, such as is found with the common cold or the flu, it is best to avoid drugs. With an infection, the body will initiate a major effort to heal itself and it is best if we cooperate.

With an infection, appetite is lost. The body knows that eating when sick will divert energy from healing to digestion; therefore the brain turns off the appetite. Studies have shown that fasting during the course of an infection will increase the bacteria-killing ability of the body's defensive white blood cells. Furthermore, fasting allows the body to burn and/or eliminate some of the excess material which has accumulated in and around the cells. It is best to fast under professional supervision.

Fever is also found with infection. In the past, fever has been regarded as an enemy which should be suppressed. But scientists now recognize that fever is a beneficial part of the healing process. Studies have shown that bacteria and viruses are much more easily destroyed when the body temperature is raised. The brain may also turn up the intensity of the internal fires to burn up excessive waste material more rapidly. Therefore, do not attempt to lower the fever with drugs unless it goes above 104 degrees, an extremely rare occurrence. Again, professional supervision is recommended.

Vomiting, diarrhea, sneezing, and coughing should all be regarded as defensive, healing activities initiated by the body to cleanse the system of waste products and allow healing to occur. As such, they should not be suppressed by drugs except in those rare instances where they become a danger in and of themselves. This occurs approximately 5% of the time. In all other cases, vomiting will cease when the stomach is cleansed, diarrhea will stop when the intestines have become freed of irritating wastes, sneezing will halt when the nasal passages are sufficiently drained of mucous, and coughing will end when the lungs have finished eliminating the wastes which had been choking these precious organs.

There is no denying that certain bacteria, such as those involved with cholera and syphillus, are so strong that not even the healthiest person could resist invasion. Antibiotics are truly miraculous life-savers in these cases. But, with other infections, constituting 99% of cases in our country, the main cause is lowered resistance due to poor health. Rather than attacking bacteria and viruses, we should concentrate on building health.

ARTHRITIS

If you are over the age of 45 and your joints don't ache then you should consider yourself lucky. In fact if you are pain free then you are so out of the ordinary that we may want to preserve your body in formaldehyde and display you in a museum. But if you are normal like the rest of us, chances are that your knees or your back or your fingers hurt some or all of the time.

The underlying theory of arthritis is simple. Remember from an earlier chapter that arthritis is a painful inflammation of the joints (shoulders, knees, back, etc.). Inflammation is a process that your body turns on to protect itself from irritating substances many of which come from foods that are commonly found in our diet. When these foods are eliminated from the diet the body will halt the painful inflammatory activity and the arthritis symptoms will subside.

There are two major types of arthritis. The most common type is called osteoarthritis, degenerative joint disease or arthrosis or spondylosis. The other major type of arthritis is called rheumatoid arthritis. It is far less common than osteoarthritis, but it is usually far more serious.

What can you do to help yourself if you are suffering from one of these types of arthritis? There are many lifestyle changes which will help. This is fortunate since taking the common anti-arthritis medications for more than a short period of time could kill you by causing liver or kidney failure, bleeding ulcers, or a multitude of other problems. And this is no small price to pay considering that the drugs don't even cure the arthritis. They just make you feel better while the arthritis continues to worsen.

Before we talk about the positive things that will happen healthwise when you change your lifestyle, let's talk about the hazards of the drugs which are commonly taken for arthritis.

Consider, for example, Motrin. Its list of side effects includes nausea, heartburn, stomach ulcer, headache, skin rash, ringing in the ears, anemia, fluid retention, and others. Indocin is another, and its side effects are the same as with Motrin except for the headaches which are more frequent and more severe. Butazolidin is a third common anti-arthritis drug with most of the same side effects as the others. But it is unique in that it is the only arthritis drug in use today that consumer groups have petitioned the FDA to ban because of its toxicity. Wouldn't you agree that it is preferable to avoid this stuff if you can deal with arthritis with simple lifestyle changes?

There is an alternative answer for arthritis. While the Arthritis Foundation may disagree, the fact is that you can prove to yourself using your own body as a laboratory that changing your diet can have a dramatic effect.

Scientific studies published in medical journals have proven that diet affects rheumatoid arthritis (all journal studies are listed in the Bibliography at the end of the book). One study from a London medical school showed that milk and cheese aggravate this condition. Another study from Wayne State University found that patients with rheumatoid arthritis who consumed a fat-free diet were able to completely free their joints of pain. Dietary changes again proved their value when forty-four rheumatoid arthritis patients found relief of pain and joint swelling when certain foods such as wheat, corn and beef were left off the menu. Scientists have found that short periods of fasting relieve arthritic pain and the improvement was documented with blood tests. Other studies have shown that reduction in overall food intake will reduce the severity of rheumatoid arthritis. These and many other scientific investigations which have been ignored by the so-called "authorities" have conclusively shown that dietary changes can help with rheumatoid arthritis.

What about the other major type arthritis called "osteoarthritis?" A doctor at the Memorial Hospital in London found that in many patients this painful condition is caused by food allergies. 42 patients found relief by removing eggs, milk, sugar, wheat, and yeast from their diets.

Let's look at a real life case from my practice. Don Smith (not his real name of course) first developed pain in his shoulder after finishing a lot of heavy physical work. The pain should have gone away in a few days but when it didn't Don went to see a doctor. The initial diagnosis was tendinitis. Aspirin was prescribed but the pain never left. Suddenly the pain began to travel from joint to joint, affecting both shoulders, hands, feet, and knees. The doctor tried Butazolidin and then Prednisone (a form of cortisone).

A year filled with pain passed. The patient was sent to a specialist who diagnosed rheumatoid arthritis. More drugs were prescribed, including Plaquenil, Tandearil, Methotrexate, and an antidepressant. Again, there was little or no improvement.

In the next few years, this patient went from doctor to doctor, trying different drugs including gold injections, Motrin, and 16 aspirin per day. The drugs would help for a few months, then the pain would return. The drugs caused severe disturbances in Don's blood cell count, ringing in the ears, and many other problems.

Finally, after 9 years of misery, frustration, continued pain, and treatment with almost every conceivable arthritis drug, Don decided to try something different: a carefully doctor-supervised lifestyle overhaul. For 9 days Don's diet consisted exclusively of raw fruits and vegetables. During this period of time, he slowly reduced his intake of aspirin and Prednisone so that he was able to quit all drugs by the tenth day. For the next 3 days Don ate one piece of fruit for breakfast and green juice (spinach, parsley, celery) for lunch and dinner. On the thirteenth day he started a total fast (meaning only water, no juice).

What happened to Don's pain as a result of this program? During the first four days after stopping the medication, Don was so miserable with pain all over his body that he was unable to sleep. But on the fifth day the pain dramatically reduced in severity. Don fasted for more than two weeks then broke the fast with five days of fruit and vegetable juices. The diet for the next thirteen days consisted of raw fruits, raw and cooked vegetables, and rice. Three months after completing the treatment program the pain had not worsened, and Don was planning another fast to eliminate the last traces of pain. At the end of his diet and fast, and almost 10 years after the original diagnosis of rheumatoid arthritis, Don's pain was minimal even though he was on no medication.

Rheumatoid arthritis is a very serious illness that supposedly is incurable. Yet incredibly it is possible to find dramatic results with a simple and safe program of dietary changes and fasting! Imagine Don's surprise when he found that he could live the rest of his life with minimal pain plus complete freedom from potentially dangerous drugs.

A typical case of osteoarthritis is a 43 year old woman. We call her Susan Jacobs (not her real name). Susan was suffering from severe osteoarthritic pain in her neck, upper back, and fingers. Her fingers were so stiff and painful that she could barely type, and this threatened her livelihood as a secretary.

Susan was initially put on a two week diet program consisting exclusively of raw fruits and vegetables. Breakfast typically consisted of two or three pieces of fruit such as banana, apple, orange or melon. For both lunch and dinner Susan ate a vegetable salad including lettuce (any type except for iceberg which is the least nutritious of all lettuces), carrots, cucumbers and celery. Lemon juice was used for salad dressing. Apples were eaten for dessert. At the end of the two weeks, Susan was able to bend her fingers normally without pain. Also the pain in her neck and upper back was greatly reduced. Susan's case is typical of what most osteoarthritis patients will experience following this type of dietary change.

Initially, to help either rheumatoid arthritis or osteoarthritis, it is necessary to follow a more limited diet or undergo a fast. But after the condition has improved, the diet may be greatly liberalized, as described in the back of this book. When you read about the foods included in the prescribed diet, you will probably be surprised to learn that people can get all the nutrients they need even if no meats, dairy products or grains are consumed. If you find this hard to believe, take a visit to your local zoo and the mountain gorilla exhibit. For a moment just observe the gorilla. You will find a peaceful and healthy 400 pound mass of muscles which, except for less brain matter, more hair and fewer clothes, is nearly identical to a human being. The gorilla liver is the same as the human liver and the gorilla stomach and intestines are the same as the human stomach and intestines. Now take a look at the sign which lists the foods that make up the gorilla diet. You will find a diet of berries, leaves, twigs, fruits and an occasional handful of termites. Don't worry, you can eat seeds and nuts instead of the termites. But the point is that the gorilla and you can build a strong and healthy diet without eating any meat, dairy products and grains which often are the culprits in arthritis.

Which makes more sense: Helping the body remove the irritating substances which it is trying to destroy with

inflammation, or taking drugs which stop the painful inflammatory process but leave the irritants in the joints to then cause more destruction? What would you do if your house were on fire: Put out the fire (dietary changes) or turn off the alarm and let your house burn down (drugs)?

Arthritis is one of the most common conditions in modern society. Fortunately, arthritis can be helped with a proper diet and fasting. Drugs are rarely necessary. Find a doctor who can guide you through the needed lifestyle changes and you can look forward to many years of freedom from pain and drugs.

STOMACH AND INTESTINAL PROBLEMS

The stomach and intestines give people more problems than almost all the other organs of the body combined. Just one of the problems in this region, peptic ulcers of the stomach, affects up to 10% of the population of this country sometime during life. What with the high incidence of gastritis (stomach inflammation), Crohn's disease (inflammation and ulceration of the small intestines), ulcerative colitis (inflammation and ulceration of the large intestine), irritable colon (pain with diarrhea and/or constipation), simple constipation, and diverticulitis (inflammed pockets in the large intestine), there is probably no one in this country who escapes problems with the digestive system.

If you are astounded at the frequency of these conditions, you will be even more amazed to find out about some of the largely unknown facts regarding treatment of these problems. Peptic ulcers, for instance, have probably been more mistreated than any other health condition. For many years, the bland and white "Sippy" diet has been in vogue. This diet consists of plenty of dairy products and soft cooked cereals, with almost complete avoidance of fruits and vegetables. Would you believe that this diet has never been proven to be helpful, yet it is still commonly used? Sadly, this is the case. Also, it is known that the high fat content of this diet increases the risk of heart disease in ulcer patients by three times.

As if these problems with the Sippy diet were not enough, the high protein content of the diet stimulates excessive stomach acid secretion which further worsens the ulcer. The diet itself is extremely acidic which also complicates the situation.

What about the treatment for Crohn's disease and ulcerative colitis? Current treatment consists of drugs and surgery. The list of drugs in use is quite long, but the most powerful one in common use is cortisone. Yet cortisone is so hazardous that if you don't die from Crohn's or colitis, then you may die of cortisone use since it is known to destroy bone, skin, muscle, glands, plus have other serious side effects.

Clearly, people are dying for want of a safe plan to follow with digestive system disorders. I will attempt to describe such a program herein.

Instead of using separate names for inflammation and/or ulceration in every different corner of the digestive system, I will discuss the general care of these problems wherever they occur in the entire region. We can then dispense with the following terms: gastritis, peptic ulcer, Crohn's disease, ulcerative colitis, and diverticulitis. Having read the earlier chapters on inflammation and ulceration, you know that these processes are essentially the same wherever they occur.

The health recovery program is almost identical for all cases of inflammation and/or ulceration in the digestive system. Recently, research with Crohn's disease has been published which reveals the success of a dietary program which can be utilized for most digestive tract problems.

In July of 1985, this research was published in the British medical journal Lancet. Doctors at the Addenbrooke's Hospital in Cambridge, England, studied the effect of dietary changes with Crohn's disease patients. When you read the results, bear in mind that standard medical thinking holds that this condition can only be controlled with powerful drugs and that, even with such therapy, flare-ups are common necessitating surgical removal of portions of the small intestine.

Yet the researchers in the Lancet study found that 70% of patients maintained a healthy small intestine by making simple dietary changes while completely avoiding drugs. The following foods were the most common causes of trouble (listed in decreasing order of severity): wheat, dairy products, cabbage family plants (cabbage, broccoli, cauliflower, brussel sprouts, turnips), corn, yeast, citrus fruits, coffee, lamb, and beef. Foods which none of the patients had problems with included rice, barley, rye, chicken, turkey, banana, and potato.

To detect food intolerances, patients were not allowed to eat and could drink nothing but water for approximately one week (most received intravenous feeding). Almost all subjects were free of intestinal symptoms at the end of this week. They were then given one food per day. The foods which caused problems caused immediate flare-ups. Patients were then

advised to avoid these foods. By avoiding the aggravating foods, 70% of the patients were symptom-free and taking no drugs at the end of six months.

So that there is no confusion, avoiding wheat products means avoiding white bread, whole wheat bread, spaghetti, macaroni, donuts, most cookies, and the many other foods which contain wheat. The labels on food products must be read carefully since wheat is an ingredient in a wide variety of foods.

Because inflammation and ulceration are the same wherever they occur in the digestive system, the health recovery program for all such conditions is the same as with Crohn's disease. But, to ensure success, there are a few additional important guidelines.

Never attempt to treat yourself with a serious problem in the digestive system. You must be under a doctor's care. Fasting, in particular, is only safe if supervised.

After fasting long enough to allow symptoms to disappear, avoid high fiber foods when you start eating. The coarse fiber contained in lettuce, celery, green beans, apples, cereals, and grains can be quite irritating. It is usually necessary at first to cook all fruits, vegetables, and grains in order to soften the fiber. These foods do not need to be cooked to the state of mush, just enough so that they are relatively soft.

After approximately one week of fasting (this time period is variable), the best foods to start on are vegetable soups, mashed bananas, mashed steamed potatoes, applesauce (unsweetened, of course), soft pears, and other such soft fruits and vegetables. After about one week of these foods, any grains besides wheat products can be added.

Following one week of fruits, vegetables, and grains, one can add small amounts of blended raw seeds and nuts, and/or chicken, turkey, and fish. The amounts of these foods must be limited to three ounces per day.

Any flare-up in symptoms must be dealt with by either complete fasting or a diet limited to small amounts of cooked fruits and vegetables for at least one week.

With constipation and irritable colon, there is no inflammation or ulceration. These conditions are, therefore, much easier to overcome. A one week fast, followed by the diet described in this chapter and in the back of the book, will almost always solve the problem.

Constipation can be understood quite simply. The digestive tract is limited in the amount of work that it can do, much the same as each of us is limited in the number of miles that we can walk or run. Eating excessive amounts of food will overload the digestive tract and cause exhaustion. Eating excessive amounts of foods that are too concentrated (meats, dairy products, and grains) will also overwork this region. The digestive tract will then have too little energy to complete the elimination process. The solution is a period of rest for the intestines, followed by a more rational diet.

As with all health problems, diet is not everything. The digestive system is especially responsive to emotional upsets. Excessive stress in the form of overwork, worry, anxiety, fear, depression, exhaustion and all other types must be controlled or long-term results will be unsatisfactory. Exercise is quite helpful, as are chiropractic adjustments.

Also, the digestive tract is extremely sensitive to toxic insult in the form of alcohol, coffee, cigarettes, and other such irritants. These substances must be avoided.

What about colonics and enemas? Are they needed to clean out the lower intestine? No. An enema involves running water into the lower intestine (colon) from a small bag hung about two feet above the body. When the colon gets full of water, the person will then evacuate. A colonic is similar, but it is performed by a therapist in a clinic setting. Water is pumped into the colon, then drained out by a tube which remains in the rectum.

Enemas and colonics are not needed to clean out the colon, because the colon is fully capable of cleansing itself. When the wrong types or amounts of food are no longer eaten, the colon will be able to completely cleanse itself. There is no hardened, caked-on crust of toxic waste materials lining the colon which can only be removed by colonics.

When unhealthy foods are eaten, absorption will take place in the small intestine. Enemas and colonics will not be able to prevent absorption of such foods since they can only wash out the colon which is many feet downstream of the small intestine.

In the digestive system, as in the other areas of the body, the potential for self-healing is great. Simple changes in the lifestyle will usually do the job. In this way, the tragedy of a lifetime of drugs with their side effects, plus the specter of multiple surgeries, can usually be eliminated.

SKIN DISEASES

We all want healthy skin, skin that is free of blemishes and is flush with a healthy pink color. What is the best way to accomplish this? Should we just slap on creams and salves as if we were putting spot remover on a piece of clothing? No. The way to healthy skin is not from outside-in. Rather, it is from inside-out.

The skin is not an inert covering, like a suit of clothes. It is a living, functioning organ. In fact, the skin is the largest organ in the body. The health status, and resultant beauty, of the skin is a direct reflection of the health status of the body as a whole. Skin problems cannot be "cured" by applying powerful chemicals. But the body can heal skin problems from within when the proper conditions are present.

Skin problems respond beautifully to a healthful lifestyle program. As with all other illnesses, the skin will not develop an illness unless there is a direct cause of the illness. The cause is almost always found in the area of lifestyle: diet, exercise, stress, rest, etc. When the cause is removed, the body will usually completely heal the skin, even if no direct skin treatment in the form of creams and salves has been used.

The relation of skin illnesses to health habits and lack thereof is simple to understand. An unhealthy lifestyle will almost always result in toxemia (see the chapter on this subject). When toxemia is present the body will make every effort possible to eliminate the toxins. The kidneys and liver will attempt to filter and cleanse the blood. The sweat glands of the skin will function in the same mode and help to eliminate toxins from the blood.

Scientists have known for years that sweat glands remove some of the same toxins as do the kidneys. If the kidneys do an incomplete job of eliminating wastes, some of the chemicals which usually appear in the urine will be found on the skin. Urochrome, the chemical that makes urine yellow, is found on the skin of people with kidney failure, giving rise to a characteristic yellow haze that urologists immediately recognize as a sign of severe kidney problems.

Therefore, when toxemia is present, the sweat glands will eliminate toxins through the pores onto the skin. These toxins will often cause an irritation of the skin. Depending upon the individual's predisposition, one of many skin diseases may develop. In some cases, viruses and bacteria may proliferate due to the presence of foreign chemicals on the skin. The result may be psoriasis, acne, eczema, urticaria, or others.

When the toxemia is relieved through healthier lifestyle practices, the sweat glands of the skin will cease their elimination activity. The skin irritation will disappear, and the viruses and bacteria will no longer grow. Relief of toxemia will have lead to remarkably clear and healthy skin.

Remember, skin problems can only be healed from inside-out. Creams and salves will rarely have more than a minor, temporary effect.

A major cause of toxemia is a disturbed emotional state such as chronic anxiety, depression, fear, etc. Therefore, disturbed emotions will result in toxemia and skin problems. But, the effect of emotions on the skin is so immediate and dramatic that we can conclude that there is a more direct connection via the nerves besides the chemical effect of toxemia. Any emotion disturbance may cause skin problems in the absence of actual toxemia.

Millions, if not billions, of dollars are spent yearly by consumers trying to produce beautiful skin with one allegedly "miracle" cleanser, cream, or salve, after another. What a wasted effort! Until junk food is largely eliminated and plenty of wholesome whole foods eaten instead, until an exercise program is followed on a regular basis, until negative emotions are minimized, neither the skin nor any other organ of the body will ever develop good health. Don't give up hope no matter how bad your skin looks. The power of the body to heal itself rarely shows itself as dramatically as when gray, blemished, unhealthy skin becomes pink, clear, and refreshed with a healthful lifestyle program.

HEADACHES

Headaches are extremely common. In fact, there are few people who can say that they have never experienced one. An occasional headache is not necessarily cause for concern. But when headaches begin to occur more than once or twice a week, and when medication is needed as a remedy, then there is a problem which requires immediate attention.

The worst approach for headaches is to rely on medication. Headaches are a symptom of a deeper problem. Therefore, to solely use drugs to remove the pain will allow the cause of the headaches to remain untreated. It is crucial that the cause of headache pain be identified and eliminated or one's overall health may be threatened.

It is also hazardous to solely rely on medications for headache relief because of the side effects of the drugs. Every headache drug, from aspirin to Inderol, has multiple side effects. These range from stomach irritation and ringing in the ears to kidney and liver failure. Doctors have long known that people who take pain relievers as mild as aspirin for many years risk severe damage to their kidneys and liver.

Fortunately, there are alternatives. Most headache problems can be resolved with an improved diet, stress reduction, regular exercise, and chiropractic adjustments. The exceptions are found when headaches result from cancer (brain tumor), meningitis, tuberculosis, or some other extremely serious problem. But these problems are quite rare. Probably less than 1 in 5000 headache cases results from one of these conditions.

Most headaches can be divided into one of four categories: vascular (involving the blood vessels), extracranial (resulting from problems in the teeth, sinuses, eyes, or ears), traumatic (commonly the result of auto accidents), and psychological (from stress-induced muscle tension). These four types of headaches respond well to lifestyle changes.

The most common vascular headache is migraine. Not all severe headaches are migraines as is commonly thought. Migraines involve not just head pain, but also nausea, vomiting, sensitivity to light, and occasional dizziness. These headaches can be quite crippling. Yet the solution is often simple. Scientific studies have found that most migraines result from food allergies. The most common provoking foods are dairy products, eggs, chocolate, oranges, wheat, and red wine. Elimination of these foods usually provides a satisfactory solution to migraines.

A major cause of migraines and other vascular headaches is toxemia. When the level of toxins in the body becomes excessively high, the nerves and blood vessels in the head and neck region become irritated. Such irritation can trigger headache pain. The solution is to reduce the level of toxins by careful lifestyle changes. Fasting may be of great benefit.

The second major type of headaches, extracranial, requires attention to the area of the body which is producing the pain. If there is a deep cavity in a tooth, this must be filled to remove the cause of headache pain. Ear and sinus inflammation can cause headache pain. Such inflammation is usually evidence of the body's effort to destroy toxins which have accumulated in these regions. Cooperation with this effort will result in a decrease in inflammation and headache pain.

The third type of headaches is traumatic. Following an injury to the head or neck, nerves will often be irritated due to tearing of ligaments, muscles, tendons, and other tissues. Headaches of this type respond well to a gentle chiropractic approach which combines the use of massage, heat, and other physical therapy measures with spinal manipulation to relax muscles, mobilize the bones of the spine, and improve circulation.

The fourth type of headache is psychological. Stress in any form can cause muscle tension which irritates nerves, often resulting in headaches. Chiropractic and physical therapy treatments can be quite helpful in reducing the pain of psychologically-caused headaches. But long-term relief will only come from a reduction in stress. The cause of anxiety, depression, worry, fear, or other aggravating emotions must be eliminated or the headaches will continue to recur.

Headaches are extremely common, and the solution most people seek usually is medication. Yet this habit can be very self-destructive, since it leaves the cause of the headache pain untreated, and since the drugs which are usually taken have

many negative side effects. Fortunately, however, headaches can almost always be resolved through simple lifestyle changes including improved nutrition, stress reduction, regular exercise, and chiropractic adjustments.

YOUR BODY'S HEALING POWER

Better health comes from living more healthfully. Health is built by the body. So-called "cures" relieve symptoms of poor health but do not build better health. To build health you must stop doing anything which worsens your health and must live in such a way that the body will get what it needs to function normally.

Specialists tend to believe that their specialty is the answer for all your health problems. Nutritionists believe that if you eat properly then you will achieve perfect health. Psychologists think that if you are truly happy then you will be healthy no matter what you eat. Exercise enthusiasts claim that if you get enough exercise you will be healthy even if you are miserable, and that exercise is probably the ultimate remedy for anxiety and depression.

But such limited viewpoints are incompatible with true health. You must work on all areas of your life to achieve good health.

Arnold K., a 45 year old man, came to me complaining of chronic fatigue. His medical history showed no serious illnesses, the physical exam was normal, blood and urine tests were normal, diet and exercise patterns were good. Yet Arnold was very unhappy in his work, had no close friends and was not married. This cause of his fatigue was unhappiness. Arnold's body could not muster up the energy needed to function healthfully since he had nothing to be excited and happy about in his life.

Bill R., a 52 year old man, came in concerned with chest pain. He had seen numerous doctors all of whom had found, after extensive testing, that the blood vessels in his heart were blocked with fat and that surgery would be needed. Bill could not understand why this happened since he exercised regularly. He was happy at work and home and had many good friends so stress did not seem to be a factor. But his diet history revealed eggs and bacon for breakfast, hamburgers for lunch, salad with fatty dressing and beef for dinner, and ice cream for dessert.

The cause of Bill's heart problem was his diet. Even with a good exercise program and a relatively stress-free life, Bill could not be health on a high fat diet. When he changed his diet to one high in fruits, vegetables and grains, and low in meats and dairy products, his heart pain disappeared and he was able to avoid coronary bypass surgery.

Millie B., a 55 year old woman, came in complaining of chronic digestive problems. Gas, bloating, constipation alternating with diarrhea, and indigestion were almost daily occurrences. A careful medical history followed by a complete examination including an X-ray study of the stomach and lower intestine turned up no tumors, ulcers or inflammation. The diagnosis was irritable bowel syndrome. But, surprisingly, we found that Millie was following a careful diet and was quite happy with her life except for her stomach troubles. When asked if she ever exercised, Millie explained that she was too busy to do so. Since this was the only healthful living practice that she did not follow, I recommended that she walk briskly at least 30 minutes every night. After two weeks of this Millie happily reported that her stomach was giving her no more trouble.

Eating properly is important but not a cure-all. Reducing stress is essential but by itself will not solve all health problems. Regular exercise is a requirement of any health-building program but it will not build good health if it is the only healthful living practice followed.

To be healthy it is essential that every aspect of life be scrutinized and modified. All of the following are necessary to build health: Eating the proper foods, reducing stress, exercising regularly, getting enough rest, drinking pure water, breathing unpolluted air, exposing the skin to proper amounts of sunlight, and avoiding accidents and injuries.

We live in a world of dramatic medical interventions. If your hip joint disintegrates then you can have a new one installed. If your heart blood vessels are blocked with fat you can have them replaced with new clean ones. You can have your back checked for slipped discs with MRI and CAT scans. The glory of high-tech medicine is at hand. The age of bionic bodies is right around the corner. If a body part breaks down you may be able to purchase a new one.

Simple changes in lifestyle pale in comparison to the shine of the medical/hospital industrial complex. But remember that

changing the way you live will not cure anything. It is the body that heals. The changes in diet, exercise habits, etc. unleash the internal healing powers of the body. And the functioning of these powers outshines every aspect of high-tech medicine.

In the 20th and 21st centuries we have developed a tremendous respect for the abilities of scientists. Researchers can take a tree apart and study every part down to the smallest molecule. They can say which chemicals are fond in a tree, how the tree builds new limbs, the way that nutrients are moved from the ground to the leaves, how the tree reproduces, and everything else having to do with a tree.

But never forget that even though scientists can take a tree apart and reveal many secrets, no scientist can build a tree. Only Mother Nature can produce a living plant or animal.

Nature has programmed into every living thing the ability to heal itself when needed. The mechanisms employed by nature are far more complex than anything used by doctors. When you live more healthfully you give nature the opportunity to do its work. The results speak for themselves. After following a new way of life your mind and body will clearly show you from within the power of healing that will build better health.

HOW TO EAT

I have heard it said that anyone who eats considers himself to be a nutritionist. Most of us believe that we eat a reasonably healthful diet and that our slip-ups are not very serious. The subject of food is one that is very near and dear to our hearts. To criticize what someone eats is almost as rude as criticism of one's religion. Eating is a very personal affair.

But here's the big question: Do we really know what we are doing when it comes to eating? Unfortunately the answer too often is no. Most of us have been taught how to eat by people who really didn't know what they are talking about. Our parents and teachers were well intentioned, but the typical American diet which they passed down to us is a genuine nutritional disaster. Scientific authorities have repeatedly stated that our daily fare causes many forms of cancer, heart disease, strokes, diabetes, and other serious illnesses. There is no doubt that changes must be made.

How should we eat? Which nutritional expert should we believe? Welcome to the world of nutritional anarchy. It is extremely easy to get confused when a book comes out telling people to eat a high protein, low carbohydrate diet, and then the next year a new book recommends the opposite. One scientist says cholesterol will kill you. Another says that this is unproven. With all this confusion, people are tempted to give up and just eat "whatever." We call this the "seafood" diet–we eat whatever we see! But don't give up hope! There is a formula for eating which is scientifically proven to be the healthiest on earth.

As with all animals, there is one general eating plan that is right for all human beings. Sometimes we hear the illogical argument that different people have different dietary needs. But no one will argue that one gorilla should eat a particular diet while his brother gorilla needs a different diet. All dogs basically eat the same food and all cows eat the same food. In fact, all members of any type of animal species eat the same food. There are differences in amounts and slight variations in proportions, but the overall plan is the same. This definitely holds true for human beings.

Food is primarily made of protein, fat and carbohydrate. Water is another major component and very small amounts of vitamins, minerals and some other substances complete the package. Therefore, when we discuss any diet, we can basically define it as being either high or low in protein, high or low in fat, and high or low in carbohydrate. For example, the Atkins and Scarsdale diets are high in protein and fat, and low in carbohydrate. The Pritikin and Eat To Win diets are high in carbohydrate and low in protein and fat. So, when we discuss the ideal diet, we can start with discussing the requirements for carbohydrate, fat, and protein, and the health problems which may result if the wrong types or amounts of these substances are eaten. It is also necessary to discuss food preparation and refining. There is no use in choosing super-healthy food and then destroying its nutritional value before we eat it.

Today we find great concern regarding vitamins and minerals. How much is enough? How much is too much? How can we assure adequate intake with our food choices? Do we need to eat organically grown foods to be sure that enough vitamins are present? Should we take large doses of vitamins and minerals to prevent or treat illnesses?

There are many other important issues: Is vegetarianism good or bad for health? Is fiber important and where does it come from? If we cannot control our eating habits, what should we do? The amount of food eaten is very important. You can get very sick if you eat too much or too little of the healthiest foods on earth.

In future chapters I will attempt to address these questions with answers that are scientifically documented. But where science has no answers, I will appeal to your common sense which, in some cases, is the only path available. You will find that the diet I recommend is not new. If it were then you should run the other way. Human beings have been on the earth for thousands of years and the proper diet is the same now as it was in the beginning. The liver and stomach have not changed over the centuries. The kidneys are the same as human kidneys of 10,000 years ago. The intestines, heart, lungs, blood, arteries, veins, eyes, brain and all other organs are fundamentally the same today as they were when man first lived on the earth.

Because the human body is unchanged we know that the proper diet is the same today as it has always been. You will end up on the fast track to health if you try to mimic many features of the original caveman's diet. Together let's explore what healthy eating is all about.

HOW MUCH SHOULD WE EAT?

How much food should you eat? This is a very important consideration since even the healthiest food, if eaten in too great an amount, will make you sick.

The amount of food needed is totally individual. Not only is each individuals need unique, but there is great variation from day to day and from meal to meal for each person.

The body is not like a machine that needs the same amount of fuel every day at specific times that never change. Such an imaginary machine, at 8:00 AM, every day of the year, would need a specific amount of fuel. At 12:00 PM, the machine would again need a specific amount of fuel. Again at 6:00 PM the machine would need its regular dose. The machine never changes. It never increases nor decreases its output. Its needs are always exactly the same.

Most people eat as if they were made like such a machine. People eat the same amount of food every day, and they eat strictly by the clock. Problems result, however, because the human body is nothing like our imaginary machine. Our need for food varies from day to day. The time of day when food should be eaten is always changing. The amount of food needed at each meal changes frequently.

If you eat when the body does not need or want food, you will make ourselves sick sooner or later. Therefore, we must determine on a daily and even hourly basis how much we should eat. Does this sound difficult? Maybe but only because most of us have no such experience. But with a little effort and practice, anyone can master this skill.

We are born with an instinct which compels us to eat when we are truly hungry, and to refuse food if we are not hungry. But this instinct is usually lost as the years pass. It is customary to eat by the clock: breakfast at 8:00 AM, lunch at noon, and dinner at 6:00 PM. Children learn this practice at a young age. If they get to the breakfast table and have no appetite, they are told that a good breakfast is essential for a productive day and so they eat. If they go to lunch and want to eat lightly, the smell and appearance of processed foods will override this desire and they will eat. At dinnertime there may be no appetite due to the large lunch but the child is told to finish everything on his plate because of the starving children in India and so he eats. After a few years of this type of conditioning, most children will lose touch with the true sensation of hunger.

When sickness strikes, it is common to lose the appetite. This is called anorexia. Don't confuse this with anorexia nervosa which is a loss of food due to an emotional disturbance. When someone has a cold or the flu, it is normal to want to avoid food.

But what are we told when we are sick and have no appetite? That we must eat or we will never recover our strength. So, even though the sight of food, not too mention the taste, is repulsive, we force some food down the hatch.

The problem that results from such typical eating practices is sickness. When the body says that it wants no food, and we jam food in anyway, we are sowing the seeds of illness. The body can only handle a certain limited amount of food and it signals the brain that enough has been eaten by turning off the appetite. When we disregard this message, we give the body an excess of food which leads to a whole host of problems.

Overloading the body with food will cause overweight, a major cause of diabetes, high blood pressure, and other conditions. Heart disease and strokes result when we eat too many high-cholesterol foods; cancer when we eat too many high fat foods; and accelerated aging when we eat too much of any type of food. When we are sick and overeat, there will usually be a prolongation and worsening of the illness. Clearly, overeating damages health.

How much should we eat? To know, we must tune into the messages coming from within the body. This does not mean that every time the stomach growls, we should eat. When there is a feeling of distress in the belly, many people stuff food down as fast as possible. But this is no more healthful than giving an addict a fix. True hunger is not a distressing sensation.

Learn to recognize hunger as a comfortable but compelling desire for food. You may have to miss a few meals in order to discover how to recognize hunger. Most of us have never gone without food long enough to give the sensation of hunger a chance to emerge.

When symptoms of distress develop after a person has gone without food for a number of hours, this is not a good sign and does not mean that food should be immediately eaten. If a coffee addict gets a headache when he doesn't get enough coffee, would we advise him to solve the problem by having another cup? If a heroin addict has the shakes when he has gone too long without a fix, would we advise him to quickly get an injection? Of course not. Yet this is what we do with food. Many of the foods we eat create the same type of situation in the body as do coffee, heroin and other addictive substances. When we have distress from not eating, we should not eat until the distress vanishes.

This may take an hour, a day, or even 2-3 days, but we must learn to hang in there and wait it out. It is best to have a knowledgeable doctor available to help you through this process. But when you have struggled with the discomfort from not eating long enough to begin to feel good, you will discover true hunger and eating will lead to health, not disease.

Once you are in touch with true hunger, follow it wherever it leads you. If you are not hungry when you wake up in the morning, don't eat. If the next day you are hungry, then eat. If you come home from work at night exhausted and with little appetite, skip dinner. If you have just had a fight with someone and feel upset, don't eat until you calm down. When you are sick and have no appetite, don't eat until hunger returns.

You will not lose strength if you don't eat when you are not hungry. You will not fail to recover strength if you don't eat when you are sick. In fact, by doing what the body wants you to do, you will become much healthier than before.

The general rules of how much to eat and when to eat are: only eat when you are truly hungry; stop eating immediately after your hunger has been satisfied; never eat when you are upset, exhausted, or sick; do not eat immediately before or after intense exercise. It is imperative that these rules be followed or even the healthiest food will lead to illness.

PROTEIN

One would think that "protein" is the name of a religion, not a nutrient, based on the way people talk about it. It is common to hear that protein is a miracle food which will solve all problems. But is protein such a wonder food? Do we need to work hard to ensure adequate protein intake?

The truth is that protein is no wonder food. It is easy to get enough from the diet, and most people eat far too much and damage their health.

Why the great protein mania? Because of clever advertising campaigns waged by the meat, dairy, and egg industries. Why do people buy the cars that they do? Because the car manufacturers have invested millions to create the desire for their product. Why do people dress the way they do? Because the clothing industry has created a passion for the new style. The same is true with protein.

The meat industry has most people convinced that meat is essential for strength, and that it is a sign of "high class" to eat steak many times a week. The dairy and egg industries have convinced the public that the protein in milk and eggs is crucial for good health. Most people would be genuinely frightened at the idea of a diet without meat, dairy foods, and eggs.

But what are the facts? If you talk to scientists who have a PhD in nutrition or biochemistry, you will uncover the truth. It is, in fact, easy to get enough protein. Meat, dairy products, and eggs are not required for good health. Most people eat too much protein and their health suffers as a result.

The Recommended Daily Allowance (RDA) for protein is about 50 grams per day. Yet statistics show that the average American eats 100 grams per day. Clearly, most people eat twice as much protein as they need.

But there is more to this story: the RDA figure of 50 grams includes a large safety margin. Scientists have found that the true need is closer to 25 grams.

There have been many studies in which subjects have been fed 20-25 grams of protein per day. Patients with kidney failure, heart failure, coronary artery disease, and high blood pressure have eaten such a low protein diet and their health improved. Doctors measured blood levels of protein, amino acids (subunits of protein), and hemoglobin (made of protein) and all remained normal on 20-25 grams of protein per day.

Will stress increase the need for protein? If so, since we live in a high stress society, should we eat a larger amount of protein to compensate? No. Scientific research has found that stress does not significantly increase the protein need. Studies found that the nervous tension of final exams and of sleep deprivation increased the need for protein by only one gram or less per day.

But don't athletes need more protein? Weight-lifters are especially concerned. The myth that athletes need more protein was formulated in the 1800s and disproved in 1866, but health spa counselors still hang on to their passion for protein. Dozens of studies have proven that heavy work and/or exercise will not increase the need for protein. When people are extremely active, they need more calories. Calories are to the body what gasoline is to the car, and protein is to the body what the engine is to the car. When you drive further at higher speeds, you need more gasoline, not more engines. It is unfortunate that the "more protein makes more muscle" myth is still around when the scientific community has rejected it for decades.

What is protein used for in the body? It is used to build tissue, make hormones and enzymes, hemoglobin and antibodies. So, obviously, sufficient protein intake is crucial. But this is quite easy to accomplish.

Protein deficiency is extremely rare. In fact, it is almost unknown outside of the Third World. The only way to become deficient in protein is to either starve or exclusively eat foods that contain no protein (sugar or oil). If a person eats enough food to maintain near normal weight, and if a variety of whole foods are eaten, a protein deficiency is impossible.

Even in the Third World, a true protein deficiency is rare. It is more common to find a protein-calorie deficiency. The body's primary need is for calories, not for protein. Calories are needed to provide fuel for the heart, lungs, kidneys, and other vital organs. Protein is primarily needed for building tissue. When there is too little food, the body will need to use all of the food for calorie production. Therefore, the body will convert the protein in the food to calories. This is a very inefficient process and will

only occur when a person is near starvation. For this reason, the term "protein-calorie deficiency" is used. If the starving person had enough food to eat, even if the food were low in protein, there would be no problem since the body would utilize the fats and carbohydrates for calorie production, and spare the protein for tissue building purposes.

Many people believe that meat, dairy foods, and eggs are the only sources of protein. But this is not true since all whole foods contain protein. A banana and a pear each provide one gram; a stalk of broccoli, six grams; an avocado, four grams; a carrot, 1 gram. Breads and cereals have greater amounts: one slice of bread has 2-3 grams, one cup of cereal has 2 grams. Foods like nuts, seeds, and beans are loaded: ½ cup of almonds has 13 grams, ½ cup of dried beans has 7-8 grams. By comparison, three ounces of steak contains 24 grams of protein, one egg 6 grams, one ounce of cheese 7 grams.

Meats, dairy foods, and eggs are rich in protein. But, if enough of all the other foods are eaten so that normal weight is maintained, and if animal foods are not used, there would still be more protein than needed. A daily diet of three to four fruits, a large vegetable salad, two servings of grains, and three ounces of nuts or beans would easily provide 35 grams of protein per day. Since the need is for 20-25 grams, there would still be more than enough.

What about the quality of protein? Are meat, dairy, and egg proteins the only ones "complete" enough to support good health? No. Protein quality is rated in percents: egg is 94%, cheese 82%, meat and poultry 67%, fish 80%, grains and cereals 50-70%, vegetables about 82%, legumes, nuts, and seeds 40-60%. But you don't have to eat perfect 100% proteins to rebuild body tissue. If a protein of 50% quality is eaten, you would just need to consume twice as much as you would of a 100% quality protein to get the same amount of usable protein. Therefore, meat, dairy, and egg protein need not be eaten to ensure adequate protein nutrition.

Do you need to combine lower quality proteins together at each meal so that one protein makes up for the deficiencies in the other protein? No. The body maintains a large pool of the subunits of protein, the amino acids. Therefore, if a protein is eaten which is too low in certain amino acids, the body can supplement the protein from its reservoir of amino acids and make this protein relatively complete and usable.

Again, it is important to repeat that it would take an incredible amount of imagination and planning to develop a protein deficiency. It is easy to get enough. Except in cases of starvation, kidney or liver failure, cancer or another type of severe disease, protein deficiency is not found. We must overcome the paranoia created by the protein industries and learn to eat rational amounts of protein.

Should we eat extra protein to provide a margin of safety? If some is good, more must be better. But this is a dangerous philosophy since even water, if consumed in too large an amount, can be deadly. Protein can cause serious health problems if eaten in excess.

One danger from excess protein intake is increased deposits of fat on the walls of blood vessels, causing heart attacks and strokes. Dr. Kilmer McCully, professor of pathology at Harvard Medical School, has proven this connection. Excessive intake of protein supplies excessive amounts of methionine, one of the amino acids. Methionine is broken down into homocysteine which irritates the walls of blood vessels. This irritation causes fat deposits.

Too much protein can also accelerate the aging process. Dr. Charles Barrows of the National Institute of Aging has done many experiments which have documented this hazard. A high protein intake results in excessive utilization of cellular "machinery", thereby causing premature aging.

Excess protein has been shown to increase the amount of calcium lost from the body in the urine. Many researchers believe that a high protein intake may cause osteoporosis by leaching calcium out of the body. In the book Recommended Dietary Allowances, it is clearly stated that high levels of protein in the diet greatly increase the need for calcium. Unfortunately, however, most people do not eat enough calcium-rich foods to compensate for the high protein intake.

There is no magic to protein. It is a nutrient that is needed to have a normal, healthy body, but it accomplishes no miracles. We need to become less concerned about getting enough

protein since the real problem is a dangerously high intake of protein which contributes to many serious illnesses.

FAT

Fat in food makes a meal feel like it will stick to your ribs. Fat has a rich flavor and it leaves the stomach feeling full for a long time. We crave fat in food because of its ability to produce deep satisfaction from a meal.

But this craving for fat can be disastrous for your health. Overeating fatty foods results in many types of cancer, heart disease, strokes, plus overweight which contributes to many other diseases such as diabetes.

The American Heart Association, National Cancer Institute, American Cancer Society, and many other public health and research institutes have called for a reduction in the fat content of the diet. It is rare to find such widespread agreement about diet, but with fat this is the case.

Foods high in fat include meats, dairy products, eggs, nuts, seeds, oils, margarine, mayonnaise, most salad dressings, coconut, avocado, and olives. There are generally two types of fatty foods: those containing saturated fat (animal foods), and those containing unsaturated fat (vegetable foods).

The scientific community is now completely convinced that a high intake of saturated fats will cause a build-up of fat in blood vessels, leading to heart disease and stroke. The foods high in saturated fats are also high in cholesterol and this is a major reason they are hazardous. Occasionally you may it said that fat has not been proven to be linked to heart disease. But when 99% of scientists agree that fat is a danger, and only 1% say the opposite, the better part of discretion is to go with the majority.

Researchers are also completely convinced that a high fat intake is linked to cancer, especially of the colon, breast, and prostate. Both saturated and unsaturated fats are implicated. Recently, the American Cancer Society has begun a public health advertising campaign to convince people to reduce fat intake.

A high fat diet has an overall negative impact on health. In one study, scientists examined the blood vessels which can be seen in the back of the eye. A fifty power microscope was used so that actual blood cells could be seen floating along inside the blood vessels. When the person ate a meal high in fat, the blood flow slowed considerably, the blood cells became sticky and they clumped together. This reduced the ability of the blood to carry oxygen from the lungs to all internal tissues. Since the people who participated in this study already had restricted blood flow to the heart, they developed heart pain from oxygen starvation when the blood flow slowed and the cells clumped.

When we speak of supplying nutrients to the cells, we usually ignore the most important nutrient, one which we cannot live without for more than three minutes. This nutrient is oxygen. But breathing air is not enough to ensure adequate oxygen supply to the cells. We require a healthy transport system. If a person eats too much fat, this transport system will become considerably less effective, leading to significant oxygen starvation. Every part of the body will suffer when the ideal amount of oxygen is not delivered. In fact, heart attacks and strokes result when oxygen starvation kills heart and brain cells. And some researchers believe that chronic oxygen deprivation may make normal body cells become cancerous.

Another problem with fat is its caloric density. Caloric density means the number of calories per pound of food. Vegetables have the lowest caloric density. One pound of celery contains only 52 calories. But cheese, a food high in fat, contains close to 2000 calories per pound. If you fill up on vegetables, you can feel satisfied and have eaten only a few hundred calories. If you fill up on high fat food, it is easy to eat over one thousand calories before your stomach feels full. In a country where overweight is a major problem, it is important to eat foods of lower caloric density to keep the weight down.

Imagine a large vegetable salad with red ripe tomatoes, deep green Boston lettuce, carrot, celery, cucumber, green onion, red bell pepper, and fresh peas. Total calories: about 200. A highly nutritious meal, low in fat, high in fiber, consistent with all health principles. But then comes the high fat salad dressing: two tablespoons of blue cheese dressing, containing over 200 calories of fat. Such a dressing turns a healthful salad into a high fat disaster.

When you first switch from a high fat to a low fat diet, you may feel uncomfortable for about a month. Fat in the stomach makes the stomach retain food for a longer time, thereby making

a person feel full longer. When the stomach has been accustomed to a high fat diet and then the dietary fat level is greatly reduced, the stomach will empty very rapidly and the person will say that he never feels full. But after about one month on a low fat diet, the stomach will adjust and not empty as rapidly. Therefore, the feeling of fullness after a meal will last longer and the shift to the new diet will become easier.

The American tradition of diet is one high in fat. The usual percentage of calories in the diet coming from fat is 40%. The most conservative authorities have recommended that this be reduced to 30% (American Heart Association), whereas the most radical nutritionists have recommended a 10% fat diet (Pritikin). The conclusion from reviewing many such recommendations is that 20-25% is a safe figure.

But, in considering dietary fats, it is crucial to discuss the type of fat, and the way it has been processed and/or cooked. The oil in a sesame seed is totally different from the oil in a bottle of sesame seed oil. Processed oils are treated five times with very high levels of heat, plus many other destructive types of manipulations. Processing destroys the food factors found in the sesame seed which nature provides to aid in the digestion and utilization of the oil. The conclusion is that the healthiest fats are those found in the unprocessed natural state.

As the years pass, scientists are continually amazed at the handiwork of nature. Foods produced by nature are in the healthiest form if they are processed only by the teeth. Nothing good is added when foods are extracted, refined, processed, stored, cooked, concentrated, transformed, and manipulated in many other ways. You can be sure that health value is almost always reduced through such interventions.

Therefore, the best fats to use are avocados, nuts, seeds, chicken, and fish. Always choose the most natural form of the food (raw, not roasted nuts), the lowest fat content available (trout, not shrimp), and the most conservative method of cooking (never fry). Eat no more than 4-5 ounces of high fat food per day (the amount found in 1/4 of a pound of cheese, for example).

Don't ever be concerned about getting too little fat from your diet. The only nutritional need is for the type of fat called essential fatty acids. Scientists have never found a case of dietary deficiency of these substances. They are found in many foods.

Also, you don't need to eat more fat if your skin is dry. The liver can create fat out of carbohydrate and protein. Therefore, if the body needs more fat, and you are not eating much, the liver will produce some.

To be healthy, avoid a high fat diet. The change to a lower fat intake may be difficult for some people in the beginning, but the reduced risk of heart disease and cancer makes such a change worthwhile. After a few months on the new program, you will not even miss the previous high fat intake.

CARBOHYDRATE

Food is primarily made of fat, protein, and carbohydrate. In previous chapters, I have recommended that fat and protein intake be greatly reduced. Since carbohydrate is the only remaining major food component, it is obviously necessary to increase consumption of carbohydrate when protein and fat levels are reduced.

What is carbohydrate? This technical word can be translated into the words "sugar" and "starch". "Sugar" encompasses the world of sweets: candy, ice cream, soda pop, honey, fruit juice, carrot juice, fructose, white sugar, molasses, brown sugar, dried fruit, and any other extremely sweet foods. People selling honey will tell you that it is a health food compared to the poison white sugar. People selling fructose, brown sugar, juices, and other sweets will oftentimes say the same. But don't believe it for a minute. Once they enter your body, there is absolutely no meaningful nutritional difference between all the above-mentioned sugars.

The word "starch" describes the other major type of carbohydrate. Bread, rice, oatmeal, millet, potatoes, corn, squash, carrots, and all other grains and vegetables contain starch. Basically, starch consists of hundreds of sugars linked together.

Why, if starch consists of sugars, is starch healthful and sugar not? Because when you eat sugar, it is in such a simple form that the body will rapidly absorb it with no delay. This causes the blood sugar level to shoot up which causes the blood insulin level to rise rapidly. These quick changes produce negative changes in the body, such as hypoglycemia.

But when starch is eaten, it takes a few hours for the body to digest it. One sugar at a time is broken off from the end of the long chain of sugars. Therefore, there is only a slow trickle of sugar into the bloodstream, not a flood as occurs when soda pop is ingested. The body can gracefully handle such a slow trickle.

Grains, such as bread, and vegetables are starchy foods. Fruit is the other major type of carbohydrate food. Earlier I stated that fruit juice is as sugar-rich as candy, and that it causes problems for the body. But this is not the case with fruit. Although fruit does contain sugar and no starch, the sugar in fruit is in very low concentration since fruit is mostly water. Also, the sugar in a whole fruit is bonded to fiber. It takes a while for the body to break the sugar off from the fruit fiber so, as with starch, there is no flood of sugar into the bloodstream.

One study measured the results from eating whole apples versus blended apples versus apple juice. When the whole apples were eaten, the blood sugar level gradually increased over a few hours, then it gradually decreased. When the blended apples were eaten, the blood sugar level rose much more rapidly and declined more rapidly. When the apple juice was ingested, the blood sugar level shot up very fast and then plummeted swiftly. Researchers concluded that blending and juicing released the fruit sugar from the fiber in the fruit, thereby allowing faster absorption into the bloodstream. To the body, therefore, fruit juice is not much different from candy.

The word "carbohydrate" often conveys a negative connotation. This is because most people, when they hear this word, only think of refined carbohydrates such as cake, candy, soda pop, ice cream, white bread, donuts, white sugar, pastries, and others. But there is a world of difference between refined and unrefined carbohydrates, so much so that the former is hazardous to your health while the latter forms the major bulk of a healthful diet.

There are many reasons that refined carbohydrates (white flour and white sugar) are detrimental to your health. First of all, sugar is a major cause of overweight. It is a food with high caloric density, as is fat. You would need to eat 30-40 times more ounces of vegetables than ounces of sugar to get the same amount of calories.

For the number of calories supplied, sugar gives little feeling of fullness. Thus, you eat more and overdose on calories. The overweight which results increases the risk of heart disease, strokes, cancer, diabetes, and many other diseases.

Second, sugar and white flour are devoid of the vitamins and minerals needed for the body to burn these foods to create energy. Therefore, the body must draw upon its reserves of vitamins and minerals when sugar and white flour are eaten. If

too much of these foods is eaten for too long a time, vitamin and mineral deficiencies will inevitably occur.

Third, sugar causes tooth decay. This is a serious health problem which leads to complete loss of teeth by many Americans in later years of life. This loss, besides being of cosmetic and financial concern, also causes nutritional problems since it becomes difficult to eat healthful raw vegetables.

Fourth, sugar requires little digestion so it moves easily and rapidly into the bloodstream. This rush of sugar causes the blood sugar level to rise rapidly. In response to this, the pancreas secretes large amounts of insulin. This causes increased amounts of fats to be deposited on the walls of the blood vessels. These fat deposits are the basic cause of heart disease and strokes, and one cause of high blood pressure.

The rapid increase in levels of blood sugar and insulin also may result in an excessive drop in blood sugar levels, resulting in hypoglycemia. In some people, symptoms such as fatigue, shaking, depression, headaches, and weakness may occur.

Fifth, sugar is converted by the liver into a type of fat called triglycerides. High levels of this substance in the bloodstream are another cause of heart attacks, strokes, and high blood pressure.

Sixth, when the rush of sugar enters the bloodstream from the digestive tract, scientific studies show that white blood cells are affected. These cells destroy bacteria and digest waste material. The high levels of sugar effectively paralyze white blood cells for a temporary period of time. Therefore, if you eat candy when you have an infection, you may prolong the recovery time.

Seventh, sugar and white flour are devoid of fiber. Fiber deficiency leads to colon and rectal cancer, high blood cholesterol levels, hemorrhoids, varicose veins, and many other diseases.

Sugar and white flour, and foods containing these substances, should be avoided. Also, one should avoid fruit juices, dried fruits, honey, carrot juice and all other super-sweet foods since there is no significant difference between such foods and pure white sugar.

The good carbohydrates, however, should constitute most of the diet. Whole fruits, vegetables, and grains are the true health foods. They are low in fat, moderate in protein, and high in carbohydrates. They are loaded with the most natural form of vitamins and minerals. Much of the bulk is healthful fiber. You can eat almost unlimited amounts of these foods. But if you tend towards overweight, eat more vegetables and less fruits and grains. If you need to gain wait, do the opposite.

In today's world, the word "protein" has a positive connotation to it whereas the word "carbohydrate" is thought of negatively. We need a major change in thinking: protein should be removed from its pedestal, and unrefined carbohydrates put in its place. The high protein foods should be eaten in moderation, while the natural unprocessed carbohydrates should be used liberally. The refined and processed carbohydrates, white sugar and white flour, should be largely avoided since they have many deleterious effects on the health.

FOOD PROCESSING

The subject of food processing includes all forms of cooking and refining of food. When a food is harvested from the earth, it is totally unprocessed. Before most foods are eaten by human beings, some type of processing usually occurs. It is important to discuss the impact of processing on the nutritional value of food since such processing will usually reduce the health value of food.

The only creatures on earth that process food are human beings. No one has ever come upon an animal in the wild cooking food over a fire. Every form of life on earth besides human beings exists exclusively on raw foods. For many years, certain health teachers have advocated unprocessed, raw food. What are the scientific facts? Is there danger to health resulting from the processing of food?

The answer is yes. There is a significant loss of nutrients when food is processed.

Thousands of experiments have proven that food processing will usually reduce the nutritional value of food. We will discuss some of these studies. But, first, it is important to understand the limitations of modern scientific research. Remember that while it may be possible for a scientist to take a forest apart, it is not possible for a scientist to create a forest. Science has documented the loss of many nutrients when food is processed, but there are probably many undiscovered factors in food which are needed for good health. What is the impact of processing on these unknown factors? If such factors are destroyed, how can we replace them with food supplements? Obviously, we cannot replace what we have not identified. Therefore, even if we replace all the nutrients known to be destroyed by food processing, some of the health-supporting value of food may still be absent.

The only safe course is to eat most foods in the unprocessed form, just as they were created by nature. In 50 years, when scientists discover other necessary nutrients which had been destroyed by food processing, those who have eaten foods in the natural state will have no regrets. They will have remained well-nourished by depending on nature, not on modern science.

Generally speaking, when food is processed, there is a 15% loss of minerals, carbohydrates, fats, protein, vitamins K and B3 (niacin). The following nutrients suffer greater losses: vitamins A, D, E, B6, B12, B2 (riboflavin); pantothenic acid and folacin. There is a serious amount of loss of vitamins B1 (thiamine) and C from food processing.

When unrefined wheat is processed into white flour, there is an approximate loss of 70-80% of over 40 nutrients. When flour is enriched, only 3-4 nutrients are added. Therefore, refined grains have the distinction of being the most depleted of all foods by methods of processing.

Vitamins C and B1 are easily destroyed by heat. Generally, the more water used in cooking, the greater the loss of vitamin. Boiling can cause up to 65% loss of vitamin C, whereas waterless cooking causes only a 30% loss. An average loss of 50% is found with vitamin B1 after cooking.

Vitamins A, D, E, B6, B12, riboflavin (B2), pantothenic acid, and folacin are more stable than vitamins C and B1. Therefore, an average loss of 20% can be expected from cooking.

When foods are cooked in water, minerals can be leached into the water from the food. If the water is not used, the minerals can be lost. Unfortunately, there are no exact data as to the amount of minerals lost.

Cooking is also known to change the availability of minerals to the body. A mineral that becomes less available may be less easily absorbed and/or utilized by the body. Again, there are very few studies which clearly state the percent loss.

Protein can be damaged by heat. Amino acids are the subunits of protein and studies have found that cooking can destroy 5-17% of some of the most important amino acids.

Studies on the effects of food processing clearly show many losses of nutrients. But much is unknown. Scientists know that processing-related changes in the three-dimensional form of food, and in the chemical nature of food can reduce the amount of nutrients available to the body. Also, studies have shown that processing will reduce the amounts of some important nutrients. But the details are largely unknown. Since far more is unknown

than known about the effects of food processing, it is risky to depend upon processed foods for good nutrition. Be safe rather than sorry: eat most of your food in the raw, unrefined state.

Studying living beings is another approach to evaluating the effect of food processing on health. In clinical practice, a doctor can feed patients raw food exclusively and evaluate the result. In the United States, there is a 150 year old tradition of prescribing raw food diets to sick people. Hundreds of doctors have been involved. The cumulative opinion is that raw foods are considerably more effective in building and maintaining good health than are cooked foods.

A landmark study was done by Dr. Francis Pottenger in the late 1940s, and the findings were published in a major scientific journal. Dr. Pottenger experimented with diet changes using hundreds of cats. Some cats were fed raw meat and raw milk, while others were fed the same meat and milk in the cooked form. The differences between the groups of cats were dramatic.

In the cooked food group, miscarriages were common, internal organ and bone structure were abnormal, reproduction failed after a few generations, and behavior was irritable. In the raw food group, miscarriages were rare, organ and bone structure was totally normal, reproduction was healthy and normal, and behavior was calm. This study was so carefully designed that we can be sure that the only cause of illness in the cooked food animals was the destruction of health-giving properties in the food from cooking.

Scientific studies and clinical experience strongly indicate that food processing makes food less healthful. Choosing the proper type of food is important, but it is equally important to assure that the nutritional value is not destroyed by processing. The safest path to follow is to eat 75% of your food in the raw, unprocessed form. And if you are ill and attempting to rebuild health, eat 100% of your food raw for at least one month.

In some cases, supervision by a doctor will be necessary when the change is made from a cooked food diet to one high in raw food. Occasionally, raw food will be irritating to the digestive tract. With a history of a stomach ulcer or ulcerative colitis, raw food can be quite aggravating. If you experience any disturbing symptoms at any time, see your doctor.

FASTING

Do you believe that if you go without food for a day or two that you will starve to death? Most people feel sick after missing one or two meals so they conclude that a longer fast would be deadly. Nothing could be further from the truth.

Fasting for one to two weeks is a very common practice in many European countries. It is usually safe and, believe it or not, easy after the first day or two. It actually can be very good for your health!

The idea that fasting improves health is hardly new. Fasting was popular in the early days of recorded history and not just because food was hard to find. Socrates, Plato, Pythagoras, Hippocrates, Paracelsus, and others recommended fasting to clear the mind and improve health.

Fasting has been studied in depth by scientists since 1900. Also, fasting has been used by many doctors in health retreats since the mid-1800s. I interned in one such fasting retreat for six months in 1980 and saw over 1000 people fast for 5-25 days at a time.

Fasting can be safe and beneficial but only when an experienced doctor is available for supervision. Such a doctor can determine if fasting would be safe for you; how long you should fast; and when the fast must be broken. The rare horror stories about fasting result from improperly supervised fasts.

Fasting does not directly cure any disease. When you are sick your body does all the curing. Fasting simply provides an opportunity for your body to heal itself more rapidly and completely.

The body is best able to rid itself of toxins during a fast. Many health problems are the result of the build-up in any amount of toxins in the system, otherwise known as toxemia. Toxemia results either from the build-up of poisons such as lead, mercury, etc. that are toxic in any amount, or natural substances that are harmless in normal amounts but become toxic when there is too much in your system (example, cholesterol).

During a fast you do not eat any food, therefore your body must live on accumulated materials in the tissues and blood. The body first will burn up the least important materials available such as excess fat and toxins. As the level of fats and toxins is reduced, the body will work better and become healthier. The previous chapter on toxemia discusses this subject in greater depth.

Some people worry that if they stop eating the body will burn up muscle to survive. But studies of fasting have proven that the body prefers to burn non-essential substances like fat long before it will burn the protein of muscle. There are documented cases of obese people fasting 249 days in one case and 382 days in another with large losses of fat but no significant loss of muscle.

Potential fasters fear that they will not be able to cope with overwhelming hunger and so will fail at fasting. Yet studies have found that hunger usually disappears after the first two to five days of fasting, and that fasting generally is not difficult. One scientist wrote that "the most surprising aspect of this study was the ease with which the prolonged fast was tolerated." Another noted that many patients "reported a marked sense of well-being, suggesting a mild euphoria." The first day or two of fasting can be difficult because some people develop headaches, nausea, weakness, and muscle pain. But these symptoms rapidly disappear.

When should you consider fasting? Fasting is highly effective in heart and blood vessel diseases. Most heart attacks and strokes occur because fat deposits in blood vessels block blood flow. Fasting gives the body an opportunity to dissolve these deposits thereby reducing the risk of a heart attack or stroke and eliminating the need for coronary bypass surgery.

High blood pressure usually drops down to normal levels after a fast. Scientists have long known that a tremendous amount of salt and water are eliminated from the body during a fast and this is what actually causes the blood pressure to go down. After a fast, most people with high blood pressure will be able to stop taking medicine.

Arthritis (inflammation of the joints), colitis (inflammation of the colon), gastritis (inflammation of the stomach), tonsillitis (inflammation of the tonsils), and other inflammatory diseases usually result from a buildup of toxins. The body turns on the inflammatory process to destroy such toxins. During a fast the

body rapidly burns up and destroys toxins. As the toxin level decreases, the body turns off the inflammation and healing occurs. For more information on inflammation, refer to the chapter on that subject.

There are many illnesses, such as the common cold and the flu, that basically consist of the body's effort to eliminate garbage from the system. Symptoms include sneezing, coughing, nasal drainage, vomiting, diarrhea, etc. Most people have no appetite when they suffer from these illnesses. When you give in to the loss of appetite and stop eating, your body will be able to burn up and eliminate waste materials far more rapidly than if you keep eating. When the garbage is eliminated from your system, your body will turn off the sneezing, coughing, vomiting, diarrhea, etc., and you will feel well.

Fasting is of no help with cancer. If a cancer patient fasts, he will probably die more quickly. A cancer is like a parasite living off the body's internal tissues. The cancer will consume even more of the tissues when no food is eaten and the person will die earlier.

The story is very different with benign tumors such as uterine fibroids. These tumors are not cancers. When a person fasts, the body will break down and destroy such tumors in the same way that it consumes other nonessential tissues and waste products.

Fasting is not helpful for weight loss. Fasting actually causes a decrease in the rate of internal body activities (metabolism). After a fast, the body will burn fewer calories than before the fast. Therefore, if a person eats the same amount of food after a fast as he did before, there will be a net weight gain! Obviously fasting will not help a weight loss program.

Can fasting help the thousands of other diseases that we have not mentioned in this chapter? Remember that all healing is done by the body. During a fast, your body becomes more efficient at healing because it no longer must use tons of energy digesting and burning food. Therefore fasting helps many illnesses clear up more rapidly and completely. Consult a doctor who is an expert in fasting to get advice on a particular health problem.

Fasting is actually a diet consisting only of water. Juices are foods and so are not taken during a fast. A successful fast requires plenty of rest. You cannot hope to fast and go to work, take care of your family, exercise, write a thesis, read two novels per day, argue or be involved in any other stressful activity. You may be able to take a short walk if the doctor lets you, but you should expect that napping will be the highlight of your fasting day. Fasting for a human being is like a short period of hibernation for a bear.

How many days should you fast? This depends on the individual. If you are on a lot of medication, or if you are in frail health from a recent heart attack, stroke, or other extremely serious illness, you should not fast at all. The heavier you are the longer you can fast. But it is best not to fast more than three days without professional supervision. At a professional fasting retreat you may be able to safely fast for a few weeks.

It is very important to break a fast in the proper manner. Eating the wrong foods immediately after a fast can cause severe illness. The way to break a fast depends on the length of the fast. For example, after a five day fast you should drink diluted fruit juice (½ juice, ½ water) for breakfast; eat one piece of ripe fruit for lunch and another for dinner. The following day eat two fruits for breakfast, a vegetable salad for lunch, and raw and cooked vegetables for dinner. After this, you may begin to eat normally.

A fast of twenty days should be broken with two to three days of diluted fruit juice alternating with vegetable juice (a combination of green vegetable and carrot juice) followed by two days of small meals of raw fruits and vegetables. After this period, you can add small amounts of nuts, seeds, rice, bread, fish or chicken. You usually can begin to eat normally about ten days after the completion of a twenty day fast.

Fasting is not a miracle cure for all health problems. But a properly supervised and conducted fast can lead to dramatic health improvement. You may wish to seriously consider fasting if dietary changes, exercise programs, and other such measures have not improved your health as much as you would like.

VEGETARIANISM

A great interest in vegetarian diets has emerged in recent years. Some people are concerned with the high fat and cholesterol content of meat. Others feel that raising animals for food is cruel and that for this reason they should avoid meat.

Since there is so much interest in vegetarianism, it is important to discuss the possible advantages and potential hazards associated with such a dietary change. Fortunately, dozens of studies have been done on vegetarians so it is possible to know the facts.

All vegetarians are not the same. While all eat no meat, including fish and chicken, some do use eggs and dairy products; they are termed lacto-ovovegetarians. Others use dairy products but no eggs; they are termed lactovegetarians. The strictest vegetarians use no eggs or dairy products and are called vegans.

At least seven major studies have evaluated the health of vegetarians of all three classes. Researchers from the Loma Linda School of Medicine, the Harvard School of Public Health, the London Office of Health Economics, the Kingston Hospital in England, and other major scientific centers have taken complete medical histories, and performed thorough physical and laboratory examinations. No health problems associated with diet were found. Vegetarians were found to be at least as healthy, and in some of the studies healthier, than meat-eaters.

Many studies have found that vegetarians are less likely to be overweight than the average person. This is good since lower body weight reduces the risk of cardiovascular diseases, many types of cancer, diabetes, kidney and liver diseases, lung pathology, and problems in pregnancy and childbirth. Also, vegetarians consistently have been found to have lower blood cholesterol levels. This is responsible for a lower risk of heart attacks and strokes.

A vegetarian diet is much higher in fiber than the average diet. One study found that lacto-ovovegetarians consumed twice as much, and vegans four times as much fiber as non-vegetarians. A high fiber diet reduces the risk of diverticular disease of the colon, appendicitis, cancer of the colon and rectum, hiatus hernia, hemorrhoids, and varicose veins.

With a vegetarian diet, one avoids the harmful chemicals that are sometimes found in meat. In 1979, the General Accounting Office of the U.S. Government reported that 14% of meat in supermarkets contains illegal and potentially harmful residues of animal drugs, pesticides, and environmental contaminants. Of 143 chemicals likely to be found, "forty-two are known to cause or are suspected of causing cancer; 20 of causing birth defects; and 6 of causing mutations."

The American Dietetic Association reviewed all the studies on vegetarianism, with the conclusion that "well-planned vegetarian diets are consistent with good nutritional status."

Frequently people will say: "A vegetarian diet can be healthful but you must be careful in planning." The implication is that if one eats meat then he does not need to be careful in planning his diet, but in a meat-less diet caution is necessary. The fact is that caution is always needed in diet planning, whether meat is eaten or not. There is no greater need for caution with a vegetarian diet.

Is meat protein so unique and special that one cannot be healthy without it? Absolutely not. Where does steak get its protein? From the grass which the cow eats. The same protein is directly available to human beings from green vegetables and other vegetarian proteins.

Protein is made of amino acids. There are 22 amino acids in protein, 14 of which can be made by the body, but 8 of which must be provided by food. Scientists have found that all 8 of the essential amino acids are found in both animal and vegetable foods. For more information on protein, refer to the earlier chapter on this subject.

In the 1980s, there is no longer a concern for protein adequacy on a vegetarian diet. There are no nutrition scientists still concerned about this subject. In fact, nutritionists are unconcerned about any possibility of deficiency except in the case of one nutrient: vitamin B12.

Vitamin B12 is needed for normal functioning of the nervous system. A deficiency causes a sensation of pins-and-needles in the forearms, hands, legs, and feet, leading to weakness,

stiffness, unsteadiness, and fatigue. If a person is also deficient in another vitamin named folic acid, then anemia will occur with a B12 deficiency.

When foods are analyzed, vitamin B12 is not found in fruits, vegetables, grains (bread, rice, etc.), or beans. It is only found in meats, dairy products, and eggs. Therefore, most nutritionists state that a strict vegan diet will lead to a vitamin B12 deficiency. Vitamin B12 is exclusively manufactured by bacteria. These bacteria live in a cow's stomach. When they produce B12, it is absorbed into the bloodstream and then ends up in the muscle. When the cow is processed into steak and hamburgers, B12 is found in the meat.

Despite the fact that there is no B12 in non-animal foods, many studies on strict vegetarians have failed to find signs of B12 deficiency. Nonetheless, since scientists have not been able to find B12 in non-animal foods, vegans have been advised to take B12 supplements.

The solution to this mystery has recently been found. For years, it was thought that B12 produced by the bacteria that commonly live in the human intestine could not be absorbed by the body. However, in 1980 a study was published in a major British medical journal which found otherwise. Significant amounts of B12 are produced by intestinal bacteria in an area of the intestine where it can be absorbed. This is probably the reason that strict vegetarians almost never develop a B12 deficiency.

Regardless of diet, a B12 deficiency can occur as a result of sickness in the stomach, intestines, liver, kidneys, or certain other organs. If a person on any type of diet becomes ill, he should be examined by a doctor. A simple blood test can determine if there is the cause is a B12 deficiency.

Should all people become vegetarians? This is a matter of individual choice. All people do need to eat minimal amounts of high protein foods, most of which are animal foods. But there is no evidence that a small amount of meat is harmful. If animal foods are used, it is better to eat fish and chicken rather than red meat since the fat content is lower. Also, low-fat dairy products are superior to regular milk and cheese.

But, whether the high fat food is cheese, chicken, eggs, nuts, or seeds, it is important to restrict the amount to about 4-5 ounces per day (1/4 pound).

Is it safe to be a strict vegetarian? Yes. A study of all nutrients including protein and B12, and a thorough examination of all aspects of health, reveals that strict vegetarians are at least as healthy as non-vegetarians.

In fact, if you choose a vegetarian diet, you can expect a general improvement in health. The supposed dangers of vegetarianism are non-existent.

VITAMINS AND MINERALS

Vitamins and minerals are required by the body for normal functioning. A deficiency of vitamin C, iron, or of any other vitamin or mineral can lead to severe illness. It is important to be sure that you are getting enough of these nutrients every day.

Because vitamins and minerals are so important, most people are very concerned about getting enough. Millions of people take food supplements on a daily basis just to be safe. At the first sign of illness, many people will resort to the jar of vitamins. In any discussion of nutrition, it is crucial to cover the subject of vitamins and minerals.

How should we approach this subject? There are thousands of books which will tell you the vitamins and minerals you need, the amounts required, the sources in food for these nutrients, and the diseases which will develop if there is a deficiency. This is common knowledge so there is no need to discuss all of these subjects here.

But it is rare to find a book which will answer our practical questions. What do we have to do on a daily basis to be sure that we are getting enough vitamins and minerals? Do we need to take food supplements? Can we get enough vitamins and minerals from food? How careful must we be when we choose our foods in order to avoid deficiencies? Does modern agriculture produce foods which look good but are deficient in vitamins and minerals? When we are sick, should we take large doses of vitamins or could this be harmful? These are the significant questions that need to be answered.

First, let's take a look at the world of wild animals. In the beginning, man was part of this world. Do wild animals take food supplements? Did prehistoric man take vitamin pills? The answer to both questions obviously is no. Nature's plan has always been for all living creatures to derive complete nutrition from raw whole foods.

But in the 20th Century, many people have lost confidence in Nature. They believe that even a diet made of raw whole foods is inadequate. One reason is a concern that the soil on which foods are grown has been so depleted by destructive agricultural methods that even whole foods are deficient in vitamins and minerals. Therefore, supplements may be necessary.

In the last 50 years, thousands of scientific studies have examined these questions and provided answers. Are foods deficient in vitamins because the soil they were grown in was deficient in vitamins? The answer is no since plants do not get vitamins from the soil. Plants produce these nutrients from carbon dioxide, water, and the energy in sunlight. The plants must produce vitamins for their own needs. The vitamin level in plants is affected only by the weather and amount of sunlight, not the soil.

In one study, scientists experimented with tomatoes. A few dozen tomato seeds of identical type were used. Seeds were grown in five widely separated locations in the U.S. using local soil. At the end of the growing season, the tomatoes from all locations were analyzed for vitamin C content. Vitamin C levels varied based on where the tomatoes were grown.

The next year, scientists had the soil from these five locations shipped to their laboratory and put in separate containers. The same tomato seeds were grown in the different soils in the same location. When the tomatoes were harvested, they were analyzed for vitamin C content. There was no difference found even though different soils were used.

Many similar experiments have convinced scientists that vitamin content will be the same regardless of soil factors. Sunlight and other environmental factors are responsible for the minor differences that are sometimes found. Therefore, if the plant grows, you can be sure that it will provide you with the normal amount of vitamins.

With minerals, there is also little reason for concern. Almost all minerals, such as calcium, iron, magnesium, zinc, copper, manganese, boron, and others are needed for normal plant growth. Any textbook on plant nutrition will show how plants use these minerals. Calcium, for instance, is needed to build cell walls in plants. If the soil is too deficient in calcium, the plant will not grow.

If the soil is deficient in a mineral, a plant will not grow properly and the farmer will not be happy. Therefore, the soil will be analyzed to see what is lacking. Such soil analysis has been

in use for most of this century. If a deficiency is found, the farmer will add the needed mineral to the soil. This is an inexpensive and simple process. Once the mineral has been added, the plant will use it and grow normally. At harvest, a food with normal mineral content will be sent to the market.

The only complication comes with the minerals which human beings need, but plants do not. There are four such minerals: iodine, chromium, selenium, and cobalt. If all our food were grown in soil deficient in these minerals, we would have a problem. The plants would grow normally, but we would become ill from mineral deficiencies.

Fortunately, however, our food is grown in many areas. On some farms, the soil is deficient in iodine, chromium, selenium, or cobalt. But many farms have plenty of these minerals in the soil. A small amount of our food may be low in one of these minerals, but most of the food we eat will contain adequate amounts. This protects us from deficiencies.

Since people have begun eating foods grown on a wide variety of soils, there have been no cases of vitamin or mineral deficiencies resulting from a soil deficiency. Deficiencies in human beings have been found, but only from poor choices of food, including the use of processed foods which have had their vitamin and minerals destroyed or removed.

Many foods are harvested when they are not yet ripe. Tomatoes, for instance, are picked green so that they can be shipped. Is there a loss of nutrients when a food is harvested before it is ripe? Studies have found that "ripening on the vine or plant does not always produce higher vitamin content." Pineapples ripened on the plant have less vitamin C than those picked green. Tomatoes, however, lose about 30% of their vitamin C when they are picked green. Vitamin content, then, is increased in some foods when picked green, but decreased in others. Since the change in vitamin content is not great either way, we do not need to worry about developing a deficiency as a result of the timing of the harvest.

So now we know that the foods harvested from farms have all the vitamins and minerals we need for optimal health. But what happens after the harvest? Is there a loss of nutrients from the time spent in transport or in storage?

In studies, scientists usually measure vitamin C levels since this vitamin is considered to be an overall indicator of nutrient retention after harvest. Many studies have shown that if the food is properly handled after the harvest, there will not be a significant loss of vitamins. Food must not be bruised, dried out, or exposed to warm temperatures. If the food does not look wilted or damaged in the store, if it appears fresh and crisp, you can be sure that most of the vitamins are still intact.

Ensuring optimal vitamin and mineral nutrition with food is easy. In a later chapter, I will describe sample dietary plans and show how good nutrition can be easily assured. Generally, you must first be sure to eat plenty of raw foods, since cooking destroys a significant amount of vitamins. Also, avoid refined foods such as white flour and white sugar since they have 85% less nutrients than their unrefined counterparts.

If you eat two or three whole fruits, one large raw vegetable salad, and avoid white flour and sugar, you will never develop a dietary deficiency of vitamins and minerals. There will be no added benefit from taking supplements. The details of a complete health diet will follow in a later chapter.

TO SUPPLEMENT OR NOT

In the previous chapter, we established that the food we buy in supermarkets, if not refined or overcooked, will contain all the vitamins and minerals we need. Some people feel, however, that they should take a supplement just to be safe. Others feel that they should take very large doses of vitamins and minerals to either prevent or treat disease.

In a later chapter, I will describe in detail the recommended diet. An analysis of this diet will show that it is more than sufficient in all vitamins and minerals. Therefore, if one follows this program, there will be no need for supplements.

But what if we don't eat healthfully? What if we regularly eat white bread, candy, and canned vegetables, and almost never eat raw fruits and vegetables? Should we take supplements?

The answer is complicated. Strictly speaking, it is true that if the diet is deficient in vitamin C, then it will be better to take a vitamin C supplement. But, overall, supplements cannot make up for an unhealthy diet. Many of the negative aspects of a poor diet result from excesses of fats, proteins, and sugars. No supplement will protect against this type of damage.

Also, there is no such thing as a "complete" supplement. For instance, it has been known for over ten years that human beings need silicon, tin, and nickel. These trace minerals are found in food, but there is no supplement that includes them. And what about the substances in food that the body needs but which have not yet been identified? The world of nutritional science is not yet perfect. We can only be sure that we are getting all the nutrients we need when we rely on food, not pills.

What about a totally natural food supplement? Why not use one for security? The fact is that there is no such thing as a totally "natural" food supplement. To make a food supplement, the food must be harvested and dried, the vitamins must be extracted, concentrated, and mashed into pill form. The end result is no more "natural" than white bread.

Food supplements create a false sense of security. People think they do not need to be concerned about eating properly when supplements are used. The pill supplies everything necessary, so why not eat donuts for breakfast? But this is dangerous course to take because no pill supplies all the nutrients which are missing in donuts made from white flour and white sugar.

Also, food supplements are often very expensive. When people understand that they can get what they need from food, they are happy to save the money spent on vitamins.

We have been discussing low dosage supplements. While they are unnecessary, at least they are harmless. What about megadoses? A megadose of a vitamin or mineral is a level of dosage that one could never get from food. For instance, if you ate a large amount of fruits and vegetables, you could get 500 milligrams of vitamin C per day from food. The Recommended Dietary Allowance (RDA) is 60. To treat colds, some people take 5000-20,000 milligrams of vitamin C per day. This is definitely a megadose.

Many people think that, if a small amount of vitamins and minerals is good, twenty times more will be better. But this large a dose turns the nutrient into a drug, complete with hazardous side effects.

The science of biochemistry teaches that vitamins and minerals are to the body what spark plugs are to a car. If you wanted better performance out of your six cylinder car, would you try to install ten spark plugs? Of course not, since the need for spark plugs in such a car is limited by the number of cylinders. Adding extra spark plugs would not help the engine.

The same is true with vitamins and minerals. The body needs a certain amount, but this is easily supplied by a healthful diet. The extra vitamins and minerals cannot be used nutritionally.

Some people feel much better when they take megadoses of vitamins and minerals and consider this proof that the megadoses fulfilled a nutritional need. But this is not good reasoning since a sense of feeling better can also result from taking a drug. When one takes aspirin for a headache, the pain will disappear. Does this mean that the body needed aspirin to function normally, and that a headache is a sign of aspirin deficiency? Obviously, the answer is no. But when a large dose of vitamin C decreases the congestion of a cold, people believe that the vitamin corrected a deficiency and so the body healed

itself more rapidly. The fact is that vitamin C in large doses works like an antihistamine drug, just like those advertised on TV. The elimination of mucous when one has a cold is desirable, since it reduces the load of waste products and toxins in the bloodstream. Antihistamines, including vitamin C, decrease the amount of mucous eliminated, and should therefore be avoided.

To protect your health, remember that megavitamins are drugs, not nutrients. Large doses of vitamins cannot be used as nutrients, any more than your car could use ten spark plugs. When one feels better after taking a megadose, the effect is the same as when any drug is taken. Drugs suppress symptoms but do not relieve the cause of the symptom.

Vitamins C, B3 (niacin), and E are three of the most common vitamins used in megadose amounts. C is used for colds, B3 to lower cholesterol levels, and E to improve circulation. There is some limited evidence that each will accomplish the desired result, but the effect is pharmacological, not nutritional.

One way to determine if we are dealing with a drug or a nutrient is to look for side effects. Nutrients are used by the body with no signs of any illnesses developing as a result. Drugs interfere with normal body function and signs of illness commonly result.

Megadoses of vitamin C have been proven to destroy red blood cells; irritate the lining of the intestine; cause kidney stone formation; interfere with use of iron, copper, vitamin A, and bone minerals; cause infertility and fetal death; cause diabetes; and cause rebound scurvy. Scurvy is the disease that results from a true vitamin C deficiency. If you take large amounts of vitamin C for a long time, your body will begin to consistently eliminate more C every day. If you suddenly decide to stop taking C, you will become deficient because it takes a long period of time for your body to begin to eliminate less C every day.

Megadoses of niacin (B3) cause liver damage, elevated blood sugar and uric acid levels, and abdominal pain.

Megadoses of vitamin E result in more deposits of cholesterol in blood vessels, elevated blood fat levels, abnormal clotting of the blood, faster growth of lung tumors, decreased absorption from the intestine of vitamin A and iron, stomach problems, skin rashes, disturbed thyroid gland function, and damage to muscles.

The many side effects which result from the use of megavitamins proves that such large doses have a drug, not nutritional, effect. Most people who take megadoses condemn drugs which have side effects similar to those found when excessive vitamins are taken. It is time for the public to realize that megadoses are drugs.

When healing is necessary, the body will automatically initiate the mechanisms of healing. To support the healing process, the body requires the amount of vitamins and minerals that is easily available in a wholesome diet. Megadoses of nutrients function like drugs: they only suppress symptoms without really "curing" anything, and they are always accompanied by side effects. If you are really serious about finding an alternative to medical care, don't fall for the use of drugs with a different name: megavitamins.

CALCIUM AND DAIRY PRODUCTS

A great concern about getting enough calcium has developed in recent years. Many people believe that it is easy to become deficient in calcium, and the only way to be safe is to use large amounts of dairy products. What are the facts?

The ultimate authority on nutritional needs in the United States is the National Research Council of the National Academy of Sciences. Every five to ten years, they publish an updated version of the book *Recommended Dietary Allowances.* The most recent edition was printed in 1980, with a full chapter on calcium.

The Recommended Dietary Allowance for adults is 800 mg/day. This is the amount found in 3 cups of milk, or in 3 ½ ounces of cheese, or in 2 ½ cups of almonds, or in 5 medium stalks of broccoli. Calcium is found in many foods, but more is found in dairy products than elsewhere. Since the need is understood to be 800 mg/day, it would seem that dairy products would be required to meet this need since they are so concentrated in calcium.

But how can it be that adult human beings must use the milk of adult cows to get enough calcium? The adult cow does not drink milk. In fact, no other adult mammal uses dairy products. In the biological kingdom, milk is only provided for infants until they are weaned. And, except for human beings, no other lifeform uses the milk of another species.

Usually, the discussion of calcium starts and ends with the figure of 800 mg/day. But, there are many other important matters discussed by the National Research Council. For instance, the figure of 800 mg/day is not considered an absolute requirement, but rather as a "guide for planning food supplies." It is recognized that "children do in fact grow healthy bones and that adults remain in calcium balance despite lower calcium intakes."

The World Health Organization is quoted as saying that the need for calcium is "between 400 and 500 mg/day because there appeared to be no evidence of calcium deficiency in countries in which calcium intakes were of this order." Many studies have found that an intake of 200-400 mg/day of calcium has never been linked with any disease.

So why is the U.S. RDA 800 mg/day? Because of the "high levels of protein and phosphorus provided by the U.S. diet." High protein foods are meats, dairy products, beans, nuts, seeds, and eggs. High phosphorus foods are meats, dairy products, and soda pop. Many studies have shown that when a diet high in protein and/or phosphorus is eaten, the body will lose large amounts of calcium in the urine. Therefore, if one eats less than the usual amount of protein and phosphorus, the need for calcium will be far below 800 mg/day.

Cow's milk is much higher in phosphorus than human milk. Also, it is high in protein. Therefore, the more cow's milk you drink, the more calcium you will need. To protect against a deficiency of calcium, most people use large amounts of a food which contributes to calcium deficiency. This is not very sensible.

Of all foods, dairy products are the most likely to cause allergies. For this reason, the American Academy of Pediatrics has recommended that no infants younger than six months of age be given cow's milk products. Doctors commonly find in practice that patients feel better when they avoid dairy products. Also, dairy foods are very high in fat and calories. The animal fat in dairy products is part of the cause of heart attacks, strokes, and cancer of the breast, colon, and prostate.

For all the above-listed reasons, I usually recommend that people eat no dairy products. Human beings only need dairy foods in infancy, and at that time they need human milk, not cow's milk. There is a vast difference between these two types of milk. I will discuss this further in the chapter on feeding children.

The eating plan recommended in this book provides far less protein and phosphorus than the customary U.S. diet. Therefore, the need for calcium will be much lower than 800 mg/day. When the calcium requirement is much lower, it can easily be met without using dairy products.

How can a diet be set up to provide enough calcium without milk and cheese? It is easy. Remember that the cow's milk contains calcium because the cow ate plenty of plant foods. If

we bypass the cow and eat as the cow eats, we can assure adequate calcium intake without using milk. Plant foods are superior since they do not supply the large amounts of protein and phosphorus found in milk which increase the need for calcium. Also, plant foods are not as rich in fat as are dairy foods, therefore they do not increase the risk of disease.

The following menu provides all the calcium you need on a diet lower than the average in protein and phosphorus: breakfast of one orange (54 mg calcium), one banana (10 mg), one ounce of nuts (50 mg). Lunch of a salad with one carrot (18 mg), one stalk of celery (16 mg), 1/2 cucumber (17 mg), 3 large leaves of leaf lettuce (51 mg), and one tomato (24 mg). Also for lunch, one slice of whole wheat bread (25 mg), and one cup of cooked green peas (37 mg). For dinner, a repeat of the lunch salad plus 1/2 cup cooked beans (75 mg), and one medium sized stalk of broccoli (158 mg). Total for the day is 661 mg. This amount is scientifically proven to be more than adequate, and no dairy products have been used.

What about osteoporosis? Should excessive amounts of calcium be used to prevent this condition? The National Research Council reviewed hundreds of studies and concluded that "it is impossible to prevent osteoporosis in adult life with dietary calcium alone."

Harrison's *Principles of Internal Medicine* is considered a highly respected text. Based on many studies, the authors state that no difference in calcium intake has ever been found between people who have osteoporosis and others of the same age without this condition. In fact, osteoporosis is not primarily from loss of bone calcium, but rather from loss of the fibers in bone upon which calcium is deposited. This text concludes that osteoporosis seems to be related to a high protein intake and a sedentary lifestyle. In the same way that lack of exercise leads to weaker and smaller muscles, many scientists feel that a sedentary existence may weaken the bones and cause osteoporosis.

From the facts we know that it is easy to get enough calcium on a low protein diet without using any dairy products. Also, osteoporosis is not from a calcium deficiency. Why, then, do most people believe that using too little milk and cheese will cause their bones to turn to dust?

The answer is quite simple: dairy industry propaganda. We are surrounded by advertising for milk and cheese. Grade schools teach that children need milk, and they provide it at lunch. Billboards, TV and radio ads, and pamphlets at supermarkets all cry out at us to drink more milk and eat more cheese. Milk has become as American as apple pie and the flag. But remember the facts about milk, calcium, and osteoporosis and don't succumb to this high pressure advertising campaign. Your health will be better as a result.

FEEDING BABIES

All the diet ideas discussed so far are suitable for adults and for children past the age of 2-3. Feeding infants and babies requires a different approach. How can you assure safe nutrition for your children?

For the first six months of life, Nature provides a perfect food: human breast milk. This should be the only food for at least the first four months. For the remainder of the first year of life, breast milk should be used to the greatest extent possible. Breast milk is nutritious enough to serve as the only food for the first year.

For many years, doctors thought that cow's milk was a good substitute for human milk. But scientific studies have proven otherwise. Human milk has many unique properties.

In contrast to cow's milk, human milk contains a growth factor that helps the intestines mature properly. Normal maturation improves the ability of the intestines to process food. It also helps the intestines block absorption of unwanted substances. This reduces the chance of allergies in later life.

Other factors found only in human milk reduce the risk of infectious diseases. Because of these factors, breast-fed babies have far fewer respiratory and gastrointestinal infections.

The fat in human milk is more completely digested than the fat in cow's milk. This is because human milk contains the enzymes needed to digest fat.

Human milk is higher in cholesterol than is cow's milk. The higher level of cholesterol is thought to stimulate the body's mechanisms for dealing with cholesterol. Therefore, in later life, a person who was breast-fed will be better able to maintain a lower blood cholesterol level.

Obesity in adults is a serious problem since it contributes to the formation of many diseases such as diabetes and heart disease. Breast-fed infants have a lower risk of becoming obese and developing these diseases in adult life.

Breast milk, but not cow's milk, contains the amino acid taurine. This chemical is needed for normal maturation of the nervous system. A deficiency of taurine may lead to a lower IQ in adult life.

It is clear from the above that human breast milk is the ideal food for infants. Therefore, it should be used for at least one year. It is healthful to breast-feed even longer.

Occasionally, circumstances make the use of breast milk impossible. Such is the case with adopted babies. If breast milk cannot be used, the best substitute is a soy-based formula. Even though breast milk is the ideal, babies fed soy formula can develop normally and be healthy.

Solid foods can be introduced as early as four months. Each infant is different, so the exact timing can vary. When an infant expresses interest in the food his family is eating, he is usually ready for solid foods.

The first foods should be blended or mashed fruits and vegetables. Unsweetened apple sauce, mashed bananas, blended steamed peas or yams, mashed avocado, blended melons, and other such foods are excellent for a start. It is best to introduce only one new food every three days to monitor for allergies.

After a few weeks on fruits and vegetables, cereals may be introduced. It is best to start with oats, rice, and corn. Wheat and rye should not be used until at least six months of age because they cause more allergy problems. To prepare these cereals, cook whole oatmeal and brown rice, then blend. Or buy puffed brown rice and puffed corn, then blend. Mix with expressed breast milk or fruit juice. Always use a three-to-one ration of fruits and/or vegetables to cereals.

As the months pass and the infant drinks less breast milk, the need for solid foods will increase. After the age of six months, begin to use high protein foods such as tofu, nuts, nut butters, seeds, seed butters, beans, and split peas. Begin with about three tablespoons per day, and increase to ten per day at three years of age. Many of these foods will require blending in the beginning. Dried fruit spreads are good and can be made by blending dried fruit like peaches with water.

If the family chooses a non-vegetarian diet, small amounts of fish and chicken can be used as high protein foods.

In a strict vegetarian diet which includes no meats, fish, dairy products, or eggs, deficiencies are unlikely. The most common ones are of calories, zinc, and vitamin D. On a diet

which is not excessive in protein, calcium needs are easily met (see chapter on calcium). Vitamin B12 is produced by intestinal bacteria, therefore this nutrient is not a concern (see chapter on vegetarianism).

The calorie need can be met by eating plenty of fruits, dried fruit spreads, nuts and seeds and their butters, and avocados. Zinc is found in beans, nuts, seeds, and tofu. Vitamin D can be formed by the skin when it is exposed to moderate amounts of sunlight.

It is best to have your baby's diet supervised by a knowledgable doctor. In this way you can be sure that the diet is nutritionally complete.

If symptoms of illness develop in your child at any time, see your doctor. But remember certain general rules: when your child is sick and does not want to eat, don't force him. Also, when illness occurs, it is best to feed a light diet of fruits and vegetables, or to skip a few meals altogether. This type of approach in illness is of great help in cases of recurrent ear infections, asthma, chronic colds, and allergies.

You will notice that cow's milk products have not been recommended for use by infants and children. For a more complete discus- sion of this matter, refer to the chapter on calcium and dairy products. Since cow's milk has been designed by Nature for cows, it is unnecessary and often unhealthful for human beings. Protein and calcium needs can easily be met without it. The only appropriate milk for babies is human milk. After weaning, no milk of any type is needed.

After the first year or two of life, children begin to develop food desires of their own. These desires may include fast food hamburgers, ice cream, cookies, etc. Should parents prohibit all such foods? Or should the child be allowed to eat whatever he wants?

A careful balance must be achieved. Even though junk foods are unhealthful, strict prohibition may cause a child to rebound in the other direction and eat *only* junk foods when he has more control over his diet. But a diet exclusively of junk foods is obviously unacceptable. A workable compromise is to use sweets and fast foods only for birthdays and holidays.

Raising children is a joy. When you feed your child healthfully, he will develop into a strong and vigorous adult. Following the recommendations in this chapter will get your child off to a good start.

HERBS

An herb is any type of vegetative growth. All growing plants, therefore, can be classified as herbs. Some herbs, such as lettuce and celery, are used as foods. Some herbs, such as sweet basil and summer savory, are used as seasonings. Other herbs, such as ginseng and golden seal, are used as medicines.

What is the place in a healthful living program for herbs? Obviously, the herbs which can be used as foods should be included in generous amounts. It is best to eat plenty of lettuce, tomatoes, cucumbers, carrots, squash, green beans, peas, and all other herbs which can be used as foods.

The herbs which can be used as seasonings are in fact good foods with an appealing aroma and taste. The list of such herbs includes sweet basil, summer savory, marjoram, thyme, oregano, mint, sage, and others. One of the best ways to make food taste good without using salt is to develop combinations of flavorful herbs to sprinkle on food.

The last major category of herbs is the type used as medicines. Health-related magazines are full of advertisements for this type of herb. One herb is recommended as a cure for arthritis, another for cancer. One herb will supposedly make your skin soft as silk, while another will totally solve the nasty problem of constipation. Should you include medicinal herbs in your health-building program?

No. It is best to totally avoid medicinal herbs. The promoters of these herbs claim that they are natural safe alternatives to drugs. Yet the fact is that medicinal herbs are identical to drugs, they rarely are safe, and they are no more natural than poison ivy.

Herb promoters often say that any green plant pulled from the soil and consumed without any processing is safe and healthful. Recently, a passenger on a river trip unknowingly tested this concept. When the boat stopped at a beach along the river, the passenger picked a pretty green plant and ate it. Within minutes, he was dead. The plant happened to be water hemlock, a deadly poison.

Clearly, then, all green plants are not safe. Some are fine to use as foods, whereas others are extremely toxic. We must be discriminating about which herbs we eat.

Herb promoters usually state that drugs prescribed by medical doctors are pure poisons and should almost never be used. However, they say that herbs are natural, safe, and fine to use on a regular basis.

What is ignored is the fact that most medical drugs have come from herbs. Large pharmaceutical companies send teams of researchers to the far ends of the earth to find out what herbs the "natives" are using when they become sick. When the scientists find a popular plant, they bring samples back to the lab, isolate the chemicals within the plant that have drug effects, develop methods of synthesizing these chemicals in the laboratory, and market their new drug.

A few hundred years ago, pioneers in North America found Indians using the bark of the willow tree to get rid of headache pain. What could seem more natural than the bark of a tree? Yet the reason the bark helps with headaches is because it contains salicylic acid, the chemical in aspirin. Salicylic acid is a drug whether it is found in willow bark or in aspirin tablets.

The foxglove plant contains digitalis, a powerful and potentially dangerous heart drug. The only difference between taking foxglove and purified digitalis is the concentration of digitalis. The adverse effects of foxglove are the same as for digitalis.

Most herb books present the opinions of the author and the people with which he has studied. Scientific references are almost never found. However, a new book, *The Honest Herbal*, published in 1981, is an exception. Every statement about herbs is backed up by a reference to a scientific journal.

A list of herbs which are proven to be unsafe includes angelica, apricots pits (laetrile), blue cohosh, broom, calamus, canaigre, chaparral, coltsfoot, comfrey, dong quai, eyebright, liferoot, mistletoe, poke root, sassafras, and wormwood. Don't underestimate the danger of these herbs; sassafras and comfrey, for instance, have been proven to cause cancer.

There are many other herbs that are not definitely known to be dangerous, but their safety is in doubt. I would advise

avoiding these herbs. The list includes bayberry, betony, black cohosh, devil's claw, ginseng, gotu kola, juniper, licorice, lobelia, mormon tea, muira puama, pollen, propolis, raspbery, tansy, and yohimbe. Ginseng, the most popular of this group of herbs, has been linked to disturbances in blood pressure and mood.

Herbs which are considered safe are alfalfa, aloe, arnica, barberry, boneset, borage, buchu, burdock, calendula, chamomile, yarrow, chickweed, chicory, cucurbita, damiana, dandelion, echinacea, fennel, fenugreek, fo-ti, garlic, gentian, goldenseal, hawthorn, hibiscus, horehound, horsetail, hyssop, kelp, linden flowers, lovage, mullein, myrrh, nettle, papaya, passion flower, peppermint, red bush tea, red clover, rose hips, rosemary sarsaparilla, savory, saw palmetto, scullcap, senega snakeroot, senna, spirulina, uva ursi, valerian, witch hazel, yellow dock, and yucca.

It is important to understand that some of the herbs which are considered safe, such as goldenseal, still may have drug effects in the body, including side effects. Scientists consider aspirin, Tylenol, and Motrin safe even though they are drugs with many side effects.

Probably the most important aspect of the herb discussion is the reason for using herbs. When the body is not working properly and we feel ill, the body will actively try to correct its problem. We need to help by removing the cause of illness, for instance stress, improper foods, lack of rest, etc. Attempting to "cure" the disease with herbs will never force the body to heal faster. So-called healing herbs only cover up the symptoms of disease, much like aspirin masks the cause of headache pain. Since the symptoms of disease are manifestations of the disease and not the disease itself, getting rid of symptoms will not improve health.

The herbs which are effective in reducing the severity of symptoms are drugs just like the others which can be purchased in drug stores. The only difference is the external appearance: herbs usually come in bags of dried plant material, while drug store medications are in bottles in the form of pills and capsules. Side effects which have a negative impact on health are found in both cases.

Greater health can only come from a deeper commitment to healthful living practices, not from pills, powders, and potions. Don't settle for less than the real thing. Dietary changes, exercise programs, more relaxation, and other beneficial changes will improve your health. Medicinal herbs will only make you less aware of your health problems. They cannot produce healing.

EXERCISE

Regular exercise is required to build and maintain good health. Diet is very important, but a good diet without regular exercise will not result in health.

We tend to think that exercise is only for fun. Certainly the type of exercise we choose must be fun or we will not do it regularly. But exercise does far more than make us happy. It is needed to make us healthy.

In the early days of Man's history, regular and strenuous exercise was commonplace. Primitive man had to cover many miles every day in his search for food. The Hopi Indians are said to have run 40 miles each way to tend their gardens every day. Roman soldiers often marched 40 miles a day dressed in 100 pounds of armor.

Today, however, such strenuous physical activity is rare. Modern civilization has eliminated the need for it. In fact, in many circles, vigorous exercise is unfashionable. People will cruise parking lots to find the closest space so as to avoid walking an extra 100 feet. We will use electric can openers to avoid the effort of manual openers. The life of luxury often seems to be a life of sedentary activities.

But we pay quite a steep price for a sedentary existence. The body requires regular physical activity to build and maintain health. Exercise is not a luxury. It is an absolute necessity.

This does not mean, however, that everyone must run 10 miles per day. The required amount of exercise to build and maintain health is far less. We can definitely get the exercise we need without working so hard that we feel a sense of intense suffering. Exercise can and must be a joy. If we do not truly enjoy our exercise program, it will not last for long.

Why do we need to exercise? The main reason is to maintain the health of the cardiovascular-pulmonary system. This system is responsible for supplying the most essential nutrient of all to the cells of the body: oxygen. The lungs must move oxygen from the air to the bloodstream. The heart must pump the blood to transport oxygen from the lungs to the cells. The blood vessels must carry the oxygen efficiently. Without exercise, these tasks will be done insufficiently and health will not be achieved.

Exercise strengthens the body systems which supply blood to the cells. This improves the delivery not only of oxygen, but also of all vitamins, minerals, proteins, hormones, and other essential nutrients and chemicals. Exercise also pumps the lymphatic system which drains waste products from cells. There is no other pump to power the lymphatic system.

Exercise also helps in weight control. Regular exercise will speed up the body's metabolic rate and increase the amount of muscle so that more calories will be burned 24 hours a day.

There is no doubt that exercise is beneficial. Scientific studies have proven time and again that people who exercise regularly in the proper way have a lower risk of heart disease and strokes. These cardiovascular diseases kill more Americans than any other diseases, including cancer. Besides conditioning the heart, lungs, and blood vessels, exercise has a beneficial effect on blood cholesterol levels.

Dr. Kenneth H. Cooper, M.D., has done more to promote the benefits of exercise than any other person in this country. Millions of copies of his book *Aerobics* have been sold. He states that exercise can help patients with asthma, bronchitis, emphysema, tuberculosis, heart disease, strokes, congenital heart defects, high blood pressure, varicose veins, stomach ulcers, diabetes, obesity, back pain, arthritis, glaucoma, depression, and anxiety. Obviously, exercise is good for you!

Exercise can build health, but only if it is the correct type of exercise. The most healthful type of exercise is aerobic. This is the type that increases the heart rate and makes you breath harder. There are specific guidelines to follow to assure that your exercise program is of the right type.

Other types of exercise which are not aerobic are aimed at muscle strengthening or stretching, relaxation or recreation. Weight lifting will strengthen muscles; it is fine if one is careful, but it is not essential for good health. Muscle stretching exercises are required both before and after aerobic exercises. But, by themselves, they will not improve health. Relaxation exercises such as Hatha yoga are quite effective in reducing tension, but useless in promoting good cardiovascular-

pulmonary health. Recreational exercises such as golf and bowling are enjoyable but not a substitute for aerobic exercises.

Aerobic exercises include walking, jogging, running, hiking, swimming, bicycling, handball, racquetball, basketball, jumping rope, rowing, dancing, ice or roller skating, tennis, and squash. These exercises, and possibly others that have not been listed here, are aerobic because they can be done continuously and steadily with no interruptions for at least 12 minutes at a time, and they are vigorous enough to assure that your heart will beat at the training heart rate for the entire 12 minutes.

How do you compute your training heart rate? Count your resting heart rate in bed in the morning before arising by touching a finger to the thumb side of your wrist or the side of your neck. Count the number of heart beats in 6 seconds, then multiply by 10.

Next, subtract your age from 220. This gives your your maximum heart rate. The final step is to subtract the resting heart rate from the maximum heart rate, multiply this number by .65, then add the resting heart rate to this figure.

For example, take a 40 year old man with a resting heart rate of 70. 220 minus 40 equals 180. 180 minus 70 equals 110. 110 times .65 equals 71.5. 71.5 plus 70 equals 141.5. Therefore, this man must exercise for 12 minutes with his heart beating at the rate of at least 141.5 beats per minute.

This method is the most accurate way of determining the training heart rate. A simpler but less accurate method is to subtract your age from 220, then multiply by .75. In the above example, the result using this simpler method is 135. In this case, the result is close using both methods. But this does not always occur.

There are a few other rules you need to know to exercise the proper way. First, do a slow version of the exercise you have chosen for 3-5 minutes to warm up before, and then 3-5 minutes more to cool down after exercising. Second, stretch the muscles you are using both before and after exercising. Third, exercise a minimum of 3-4 times every week.

Recently, reports of occasional deaths from exercise have surfaced. To avoid any risk from exercising, get a complete physical exam within one year before starting an exercise program if you are under 30 years of age. If your age is 30-35, get a physical exam and a resting electrocardiogram within six months of beginning your program. If you are over 35, get a physical exam and both a resting and stress electrocardiogram within three months of beginning an exercise program.

A resting electrocardiogram will check your heart while you are lying still. A stress electrocardiogram will check your heart when it is working hard as a result of exercising. The doctor will have you run on a treadmill as he performs this test.

Remember, exercise does not have to be painful. It should be fun. There is no need to overexert. Build up your endurance safely, slowly, and progressively. One of many studies that proves that the necessary amount of exercise can be quite comfortable analyzed the effects of walking. It was found that walking at a rate of 3 miles per hour for 30 minutes at a time, 5 days a week, was enough to qualify as aerobic exercise if 6.5 pounds was carried on the back. This speed of walking, one mile in 20 minutes, is not particularly fast. 6.5 pounds is not very heavy. But this is all the exercise you need to do to fulfill your body's needs.

Exercise is crucial for building and maintaining health. Make it a regular part of your life. The investment of time and energy into exercise will pay off better than many others you might make.

STRESS

A book on health would be incomplete without a chapter on stress. This is because excessive stress will cause poor health even if we eat properly and exercise regularly. We must recognize the level of stress in our lives and alter our way of living so that the level is not excessive.

What is stress? It is the response of the body to any demands made on it. The body responds to demands by increasing muscle tension, heart rate, blood pressure, hormonal output, and other changes. These responses increase the body's ability to either face a specific demand and deal with it, or to flee from it.

Many people think that the word "stress" implies that there has been a negative experience such as death, divorce, financial loss, or illness. But a significant amount of stress can also be generated by a positive event such as birth, marriage, a desirable job change, or a large inheritance.

Should we attempt to avoid all stress? No. We require a moderate amount of stress in our lives to serve as a stimulus for constructive activities and positive changes. A complete absence of stress would be overwhelmingly stressful!

Therefore, the goal is not to eliminate stress, but to keep the level of stress within reasonable limits, neither too high nor too low. Sometimes we can moderate the level of stress by changing jobs, homes, or spouses. But usually such changes are not feasible. In most cases, we must deal with stress by changing ourselves. There are many ways to accomplish this which we will discuss later.

What health problems are influenced by stress? All of them. In my practice, I rarely see someone whose health problems are totally from stress. But, I have never seen anyone who has so little stress that his problems are not at least partially from stress. Therefore, everyone can benefit from an effort to learn how to relax.

In the last 20 years, a tremendous amount of research has proven that there is a link between mental stress and physical health problems. The following disorders have been proven to be caused or aggravated by stress: heart disease, strokes, high blood pressure, cancer, rheumatoid arthritis, migraine headaches, and respiratory illnesses. But, because excessive stress will reduce overall body resistance, we can conclude that every health problem will be worsened by stress.

Never underestimate the effect of the mind on health. If you believe that a pin stuck in the heart of a voodoo doll will damage your heart, you may have a heart attack when the pin is inserted. If you believe that a capsule will have a powerful tranquilizing effect when swallowed, you will feel calm after ingesting the capsule even if it contains only flour. This is called the placebo effect. It is well understood by doctors who use it to mobilize the power of the patient's mind to heal his health problems.

How do you know if you are under stress? Look at your life with a magnifying glass. How is your home life? Do you fight too often with your spouse, children, or parents? Are the bills stacking up? Does your home need many repairs which you can't take care of at this time?

How is your life outside your home? Do you enjoy your job, or is it frustrating and unfulfilling? Do you get caught in traffic jams every day? Are you exposed to excessive levels of pollution or noise? Do you have satisfying relationships with friends?

The list of possible causes of stress is almost endless. It includes personal injury or illness, retirement, change in financial status, outstanding personal achievements, vacations, Christmas season, violations of the law, etc. We are all unique so those events which are stressful for us will be somewhat different from the events which are stressful for another person.

How should we deal with stress? First, make an effort to change the circumstances of your life so as to minimize stress. Change jobs, catch up on your bills, take the time to repair your home, solve your health problems, postpone retirement, or take other such actions. But, if these changes do not sufficiently reduce your stress level, the only further action you can take is to change yourself.

One way to help yourself is to become more flexible about your expectations of the nature of your daily life. It is fine to have a preference for a sunny day, but if your expectation is so rigid

that you will be depressed if it rains, you need to make some changes.

Do you believe that you will be happy "tomorrow" when you have more money or possessions? If you do, you are only kidding yourself. The secret to happiness is learning how to be happy right now. Remember that "today" is the "tomorrow" that you hoped for "yesterday". If you can't be happy now, you will never be happy later.

Are you unhappy with whom you are? We all have our positive and negative attributes, and it is fine to have preferences about how you would like to be. But, in the meantime, while you are trying to improve yourself, accept yourself for the way you are at this very moment.

There are many specific relaxation techniques that you can use. One involves tensing every part of your body at separate times and then mentally willing the part to relax as you release the muscle tension. Start with your feet, then progress to your legs, thighs, buttocks, stomach, chest, back, neck, shoulders, hands, forearms, arms, neck, and face. Tighten the muscles in each area for 10 seconds, then mentally ask each area to relax and let go. This is a highly effective technique.

Breathing exercises also work quite well. Lie on the floor on your back, close your eyes and relax. Inhale as you count to ten, then exhale as you count to ten again. Repeat this process ten times.

Meditation is very effective in reducing stress. It can be done in connection with a religion or spiritual science, but it can also be done with no thought whatsoever of religion. Twice a day, sit in a quiet corner of your house where you will not be disturbed by any people or sounds. Close your eyes, focus your attention on your forehead (don't strain your eyes looking upward), and repeat the word God or one for 15 minutes. Meditation has been proven to produce relaxation very efficiently.

Visualization is another helpful relaxation technique. Sit in a quiet spot, close your eyes, and imagine that you are in a place that you have found relaxing and enjoyable in the past. Your spot might be a secluded beach by the ocean, the shore of a glistening mountain lake, or your garden on a beautiful fall day. Wherever you have found peace, imagine that you are there again. You will be able to create an atmosphere of calm much like the eye of a hurricane.

Biofeedback requires the use of electronic instruments so it is less convenient and more expensive than the other relaxation techniques mentioned, but it is very effective. Instruments are used to measure your level of stress by checking the degree of muscle tension, the amount of perspiration (which is increased with added stress), the nature of your brain waves, the speed of your heart rate, etc. You get feedback from the instrument which reveals your level of stress. When the muscle is tense, you may hear a louder sound or see a brighter light. By using various relaxation techniques, you can hear the sound lessen, or see the light dim. With biofeedback, it is possible to learn exactly which mental changes will produce relaxation.

Occasionally, relaxation techniques will not be sufficient. The cause of stress may be a problem which developed many years ago and cannot be clearly identified now. In such cases, a technique such as meditation would have purely symptomatic effects. The stress will return again and again. If this occurs, it is best to consult a professional counselor.

It is definitely possible for people to reduce stress levels. All that is required is effort. When we take the attitude that we are responsible for our physical and mental health, we will begin to take positive actions to improve ourselves. When effort is put into reducing stress and learning how to relax, the frequency and intensity of health problems will decrease, and the quality of life will increase. The time to start is now.

CHIROPRACTIC

When you need professional help in your quest for health improvement, the best type of doctor to consult is a chiropractor. Since it is preferable to avoid drugs and surgery if at all possible, it is best to consult a chiropractic doctor who knows more about the alternatives to drugs and surgery than most other types of doctors. Naturopathic physicians are equally competent but they are only licensed to practice in seven states.

You may be surprised to learn about the expertise chiropractors have in this field since chiropractors are often regarded as "back" doctors and nothing more. But times have changed. Chiropractic education in the 1980s is similar to medical education, and this qualifies chiropractors to serve as general family physicians for most health problems. The number of class hours in anatomy, physiology, pathology, and diagnosis are the same for both medical and chiropractic students. The differences between the two fields result from the extra training medical students receive in drugs, surgery, and hospital procedure, and the extra emphasis chiropractic students receive in spinal adjustments, exercise, physical therapy, and nutrition.

Chiropractic schools are accredited in the same way that medical schools are accredited. The Council on Medical Education (CME) accredits medical schools, while the Council on Chiropractic Education (CCE) accredits chiropractic schools. Both the CME and the CCE are licensed by the U.S. Office of Education.

Following graduation, medical doctors (MDs) and chiropractic doctors (DCs) are examined, licensed, and regulated by state agencies. In most states insurance companies must pay equally for medical and chiropractic care.

Let's be clear about one important point: fact: chiropractors do not claim to "cure" all diseases by working on the spine. In fact, chiropractors do not claim to cure anything. They simply state that healing is done by the body itself and if healing is possible without the use of drugs and surgery then the patient will be an appropriate candidate for chiropractic care. Remember that chiropractors only work with health problems that can be helped without drugs and surgery. They are trained well enough to know when a patient needs medical care, so a referral to a medical doctor is made when necessary.

Chiropractic physicians are usually able to provide education regarding diet, exercise, and stress reduction. They can supervise the changes in such lifestyle patterns which may be necessary to allow healing to occur. Chiropractors can help remove obstacles to healing by using spinal adjustments.

What problems can spinal manipulation help? Most people associate the word "chiropractic" with back problems. This is because chiropractic care is great for such problems which are present in epidemic proportions. Most people are not happy relying solely on drugs such as pain killers and muscle relaxers which only cover up the problem. They prefer to get to the root of the difficulty, and chiropractic is the most effective measure available.

Many internal health problems will also respond to chiropractic care. The nervous system controls and coordinates all functions in the body. All nerve impulses originate in the brain, flow to the spinal cord, and then to nerves which feed all the organs, glands, muscles, and other tissues of the body. If the spinal nerves are stressed by a problem in the spine, the nerves will not work properly and, therefore, the organ on the other end of the nerve will not function healthfully.

Because of this connection, some people with the following conditions will respond well to chiropractic care: asthma, bronchitis, colitis, irritable colon, constipation, painful menstrual periods, shingles, high blood pressure, nervousness, chest pain, the common cold, sinusitis, insomnia, gastritis, rapid heart beat, dizziness, and ringing in the ears.

Chiropractic is sometimes surrounded by an air of controversy. Both supporters and critics are fervent in their beliefs. It has been difficult to know the facts about chiropractic, at least until 1979 when an independent and unbiased report by a special commission of the New Zealand Government was published.

Some of the most important conclusions of this 377 page report are: "modern chiropractic is a soundly-based and valuable branch of health care in a specialized area neglected by the medical profession . . . worthy of public confidence and support."

"Chiropractors are the only health practitioners who are necessarily equipped by their education and training to carry out spinal manual therapy, which can be effective in relieving musculoskeletal symptoms such as back pain, and other symptoms known to respond to such therapy, such as migraine."

"In a limited number of cases where there are organic and/or visceral symptoms, chiropractic treatment may provide relief . . . Chiropractors should, in the public interest, be accepted as partners in the general health care system . . . Much medical criticism of chiropractors is based on simple ignorance."

Remember that this report was not from a chiropractic or medical group. The source is an independent, unbiased government commission and so you can rely on its accuracy.

Since the breakthrough 1977 New Zealand report, there have been dozens of other government reports and hundreds of medical journal articles regarding chiropractic. Science has now documented that chiropractic care is safe and effective.

When drugs and surgery are not definitely needed as is often the case, it is best to consult a chiropractor first. Chiropractors do not usually limit themselves to spinal conditions. Many other health problems may respond favorably to chiropractic care. To assist in the healing process chiropractors will oftentimes prescribe healthful foods, regular exercise, extra rest, and reduced stress.

Find a chiropractor who can effectively adjust the spine and provide guidance regarding diet, exercise, and stress reduction, and you will have discovered a great source of help in getting well without unnecessary drugs and surgical procedures. Professional healthcare supervision is often necessary, and the best source is the chiropractic physician.

WATER

Could your drinking water be making you sick? Yes! You may actually be harming your health if the water you drink comes from your local water system. Cancer-causing chemicals are found in almost every city water supply in this country.

How can this be so? Because many cities draw their water from wells, rivers and lakes that are polluted by hazardous industrial or agricultural chemicals, and there is no filtration process in use which will get rid of these chemicals. Cities which get their water from the mountains or deep wells in the wilderness create cancer-causing chemicals when chlorine is added to kill bacteria.

Good old chlorination, the process which saves us from bacterial contamination, is often the culprit. Even the purest water from the wilderness contains bits and pieces of leaves, roots, bark and other natural substances. The smallest particles are not filtered out by any city water system and they are harmless. But, when chlorine is added, as it always is, the chlorine combines with these particles and forms dangerous cancer-causing chemicals.

Examples of chemicals formed in this manner, such as chloroform, methylene chloride, and carbon tetrachloride are proven carcinogens. And don't think you are safe because only a very small quantity of these chemicals is present. Your risk of developing cancer will be significantly higher if you ingest even a small quantity of these chemicals over the course of many years.

What do the scientists have to say about this issue? In 1985, the International Conference on Occupational and Environmental Significance of Industrial Carcinogens was held in Bologna, Italy. Scientists from all around the world concluded that "there is no safe threshold of exposure to toxic chemicals– there appears to be no level below which a cancer-causing chemical will not cause cancer." Dr. Arthur Upton, former chief of the National Cancer Institute, stated that "we are faced with the facts that there are an unknown number of chemicals that may cause cancer, and if we don't find them and eliminate them from the environment, we may be exposing future generations to unnecessary risks of cancer."

Can you trust tap water that tastes and smells good? No. Most of the cancer-causing chemicals have no taste or smell.

Let's consider one example to better understand the risk we face. In the early 1980s, scientists, for the first time, tested water supplies in Phoenix, Arizona for trichloroethylene (TCE), a known carcinogen. TCE is a solvent which was once commonly used by electronic firms. In the 1940s, TCE was dumped onto vacant land in the Phoenix area and began to seep into the water supply. In the 1960s, this land was developed for residential use and the TCE-laced water began to flow into thousands of homes. The scientists then searched for the source of the TCE. They were alarmed to find dangerous levels of this chemical in reservoirs supplying a large section of the city. Measures were immediately taken to eliminate the TCE.

From the 1940s to the 1980s, many Phoenix residents drank water that was polluted with TCE. However, no one knew this because tests for TCE had never been performed. Hundreds of people may have died of cancer caused by TCE.

Are Phoenix residents safe now that TCE has been removed from the water supply? Only the foolish would say yes. Ken Schmidt, a local water-quality consultant, has stated that "it's likely that, in the future, when more expensive and detailed studies can be conducted, pollutants more dangerous that TCE will be found in ground water". David Kreamer, a hydrology professor at Arizona State University, has said that TCE pollution is "just the tip of the iceberg" as the search expands for other toxic chemicals that have seeped into the groundwater. He states that we will find "more chemicals in the course of the discovery process".

What happened in Phoenix is typical of nearly every city in the world. A 1982 Environmental Protection Agency report found 180,000 surface storage areas for dangerous liquid wastes in 80,263 different locations, and determined that these wastes were contaminating local water supplies. A Government Accounting Office study found more than 146,000 violations of drinking water regulations by 28,000 of the nation's 65,000 community water systems. The violations usually were failures

to test drinking water for mercury, lead, pesticides, carcinogenic chemicals formed from the combination of chlorine and natural organic materials, and radioactivity.

U.S. Representative Toby Moffett stated in 1982 that "ground water contamination is the most serious public health and environmental problem now facing this nation". Nothing has changed in the 1990s to alter this reality.

Fortunately it is simple and inexpensive to completely avoid the dangers of water contamination. All you have to do is drink purified water and use tap water only for bathing, laundry and other household needs.

What is the best source of purified water? Should you use filters that attach to your faucet, filters that are spliced into your water line, bottled drinking or spring water, bottled distilled water or some other alternative?

Studies of home water filters show that they are helpful but not sufficient. Home water filters, usually made of activated carbon, will improve the taste and smell of water but will not remove all of the cancer-causing chemicals. An EPA study of 31 filters of all types found that one removed 87% of a major type of hazardous chemicals, another removed 55%, but the other 29 filters removed less than 32% of these chemicals. Regular carbon filters are clearly unreliable.

Reverse osmosis (RO) filters cost more than the ones which attach to your faucet but they are very effective. The bad chemicals are filtered twice, once by the carbon filter and then by a very effective membrane. An RO system costs about $300, including installation.

Another alternative is bottled water. The best type is distilled water since the purity of bottled spring and drinking water is not always known.

There are major risks to your health from hazardous chemicals in drinking water. Be smart and take one of the easiest steps available to safeguard your health: stop drinking tap water today!

REST AND SUNSHINE

One of the most crucial needs of the body is for sufficient rest and sleep. Yet this need is commonly neglected in so-called "modern" civilization. Many people feel that they should be on the go every minute, and that time spent sleeping is wasted because it is unproductive. This attitude is a major cause of poor health.

Many years ago, the need for sufficient rest was well understood. One doctor said that "the rest-cure is the only scientific form of cure known to our day". In previous chapters, we have established that healing is exclusively done by the body itself. In order to heal, the body must have the healing power required to fuel the activities of healing. If the body is exhausted, sufficient rest will be required to restore the necessary powers of healing through the process of recuperation.

The need for rest is undeniable and logical. We all have been taught the importance of plenty of rest in maintaining and restoring good health. Yet in actual daily practice the vast majority of people devote far too little time to rest and sleep.

Sufficient rest is required to stay healthy. During those periods of time when one feels an overall sense of vigor and good health, all that is usually needed is a good night's sleep. How much sleep is needed? This varies since one person may be sufficiently rested with six hours of sleep each night, while another may need ten hours. The only way to know how much sleep you need is to take an honest look at yourself.

Do you arise in the morning bright-eyed, refreshed, and energetic? Or do you drag yourself out of bed and only wake up after your system has been whipped with three cups of coffee? If you fall into the latter category, you are making daily withdrawals from your "savings account" of energy reserves. Physical "bankruptcy" in the form of illness will inevitably result.

When you feel exhausted at night, do you force yourself to stay awake to finish that one last report, clean out that one final drawer, or finish that one last chapter? If this is your regular style, watch out. A physical collapse is in the making.

If you are not in good health, if you feel tired all the time and "come down" with every bug you are exposed to, if you feel too exhausted to exercise, then more radical recuperative measures may be necessary. You may need a period of physical rest much longer than a good night's sleep. Two or three or more days in bed may be needed.

Besides physical rest of your muscles, you may need physical rest of your internal organs. Fasting is the superior method for achieving complete internal rest. When the organs of the body are given a respite from digestion, absorption, and elimination of food and its byproducts, a profoundly deep type of rest occurs. This profound type of rest will give the body a chance to recuperate the energy it needs to heal itself. Safe and successful fasts do, of course, require the supervision of a doctor experienced in fasting.

Sometimes, muscle and organ rest is not enough. In such cases, mental rest will be needed. Some people with serious health problems will go to bed and rest their muscles and go without food to rest their organs. But, while in bed, they will attempt to read five books a day, or finish their PhD thesis, or buy and sell stocks on the phone, or some other mentally exhausting activity. But, since mental exhaustion produces as much fatigue as eating large amounts of food or running many miles, physical recuperation and reinvigoration will not occur. Sometimes it is necessary to force ourselves to slow our thinking processes from a gallop to a crawl.

Never underestimate the potent effect that physical and mental exhaustion will have on your health. And never forget the dramatic effect that sufficient rest will have in rebuilding health. Take an honest look at your life and see if you are sowing seeds of health or disease with the level of rest which you permit yourself every day.

How does natural sunlight fit into the scheme of health-building? Sufficient exposure to the sun is as important as proper food, exercise, and all the other lifestyle measures that influence health status.

One of the first promoters of sunlight as a health-building measure was Arnold Rickli of Switzerland in the 1800s. He stated that: "Man is made to live in the open air; therefore, when exposed to the action of light, air, and sun, he is in his real element. As a natural agent, water takes only an inferior place,

above it comes air, while light takes precedence of every other natural agent, and is the greatest essential wherever organic life exists. The nervous system, which is an inherent principle of our organism, is acted upon by light, especially through the skin".

For many years, scientists were skeptical about the need for sunlight. But recent research has confirmed that the early teachings of Rickli were correct. A scientific conference on sunlight, sponsored by the New York Academy of Sciences in 1984, revealed many dramatic effects of sunlight.

The most well known effect of skin exposure to sunlight is production of vitamin D by the skin. This vitamin is needed for the body to absorb dietary calcium. Some scientists think that bone loss in the elderly may be partly related to a vitamin D deficiency from lack of exposure to sufficient sunlight.

Even more fascinating is the discovery that when the eyes are exposed to sunlight they send a message to the pineal gland in the brain which stops the secretion of the hormone melatonin by this gland. In this way, sunlight produces many dramatic changes in body functioning.

The effect on melatonin secretion, or some other mechanism that is not yet understood, is thought to a factor in the depression, decreased alertness, increased sleepiness, and decreased sexual activity which people experience in the winter when there is far less natural light. One psychiatrist found that exposing patients to ultra bright lights relieved symptoms of depression faster than any known anti-depressant drug.

We can conclude, therefore, that sufficient sunlight is required just as much as sufficient food and oxygen. To maintain or restore health, sunbaths are required. How much time should you spend in the sun? In the summer, don't go out in the middle of the day. Rather, spend a half-hour in mid-morning or mid-afternoon in the sun. Don't allow yourself to become overheated since this is extremely fatiguing.

During the other seasons of the year, expose your skin to the sun during mid-day. The sun will not be strong enough then to harm you in any way.

As with any other need of the body such as vitamins and water, you can harm yourself with too much sun. Excessive sunbathing will prematurely age the skin and sometimes even cause skin cancer. The goal of sunbathing to build health does not require the amount of time needed to develop a deep brown tan. Nor should you ever allow your skin to burn from sunlight exposure. Be moderate and careful when you sunbathe, and no harm will result.

The proper amount of sunbathing will improve your health, as revealed by the recent conference on sunlight and health. Even though many benefits of sunlight are known, one researcher at the conference was quoted as saying that "the best is yet to come". But don’t wait for science to spell out every detail. Make regular sunbathing a part of your life and enjoy the health benefits now.

DIET AND MENU PLANS

Following are examples and comparisons of different recommended diet plans including the standard United States Dietary Allowances plan, my Health Building Diet and a No Concentrated Protein Diet. The purpose of comparisons is to show that it is quite easy to fulfill all nutritional needs without following the government's four food group plan; moreover, *the alternative plans described are far more healthful.*

The USDA Diet is commonly called the "four food group" plan. The USDA diet claims that it is necessary, on a daily basis, to use foods from all four of the groups of foods:

1. Drink 2 or more cups of milk.
2. Eat 2 or more servings of meat.
3. Use 4 or more servings of fruits and vegetables.
4. Eat 4 or more servings of whole grain or enriched grain products (whole wheat or white bread, for example).

The Health Building Diet, as you will see through the comparisons, is far more healthful than the U.S. Diet. The Health Building Diet described below contains no meat, dairy products or eggs. However if you do not choose to be a vegetarian you can substitute small amounts of chicken and/or fish for the seeds, nuts and dairy products listed.

The USDA diet is 49% fat whereas the Health-Building diet is 26% fat. Scientists have proven that a high fat diet causes heart disease, strokes, and many types of cancer (see chapters on these subjects). The average American consumes a 40% fat diet. The American Heart Association, National Cancer Institute, and other authorities have recommended that the percent of fat be reduced at least to 30%, and down to 20% in high risk cases (diabetics, heart patients, etc.). The USDA diet provides a dangerously high amount of fat of the worst kind: saturated fat with cholesterol. The Health-Building diet contains a safe amount of fat, with no saturated fat or cholesterol.

The U.S. diet is deficient in vitamins B1, B2, B3 and fiber. The Health Building diet provides plenty of all the vitamins and minerals. There is more than enough calcium and protein despite the lack of meat and dairy products.

The comparison between these two diets should forever put to rest the contention that the U.S. Four Food Group plan is the only way to secure adequate nutrition. In fact the following charts prove that the U.S. plan is inferior to many other food plans.

Following the Health Building diet is a food plan containing no concentrated protein foods such as animal products or nuts and legumes. It will demonstrate that well-balanced nutrition can be obtained without the use of high protein foods, and that more than adequate protein can be supplied through eating vegetables, fruits and grains.

The purpose of this comparison is to show that it quite easy to fulfill all nutritional needs without following the USDA four food group plan, and that there is an alternative type of food plan which is far more healthful.

Typical USDA Four Food Group Diet

Meat group: 4 ounces beef steak, grilled; 2 ounces bacon, fried; 1 egg, fried.

Milk group: 2 cups pasteurized milk.

Fruit and vegetable group: 1 medium carrot, 1 medium orange, 1 potato, small lettuce and tomato salad.

Bread and cereal group: 3 slices white enriched bread; 1 serving cornflakes.

Miscellaneous additions: 5 ounces sugar, 2 tablespoons butter, 2 tablespoons margarine, 1 tablespoon mayonnaise.

The following diet will be called the "Health-Building Diet", since, as you will see, it is far more healthful than the USDA Diet. The Health-Building Diet described here contains no meat, dairy products, or eggs.

The Health-Building Diet

Breakfast: 1 large peach (200 grams), 1 large apple (200 grams), 2 pears (400 grams).

Lunch: Romaine lettuce (8 leaves), young and tender collard (4 small leaves), celery (2 cups diced), 2 medium-sized tomatos, alfalfa sprouts (1 cup), almonds (1/2 cup), sunflower seeds (1/3 cup).

Dinner: Romaine lettuce (8 leaves), 1 cucumber, mung bean sprouts (1 cup), parsley (2/3 cup chopped), broccoli (1 small stalk), 2 large baked yams.

Diet Comparison Chart

	Health Building Diet	USDA Diet	RDA Standard
Calories	2266	2692	2800
Protein	69 grams	78 grams	55 grams
Fat	65 grams	146 grams	
Calcium	1531 mg	829 mg	800 mg
Phosphorus	1531 mg	1265 mg	800 mg
Sodium	503 mg	2781 mg	300 mg
Potassium	8819 mg	2967 mg	2000 mg
Vitamin A	37,911 IU	8427 IU	5000 IU
Vitamin B1	2.83 mg	1.14 mg	1.4 mg
Vitamin B2	2.87 mg	1.50 mg	1.70 mg
Vitamin B3	24 mg	11 mg	18 mg
Vitamin C	727 mg	140 mg	60 mg
Fiber	30 grams	2.4 grams	10 grams

The comparison between these two diets should forever put to rest the contention that the USDA Four Food Group plan is the only way to secure adequate nutrition. In fact, this plan is inferior to many other food plans, including the Health-Building diet described above.

Food Plan Including No Concentrated Protein Foods

The following food plan does not include any animal products or concentrated sources of proteins such as nuts. Its purpose is to demonstrate that a well-balanced and nutritious diet can be composed without the use of animal products or nuts. The nutritive values can be found in the USDA Handbook #456.

Morning Meal: Orange juice (8 ounces), strawberries (1 cup), banana (one large), papaya (1 half), lettuce (4 leaves), celery (3 stalks).

Noon Meal: Mixed vegetable salad containing lettuce (4 leaves), carrot (one large), cabbage (one cup), sweet red pepper (one small), tomato (one medium), celery (one stalk), lemon (1/4 wedge). Also: avocado (1 half) and potato (one large baked).

Evening Meal: Mixed vegetable salad (same as lunch), steamed cauliflower (one cup), broccoli (1 stalk), kale (one cup), brown rice (one cup dry, approximately 3 cups cooked).

A Comparison of the Total Daily Averages of the 2000 Calorie No Concentrated Protein Food Plan to the RDA Standards for a 23-50 Year Old Female

	Rational Diet	RDA Standard	% Difference
Calories	2000	1600-2400	0%
Protein	59.4 grams	44 grams	+35%
Calcium	114 mg	800 mg	+39%
Phosphorus	1393 mg	800 mg	+74%
Iron	21.8 mg	10 mg	+118%
Sodium	542 mg	Less than 3300 mg	-80%
Potassium	7869 mg	5625 mg	+40%
Vitamin A	60,690 IU	5000 IU	+1,114%
Vitamin B1	2.55 mg	1.4 mg	+82%
Vitamin B2	2.19 mg	1.6 mg	+37%
Vitamin B3	28.7 mg	18 mg	+59%
Vitamin C	1485 mg	60 mg	+237%

RECIPE BOOKS

There are many books on the market which contain recipes which are consistent with the dietary principles presented in this book. The following information will introduce you to these recipe books and tell you briefly how to use them.

The first is *The McDougall Plan Recipes, Volume One*. All the recipes in this book are vegetarian with no meat, eggs, or dairy products. No oil is used which makes this book even more attractive than most. For the average person who is not suffering from a serious health problem, the cooked food recipes in this book can be used for 1/4 to 1/3 of the diet. Eat raw fruits and vegetables for the remainder of the diet. This book can be purchased from Mary McDougall, PO Box 1761, Kailua, Hawaii 96734.

The second recipe book is *The Uncook Book: Raw Food Adventures to a New Health*, by Elizabeth and Dr. Elton Baker. This book can be purchased from Communication Creativity, 433 Fourth St., P.O. Box 213, Saguache, CO 81149. It is an excellent introduction to the world of raw food diets. There is excessive concern, however, with the importance of food combining. This practice is of little value for most people. Also, honey is recommended even though it is only slightly less destructive than white sugar. Avoid the vinegar in the recipes since it tends to make the blood too acidic. Also, be cautious in the use of spices since some can be irritating to the body.

The third book is *Live Foods-Nature's Perfect System of Human Nutrition*, by George and Doris Fathman. It is available from the Ehret Publishing Co., P.O. Box 338, Beaumont, CA 92223. It is best to minimize the use of certain foods recommended in this book such as honey, gelatin, and vegetable oil. Otherwise, this is a good recipe book.

The fourth book is *Light Eating for Survival*, by Marcia Madhuri Acciardo, available from 21st Century Publications, P.O. Box 702, Fairfield, IA 52556. Again, avoid the honey, oil, and harsh spices found in the recipes.

The fifth book is *The Vegan Kitchen*, by Freya Dinshah, available from The American Vegan Society, 501 Old Harding Highway, Malaga, NJ 08328. The main food found in this book which you should avoid is oil.

The sixth book is *Ten Talents*, By Frank J. Hurd, D.C., and Rosalie Hurd, B.S., available from the authors at Box 86A-Route 1, Chisholm, MN 55719. Some of the recipes include milk and eggs which should be used in extreme moderation or completely avoided. Also, minimize the use of honey, baking powder, and oil.

The seventh book is *Recipes for Longer Life*, by Ann Wigmore, available from the Avery Publishing Group Inc., Wayne, NJ. Avoid the honey, oil, and molasses used in many of the recipes. Also, don't use the fermented foods recommended in this book. Fermenting food causes a deterioration in the food which is much the same as the rotting process. Food is not made healthier by letting it sit out at room temperature while bacteria decompose it. Also, there is no miraculous healing power to wheat grass juice which is recommended in this book. Eat a few leaves of green lettuce and you will get as much benefit as you would from drinking wheat grass juice.

The eighth book is *Diet and Salad*, by N.W. Walker, available from O'Sullivan, Woodside and Company, 2218 East Magnolia, Phoenix, AZ 85034. The foods in this book to eat minimal amounts of are eggs, oil, dairy products, and honey. Also, there is too much emphasis placed on enemas, foot reflexology, and food combining.

The eight books described above will give you many creative ideas for healthful meal planning. Always remember to eat at least 75% of your food uncooked. The number of different fruit and vegetable salads is so great that a raw food diet can be quite tasty and enjoyable. The improvement in health that will result is dramatic.

QUESTIONS AND ANSWERS

Question: Is it important to combine food carefully, following a strict set of rules?

Answer: Generally, no. The best way to determine if two foods can be combined without causing any problems is to experiment and see how you feel. If you eat two foods together and you have no indigestion, gas, bloating, diarrhea, constipation, or some other symptom of distress, then the food combination you have chosen is fine for you. There is no scientific evidence to support the notion that combining two foods together in a supposedly incorrect manner is harmful even if no symptoms of distress develop.

Question: Are colonics and enemas needed to clean out the body?

Answer: No. An enema involves running water into the colon from a small bag hung about two feet above the body. When the colon gets full of water, the person will then evacuate. A colonic is similar, but it is performed by a therapist in a clinic setting. Water is pumped into the colon, then drained out by a tube which remains in the rectum. Enemas and colonics are not needed to clean out the body, because the body is fully capable of cleansing itself. When the wrong types or amounts of food are no longer eaten, the colon will be able to completely cleanse itself. When unhealthy foods are eaten, absorption will take place in the small intestine. Enemas and colonics will not be able to prevent absorption of such foods since they can only wash out the colon which is many feet "downstream" of the small intestine.

Question: Is hair analysis a valuable diagnostic technique?

Answer: Only for very limited purposes. Hair analysis can detect the presence of toxic minerals such as lead and mercury. But it is completely useless in determining the body's need for dietary vitamins and minerals.

Scientific studies have shown that hair mineral levels are affected by sex, season, age, rate of hair growth, hair treatments (such as shampoo), and many other factors. Therefore, hair mineral levels do not accurately reflect tissue levels of minerals. Hair analysis laboratories are notoriously inaccurate. In a recent study, hair samples from two girls were sent to 13 different hair analysis labs. The results of analysis were vastly different from one lab to another.

Question: Should you avoid foods containing food colorings?

Answer: Definitely yes. A March 30, 1984 memo from Mark Novitch, then the acting FDA Commissioner, to Health and Human Services Secretary Margaret M. Heckler, stated that test results on ten common food dyes "clearly demonstrate that each of these color additives induces cancer in properly conducted animal feeding studies". Why risk your health when it is easy to find hundreds of foods which contain no food colorings? As a general rule, read all labels on the food that you buy and, if you cannot pronounce a chemical name on the label, don't buy the food. Some additives are safe, but many others are as dangerous as the common food dyes which cause cancer.

Question: Are many unnecessary surgeries performed in the U.S.?

Answer: Yes. A congressional report entitled "Unnecessary Surgery: Double Jeopardy for Older Americans" was published in 1985. It found that unnecessary surgery on the elderly includes 23-36% of all cataract surgery, 27-32% of all knee surgery, 17-43% of all hemorrhoid surgery, 15-31% of all gall bladder surgery, 14-29% of all prostate surgery, and 5-28% of all hernia repair surgery.

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