If You are Sick and Tired of Being Sick and Tired ....

...Then Discover what it's like to be healthy again.

What Is Good Health?

Is it just the absence of disease, or is it the maintenance of health in a complex system of interdependent organs? How you answer that question determines how you care for your body.

If you believe that good health can be measured by the absence of disease, then you are comfortable with our present day "sick care" system. You accept the philosophy that the population can be cared for on a statistical, or percentage, basis. For example, since a drug produces certain biochemical effects consistently for most of the population, it can then be used on every "body" to relieve symptoms.

If you believe, however, that a "health care" system should place emphasis on preventing chronic degenerative diseases before they occur, then you are part of an ever-growing segment of the population. A better informed public takes a more active role in their health maintenance.

We Generally Ignore our Health

We generally ignore our health until we develop symptoms that are inconvenient enough to get our attention. Then we go to the drug store to purchase a home remedy such as a pain reliever, laxative, or antacid. Many times these remedies cover up the symptoms enough so that they can be tolerated on a daily basis.

Only when the symptoms get worse do we consult a physician who orders tests to rule out catastrophic illness. If the tests are negative, the doctor prescribes something stronger than what we can buy in the drug store. This is usually accompanied by the advice, "If this doesn't work, we will try something else."

The Sick Care System

More and more we are beginning to realize that this approach is not effective. Americans pay more for health care than citizens of any other country. Yet, the United States ranks as one of the least healthy nations in the world. Twenty-two countries have a better infant mortality rate, and people in 16 other countries have a longer life span than people in the United States, according to the World Health Organization. Americans are often told they have the best health care system in the world, but statistics like those listed above are seldom quoted, making the claim that we have the "best" hard to believe.

Americans consume more than half of all the drugs taken in the world everyday. The average American family has 29 different drugs in their medicine cabinet. What is not widely reported is that the number of deaths from adverse reactions to prescription drugs is now the fourth most common and ranks only behind heart disease, cancer, and stroke. Every year 1.6 million people are hospitalized due to adverse reactions to prescription drugs and 160,000 of these die, according to the U.S. Department of Health & Human Services.

Prevention or Treatment?

When former Surgeon General C. Everett Koop released his *Report on Nutrition and Health* to the American public in 1988, he emphasized that he was primarily concerned with the relationship of nutrition to the incidence of chronic degenerative diseases. The report reviewed the scientific evidence and concluded that there is a strong correlation between dietary excesses, nutritional imbalances, and chronic disease.

Nutritional Breakthroughs

We are very fortunate to live in this era of scientific advancement and health awareness. The breakthroughs in nutritional science since 1945 are staggering. After all, the theory of vitamins was not postulated until 1906. Moreover, the first vitamin,Vitamin C, was not discovered until 1920, and it was not until after World War II that vitamins became readily available to the public.

The food supplement movement grew slowly during the 1950's and 1960's and, at first, medicine denied the need for food supplements. Now we know that medical doctors were not trained in nutrition and could not be expected to recognize their use. Fortunately, the need for supplemental nutrients became obvious to a concerned public. Vitamins and minerals are now routinely added to our food to prevent deficiencies. For example, Vitamin D and calcium are added to milk, and iodine is added to salt. More recently, the need for folic acid to prevent birth defects has been recognized.

The Role of Enzymes

One area of nutritional science that has lagged behind in understanding and recognition is the role of enzymes, in the food chain and as nutrients. Enzymes run all the biochemical reactions in living things; humans, animals, and in raw foods (foods that are not man-made). Put simply, if it grows, it has enzymes. It is the enzyme content of raw foods that causes them to grow and brings them to ripeness or maturity.

Even though enzymes are important to life, they pose a very difficult problem for the food industry. Because enzymes cause foods to ripen, they can also cause them to spoil. Therefore, they must, of necessity, be systematically removed from our food supply! Our present-day society requires food to have extended shelf life.

While it is regrettable that our food supply must be so radically altered, it is clearly necessary. But if we replace the vitamins and minerals which are removed from our foods, why not replace the enzymes? There is clear scientific proof, acquired over the past 50 years, that enzymes play an important role in our diet. One role is readily apparent—if we have an enzyme deficiency, then we are unable to put our food to work for us. Could this be responsible for the dietary excesses the Surgeon General spoke of?

What Are Enzymes?

Enzymes are very large and complex protein molecules.

> "Enzymes are substances that make life possible. They are needed for every chemical reaction that takes place in the human body. . . . They are the manual workers that build the body from proteins, carbohydrates, and fats, just as construction workers build our homes. You may have all the raw materials with which to build, but without the workers (enzymes) you cannot even begin." (Dr. Edward Howell, *Enzyme Nutrition: The Food Enzyme Concept*, Avery Publishing Group Inc., New Jersey, 1985, p. 33.)

Three Broad Categories of Enzymes

There are three broad categories of enzymes. The first type of "worker" is contained in the food we eat. The last two are present in the body.

1. **Food Enzymes** - These enzymes are contained in all raw food. They begin working in the mouth and upper portion of the stomach (before the body begins its own digestive process). The type and amount of enzymes found in a food is determined by its caloric value. Every raw food contains the enzymes necessary to digest itself in exact ratio to the amount of protein, starch, sugar, fat, and fiber found in that food.
2. **Digestive Enzymes** - These enzymes are made by the body to digest food. They do not begin their work until at least 30 to 60 minutes after eating.
3. **Metabolic Enzymes** - These enzymes are made by the body and are responsible for "running" all the organs, tissues, and cells of the body.

What Are Food Enzymes, And What Do They Do?

The enzymes present in food are released when you chew your food. They are intimately involved in the processing of the nutrients they are combined with in food.

Protease is present in protein. Before they are cooked or canned, foods high in protein (like beans) contain high amounts of these enzymes.

Amylase is present in simple and complex carbohydrates. Before they are cooked or canned, foods high in carbohydrates (like grains and fruit) contain high amounts of these enzymes.

Lipase is present in lipids or fats. Before they are cooked or canned, foods high in lipids (like bananas and olives) contain high amounts of these enzymes.

Carbohydrase is present in simple sugars. Before they are cooked or canned, foods high in simple sugars (like grains and cereals) contain high amounts of these enzymes.

Cellulase is present in fiber. Before they are cooked or canned, foods high in fiber (like celery) contain high amounts of this enzyme. This enzyme is not made in the body.

Digestion

The digestion of food is largely taken for granted by just about everybody. We all assume that what we put into our mouths is going to be digested and nourish us as a result. But it is not that simple. Let us take a look at the process of digestion.

Digestion Begins in the Mouth

Digestion begins in the mouth. The carbohydrates, fats, proteins, and fibers found in food are large molecules. Even after being chewed these pieces are too large to pass through the wall of the stomach and intestines. They must be broken down into much smaller pieces, and that is what digestion is all about.

The Salivary Glands

While we are chewing, the salivary glands secrete enzymes that begin to work right away. You can demonstrate this enzyme action for yourself by thoroughly chewing a piece of bread. After a short time, the bread will begin to taste sweet as the sugar-digesting enzymes in the saliva liberate the sugar in the bread. If raw food is eaten, the naturally occurring enzymes in that food will also participate. If the food enzymes are destroyed by cooking or canning, only the enzymes in the saliva are available to begin digestion.

The Stomach

After food is swallowed, it takes at least 30 to 60 minutes for the stomach to secrete acid and its own enzymes. In the meantime, the salivary enzymes and food enzymes are continuing to work. Some people believe that food enzymes are destroyed by stomach acid as soon as they are swallowed. This is an incorrect statement and does not truly explain the mechanics of normal digestion. Once enough acid is present, the stomach enzymes begin working while food and salivary enzymes stop working; however, they are not destroyed.

The Small Intestine

After the food leaves the stomach, it enters the upper part of the small intestine which is called the duodenum. It is here that the liver and gallbladder adds bile to the mix. Bile does not contain enzymes and does no digestive work. However, it is responsible for "degreasing" the food. In other words, it breaks down and disperses any fats or oils that are coating the food. This step is necessary so that the enzymes from the pancreas can reach the food and finish digestion. The digested food particles now pass through the intestine wall to be assimilated by the body. The indigestible or unwanted portions of the food are pushed into the colon for elimination. This is the normal course of events for the digestion of food, but all sorts of things can go wrong with this process, and many symptoms can result. Many of these problems can be corrected without resorting to the use of drugs.

Antacids

It is now estimated that the sale of antacids in the United States has reached $8 billion a year. Antacids are used by some people on a daily basis for the symptoms of acid indigestion and its accompanying gas and bloating. These products are designed to give temporary relief or to cover up symptoms. They do nothing to improve your ability to digest food. Advertisements stating they are an excellent source of calcium fail to tell you that only a balanced diet and good digestion will allow you to fully utilize calcium.

Animal Enzymes and Stomach Acid

Health food stores, some pharmacies, and even food stores now carry products such as Pancreatin or Hydrochloric acid supplements (HCl) to help with digestion.

Pancreatin or pancreatic enzymes are either bovine (found in beef) or porcine (found in pigs). By their nature, these enzymes are not active in the mouth or the stomach as are the enzymes contained in your food or the enzymes from your saliva glands. They cannot change your symptoms of indigestion, gas, and bloating.

Another misconception about digestion is that Hydrochloric acid digests food. This is not true. Hydrochloric acid capsules and tablets cannot replace the Hydrochloric acid made in your stomach.

Confused?

If you are unsure as to whether or not you need food enzyme supplements, ask yourself these questions.

1. Do you primarily eat a convenience or fast food diet?
2. Do you frequently have heartburn, gas, or indigestion?
3. Do you avoid certain foods because they bother you?
4. Do you frequently have constipation or diarrhea?
5. Do you have back pain?
6. Do you have headaches?
7. Do you have health problems that no one can find the answers to?