IMAGE AWARENESS HEALTHLETTER

THE IMMUNE SYSTEM

Enzyme Nutrition

VOLUME 102 NO. 8

IMAGE AWARENESS CORP.
1271 HIGH ST.
AUBURN, CA. 95603
PH: (916) 823-7092

Notice

This newsletter is designed for educational purposes only. Any individual suffering from health problems which are mentioned or discussed should consult a physician for proper diagnosis and treatment.

Introduction

"An Arab died leaving seventeen camels plus a will, which read, 'I leave half my camels to my oldest son, a third to my next, and a ninth to my youngest.' Nobody knew what to do with these divisions. How can you take a half of seventeen camels? Everyone was stumped. Along came a wise man who said, 'I own a camel which I'm lending to the estate. Now there are eighteen camels. Give the eldest son 9 camels, the next son six camels, the youngest two camels. That's a half, a third, a ninth, and it comes to seventeen. There's one camel left over. That's my original camel. Give it back to me.'"[1]

In this manner Roy Walford introduces the concept of an enzyme. That extra camel was an enzyme in that it entered into a reaction, made it possible, but was not itself altered or affected.

It is almost impossible to overstress the importance of food and digestive enzymes. It is these substances that make life itself possible. If you are lacking in energy or suffering from degenerative disease, problems with enzymes are likely involved. Almost all degenerative diseases have been observed to begin with digestive problems. Digestive problems begin with the lousy diet people eat. We are foolish to think that we can eat highly refined cooked foods loaded with sugar and fat and not suffer the consequences at the tissue level as well as in our overall feeling of well-being.

The upper or cardiac portion of the stomach is the area where food enzymes do their work in breaking down foods. The pancreas is usually hidden behind the stomach..

This writer has had occasion to talk with a number of foreigners about the health of the Americans they have observed. Almost without exception they have noted the lack of vitality and energy among those they have met.

We continue to act as if the degenerative disease which is steadily rising in our society is something which is out of our control. It is not the "way of things" except for those who refuse to adhere to nature's laws.

Not everyone wants to eat raw food. The information below suggests that we can prevent much of the damage eating cooked foods can cause, if we are willing to supplement the diet with pancreatic enzymes.

Reference:
1. Walford, Roy, Maximum Life Span, New York: W. W. Norton & Co., 1983, pp. 104-5.

Table of Contents
Enzyme Nutrition

Enzymes

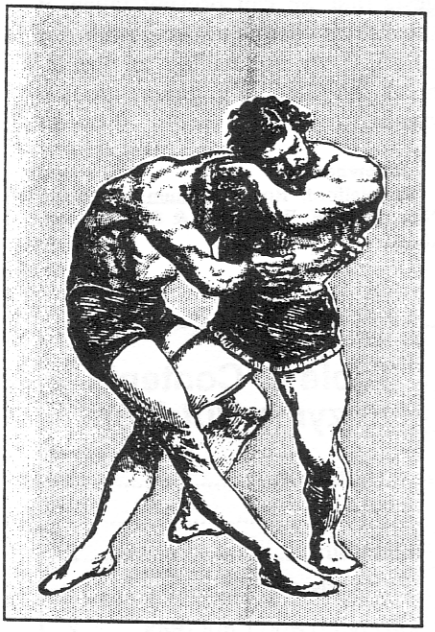
The body is filled with tissue enzymes and digestive enzymes. Digestive enzymes are produced by the salivary glands in the mouth, the stomach lining, the pancreas and the liver. These enzymes help break down food substances, making possible the derivation of nutrition from them. Lack of digestive enzymes results in rapid deterioration of health as will be discussed below.

Tissue enzymes are substances that circulate about the body making the activities of life itself possible. Tissue enzymes include substances like adenosine triphosphate produced by the liver. This enzyme makes energy production possible.

Both kinds of enzymes are generally found in larger quantities in youth than in old age. For example, Howell records that enzymes in the saliva of a young person can be 30 times stronger than the same enzymes in a person over 69 years of age. A starch digesting enzyme in the urine was almost twice as high in young people as in those who were old.

Reference:

Howell, Edward, Enzyme Nutrition, Wayne, New Jersey: Avery Publishing Group Inc., c. 1985, p. 27.



The overall energy a person can produce and use for day to day activities is determined by his intake of enzymes.

Enzymes and Lifespan

Depletion of enzymes is associated with the process of physical deterioration and death. One of the clearest indications of this is the manner in which the life span of laboratory animals is increased by providing them with maximum nutrition with a minimum of calories.

The more food that is consumed the more the enzyme producing capacity of the body is taxed. In one study the life span of rats increased 60 percent by a high nutrient diet low in calories. Fasting will almost always prolong the life span of laboratory animals.

Reference:
Walford, p. 100.

Enzymes And Diabetes

Most Americans eat few raw foods, yet there is considerable evidence that destruction of food enzymes by the cooking process can result in the deterioration of health. Enzymes in foods begin to be destroyed at temperatures as low as 118 degrees.

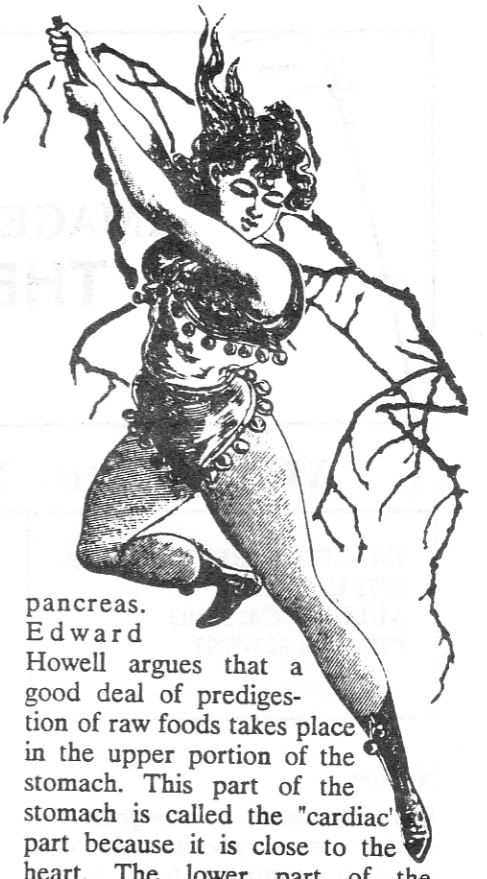
Restoration of raw foods to the diet has been observed to produce physical benefits for those suffering from degenerative disease. In speaking of cases of diabetes, John Douglas writes,

"In the cases reported here one patient had his insulin requirement reduced from 60 units per day to 15 units per day by dietary management alone, and another had his insulin requirement reduced from 70 units per day to oral agents alone. Both of these changes were accomplished by increasing the percentage of raw food in their diets."

Reference:
Douglas, John, "Raw Diet and Insulin Requirements," Annals of Internal Medicine 82:61-63, 1975.

Stomach and the Pancreas

Cooking of foods probably does its damage by overburdening the pancreas. Edward Howell argues that a good deal of predigestion of raw foods takes place in the upper portion of the stomach. This part of the stomach is called the "cardiac" part because it is close to the heart. The lower part of the stomach is called the "pyloric" section because it is close to the opening of the small intestine (pylorus).

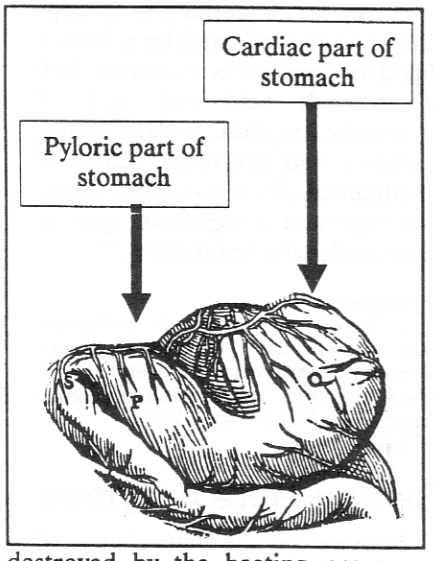


When foods are cooked, little predigestion takes place. As a consequence the pancreas must pick up the slack. This burden is in addition to the frequent overeating and large doses of sugar the pancreas is assaulted with in our society. Howell writes, "Predigestion by food enzymes occurs in every creature on earth. The only exception is the human being on an enzymeless diet."[1]

Cooking of foods is the single greatest dietary distinction between human beings and animals. It may well explain why animals, especially those in the wild, usually have good health, while man suffers from a myriad of ills.

William Philpott also suggests that we may lay pancreatic exhaustion at the door of cooking of foods. He writes,

"...pancreatic exocrine deficiencies...can also be related to the stress producing factor of always eating cooked foods in which the naturally occurring digestive enzymes contained in the food are



destroyed by the heating process. Clinical evidence that supports this thinking is offered to us by a recent study done at the University of Minnesota by Professor Jackson of the Department of Anatomy. He has shown that rats fed for 155 days on an 80 percent cooked food diet manifested an increased pancreatic weight of 20 to 30 percent with corresponding decrease of digestive secretions....the more we use our enzyme potential, the faster it is going to run out. When you eat food that is raw, the enzymes contained in the food immediately start breaking down the food that is ingested. Your chances, therefore, of not putting a burden on your pancreas are better if you eat as much raw food as possible."[2]

Howell agrees with this conclusion. He says that the pancreas will rob all parts of the body for metabolic enzymes (or tissue enzymes) which it can reprocess into digestive enzymes. He writes,

Changing metabolic enzymes into digestive enzymes means extra work for the pancreas. It must get bigger, just as a muscle grows from more exercise. This enlargement may harm the pancreas, but when it confiscates metabolic enzymes it punishes the whole body by depriving it of the mechanics every organ and cell needs to carry on their processes and functions....your brain, heart, arteries, and all organs and tissues suffer from an enzyme labor shortage.[3]

Howell points out that mice which eat cooked laboratory chow have a pancreas which weighs more than two and a half times the pancreas of wild mice which eat raw food.[4]

Laboratory rats typically have a pancreas which is three times larger than that of their wild cousins. One might think that laboratory rats were generally healthy, but they usually die young and when allowed to live to the end of their natural lifespans "an astonishing array of typically human degenerative diseases was revealed.[5]

Reference:

1. Howell, Enzyme Nutrition, p. 51.
2. Philpott, William and Kalita, Dwight, Victory Over Diabetes A Bio-Ecologic Triumph, New Canaan, Conn., Keats Publishing Inc., 1983, p. 63.
3. Howell, Enzyme Nutrition, p. 81.
4. Ibid., loc. cit.
5. Ibid., p. 84.

Consequences of a Tired Pancreas

The pancreas produces three crucially important substances: insulin, proteolytic or protein digesting enzymes, and bicarbonates. As the pancreas wears out these three secretions are affected. Insulin release is generally the last to decline.

As the pancreas becomes increasingly hampered the following problems can develop:

A disturbed acid-base balance

- Loss of ability to digest food, especially protein
- Strong allergic responses to undigested protein
- Diabetes
- Schizophrenia
- Problems handling fat

The loss of ability to properly break down and handle protein is serious because it will further diminish the ability of the pancreas to function as well as cause a collapse of the immune system.

Because the pancreas stands between the food we eat and the body Philpott refers to it as the "primary shock organ."

Reference:

Philpott, William, Brain Allergies, New Canaan, Conn.: Keats Publishing, Inc., 1980, p. 99.

Supplementing With Pancreatic Enzymes

If collapse of the functioning of the pancreas is the key to serious problems like diabetes and schizophrenia, this should be capable of being demonstrated by supplementing these problems with digestive aids. Philpott has done this and provided some stunning case histories.

Catatonic Schizophrenia

A young woman developed catatonic schizophrenia when she ate cheddar cheese. Philpott provided her with large quantities of stomach acid and pancreatic enzymes. She was then fed a pound of cheddar cheese. "The only symptom was minor sweating of hands."[1]

Blood Sugar

A young woman had a blood sugar of 400 mg.% after eating raisins. When given digestive aids blood sugar rose to only 160 mg.% after a meal of raisins.[2]

Howell reports a study which indicated benefits for a great variety of conditions as a result of enzyme supplementation:

Enzyme Benefits[3]

Condition	% Improved
Bronchial Asthma	88%
Food Asthma	92%
Food Eczema	83%
Hay Fever	80%
Loose Bowels	100%
Overweight	93%
Underweight	91%
Hives	86%

References:

1. Philpott, William, "Proteolytic Enzyme and Amino Acid Therapy in Degenerative Disease," insert in Physician's Handbook of Orthomolecular Medicine, New York: Pergamon Press, 1977, pp. 3-4.
2. Ibid., p. 7.
3. Howell, Edward, The Status of Food Enzymes in Digestion and Metabolism, Chicago: National Enzyme Comapany, 1946, p. 11.

Much of the deterioration of aging is associated with the depletion of enzyme producing capacity in the body.

Bicarbonate

One of the pancreatic malfunctions noted by Philpott was the loss of ability to release bicarbonate. Without bicarbonate, the protein digesting enzymes of the pancreas accomplish little.

Studies done on dogs indicate that if the stomach acid is not strong enough little bicarbonate will be released by the pancreas. When the pH of the stomach rose above 3 bicarbonate secretion rapidly decreased. At a pH of 4.5 to 5 no more bicarbonate was released by the pancreas.

Reference:
Meyer, James H., Way, Lawrence, and Grossman, Morton, "Pancreatic bicarbonate response to various acids in the duodenum of the dog," American Journal of Physiology, Vol. 219, No. 4, October 1970, p. 964.

Food Sensitivities

Science has long thought that the digestive tract stops the passage of large food and other particles (macromolecules) into the blood. Recently doubt has been increasingly cast upon this assumption.

Walker writes, "...the intestinal tract represents a potential site for the absorption of toxic quantities of bacteria, endotoxin, proteolytic and hydrolytic enzymes, or of ingested antigens that normally exist in the intestinal lumen and therefore might be of considerable importance in the pathogenesis of a number of local intestinal and systemic disease states."

A key factor permitting absorption of large food particles is lack of digestive substances including lack of stomach acid and lack of pancreatic enzymes. Walker writes, "...gastric and pancreatic phases of intraluminal (lit. within tube) digestion represent a significant step in macromolecular breakdown."[2]

References:
1. Walker, W. Allan and Isselbacher, Kurt, "Uptake and Transport of Macromolecules by the Intestine: Possible role in clinical disorders," Progress in Gastroenterology 67: 531, Vol. 67, No. 3, 1974.
2. Ibid., p. 538.

Getting More Enzymes

Because of the importance of both food enzymes and also those produced by the digestive organs, every effort should be made to obtain an adequate supply. This can be done by gradually increasing the amount of raw food in the diet and by supplmenting with digestive aids.

Foods naturally high in enzymes include "cabbage, carrots, cucumber, tomatoes, endive, avocadoes, mangoes, bananas, apples, oranges, grapefruit, pineapples, raw fresh undried dates and figs..."[1]

Other raw foods actually have potent enzyme inhibitors. These foods include legumes (peanuts, peas, lentils, lima beans, and especially soybeans), asparagus, egg white, seeds, wheat germ and potatoes. These foods can be easier to digest if cooked properly. Seeds are easier to digest if sprouted than eaten raw, since the process of sprouting tends to dissipate digestive inhibitors.

Conclusions

Hopefully this information will motivate some to consume more high-enzyme raw foods and supplement with digestive enzymes.

This writer was once told by a physician that he took enzymes to counteract some of the daily assaults he placed upon his body by the lifestyle he engaged in. The more study one does of the effects of cooking foods, the more important digestive aids seem to become as an essential component of any sensible supplement program.