Enzymes - Nature's Catalysts for Health

Enzyme

Look up the definition of the word "enzyme" in a dictionary and you are likely to find, "A protein functioning as a biochemical catalyst in a living organism." Sounds simple enough if you're a chemist, but doesn't begin to describe the incredible complexity of biochemical reactions that take place in the human body.

The Digestive Process

Most people do not fully understand the digestive process. Not much time is focused on the importance of properly chewing the food, and even less to the quality of the food selected for consumption. This is unfortunate, as both are critical to good health and long life.

In order for food to be easily assimilated, it must be completely broken down. The first phase of breakdown is mechanical that of using the teeth to chew the small chunks of food placed into the mouth. After swallowing, the food travels down the esophagus and arrives in the cardiac portion of the stomach.

It is here that the food sits for approximately one hour waiting for the hydrochloric acid to begin to come into the lower part of the stomach to further help in the breakdown of the food mass for proper assimilation of nutrient content. During this time, the naturally occurring enzymes in food (as long as the food has not been over-cooked above 105° F, micro- waved, or irradiated), begin the predigesting process. After the hour, food begins to work its way to the lower part of the stomach, and is mixed with acids and other digestive enzyme and juices which are manufactured in the stomach lining.

How Enzymes Break Down Food Into Nutrients

Food enzymes are enzymes found naturally in fresh, raw foods. For example, avocados and nuts contain naturally occurring lipase, while oats have a high amount of amylase, or starch-digesting enzyme.

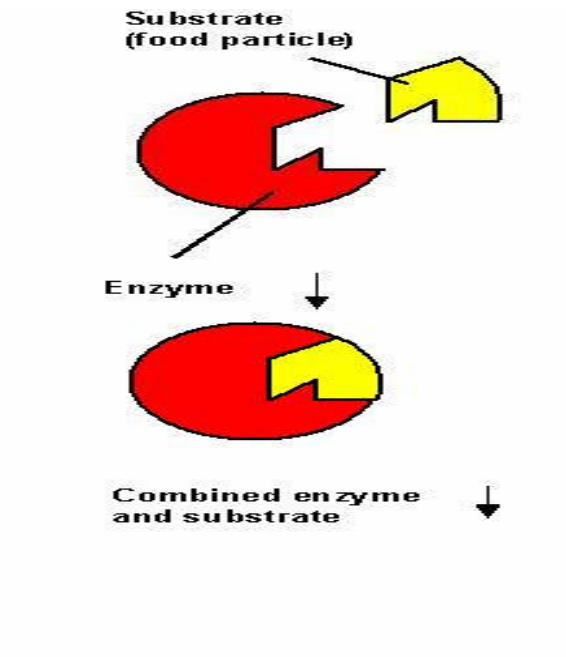
The contribution of food enzymes to the digestive process is extremely important to overall digestive function and is too often overlooked.

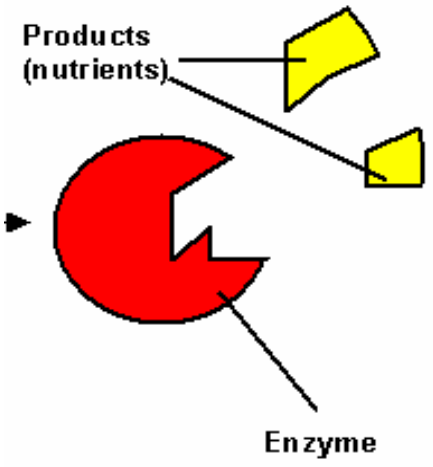
Digestive enzymes are those that the body manufactures and secretes to break down food. Examples of digestive enzymes are protease, which breaks down protein; amylase, which breaks down starch; and lipase, which breaks down fat.

So the food enzymes along with the salivary glands in the mouth, the gastric glands in the stomach, and specific cells in the pancreas secrete the enzymes that work to digest the proteins, fats, and sugars present in any food that is eaten.

Enzymes are large molecules tailored to facilitate a given type of reaction. Usually enzymes are proteins, an important class of biomolecules constructed from amino acids. Enzymes catalyze reactions by speeding up life-sustaining processes that under normal body conditions would be much too slow to be useful. Enzymes are also incredibly selective--they ignore thousands of molecules in the body for which they were not designed. The mechanisms of catalyzed reactions are often not completely understood, but a lock-and-key model is useful in representing enzyme activity.

This model proposes that the shapes of the reacting molecule (the substrate) and the enzyme fit together like a lock and key.





Metabolic enzymes are present in every cell, tissue and organ in the body, and they catalyze the reactions associated with the everyday functioning of living cells.

They are responsible for keeping the body's systems in proper balance by controlling virtually every chemical reaction associated with metabolism. Because of this, metabolic enzymes are the very basis of the life process.

Cooking, storing, and processing destroy most enzymes that are naturally present in foods, and the body all to often is therefore required to supply all of the enzymes necessary for the digestion of that food.

If food that has not been properly digested is passed into the intestine, it can become fuel for unfriendly intestinal bacteria, which can lead to intestinal fermentation, bloating, and discomfort (intestinal toxemia). But more important, undigested particles of food may cross the intestinal wall and reach the blood stream, where they are identified as foreign substances by the immune system.

Such a phenomenon was identified nearly half a century ago and is referred to as food leucocytosis (a food-driven increase in white blood cells).

Many people take supplemental digestive enzymes to aid the digestive process. Enzyme supplements do not replace the enzymes that are in food, nor do they replace the body's naturally secreted enzymes.

It is my opinion that enzyme supplements are no more effective than the isolate vitamins drug companies have been pushing for years. Food enzymes are specific to the food they are associated with.

Also, many enzyme supplements on the market today are either created by chemical synthesis or made from animal organs.

Eat Live Whole Food and eliminate the need to have any supplement.

Enzymes are at the heart of the biochemical

processes that release the energy that sustains life. Energy and vitality are a result of creating an overall healthy lifestyle, including:

- Regular exercise
- Adequate rest
- Mental peace and harmony
- Plenty of pure water and Proper diet featuring generous amounts of Live Whole, uncooked foods.

Please read the article "The Importance of Enzymes."

WARNING:
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