

enzymes

ENZYMES

What Is an Enzyme?

Enzymes are some of the most remarkable organic compounds known to man. Complex proteins by nature, they have the ability to initiate and accelerate necessary chemical reactions within the body. Almost all processes in a biological cell need enzymes in order to occur properly. Enzymes work by lowering the activation energy of a chemical reaction, dramatically accelerating the rate of the reaction as a result. Most enzyme reaction rates are millions of times faster than the comparable uncatalyzed reactions. In fact, without enzymes, most reactions would take too long to occur to be beneficial—if they happened at all. In the body, enzymes are known to aid in about 4,000 different reactions.

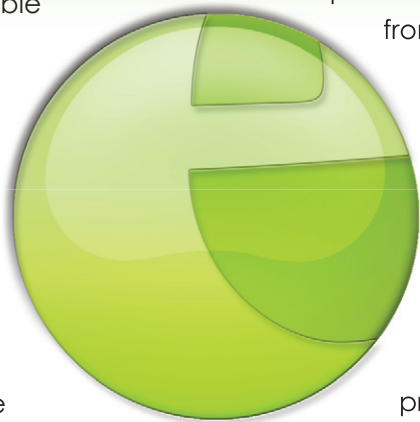
Digestion and Enzymes

Enzymes are very specialized, meaning that each enzyme only works in one or at most a handful of chemical reactions. Digestive enzymes work to transform foods into simpler, more usable materials. Food itself is essentially just a mixture of chemicals that is too complex for the body to use without first being broken down into its basic components. Enzymes unlock the benefits of vitamins, minerals, and proteins and put them to work in the body. As we age, our bodies produce fewer enzymes; and, depending on our dietary choices, we may get little help from the foods we eat.

Enzymes and pH

The activity of enzymes is strongly affected by changes in pH (acidity) and temperature within the body. Each enzyme works best at a certain pH and temperature. The pepsin enzyme works best in the

stomach where volatile stomach acids create a pH level of 1–2. The enzyme trypsin is inactive at such a low pH, but it is very active in the small intestine as pancreatic fluids neutralize contents arriving from the stomach and create a pH of 8.



Your Need for Enzymes

Enzymes run every function in our entire body. Digestive enzymes break down the foods we eat so they can be used as a source of nutrients and energy. Each cell in your body relies on the raw materials provided to the body by digestive enzymes. If you don't have enough enzymes, you can develop numerous diseases. All the food and nutritional supplements you consume won't do any good if they are not sufficiently broken down and absorbed by the body.

The foods you eat—even if you eat a healthy diet—are only as good as your digestion. Digestive enzymes help your body replenish its store of vital nutrients. With a balanced formula of enzymes and other digestive aids, Nature's Sunshine's enzyme supplements help you get the most out of your meals.

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