

## WHY TAKE ENZYMES?

### Enzyme Functions

Nearly every person can benefit from supplementation with enzymes. People may improve their absorption and utilization of nutrients through the use of digestive enzymes. Of course the benefits will vary, depending upon the individual's diet and general health. Individuals in good health can expect to notice less fullness after meals, increased energy, faster emptying of the stomach contents, decreased gas and regular bowel habits.

### Enzymes & Cooked Foods

The enzymes naturally present in food play an important role in digestion by helping to predigest the ingested food in the upper stomach. Cooking and processing destroys the natural enzymes found in foods. This places the full digestive burden on the body, which can cause extra stress on the digestive system, possibly leading to incomplete digestion. As a result, vital nutrients may not be released from the food for assimilation by the body.



### Supplement with Enzymes

Raw foods such as fruits and vegetables are excellent sources of enzymes, but these enzymes are destroyed when the food is processed, canned, or cooked. The modern diet consists of predominantly enzyme-deficient, cooked foods. Supplementation with enzymes replaces those lost in cooking and enhances the enzymes found in raw foods.

Naturally-occurring food enzymes and supplemental enzymes begin the process of digestion earlier in the digestive tract. In the absence of supplemental enzymes, the bulk of digestion occurs in the small intestine. The chance of undigested food entering the colon is increased. Incomplete digestion of food gives colon bacteria the opportunity to feed, producing gas and toxins that can leave people feeling uncomfortable and even sick.

### What are supplemental Enzymes?

*Enzymes are necessary for life* and enzyme supplements can play an important role in maintaining a healthy active life. There are many different types of enzyme products including digestive, antioxidant and systemic supplements. Enzyme supplements are commonly found in the form of capsules, tablets, chewable tablets or powders.

**Digestive enzymes** include proteases, lipases and carbohydrases and function to break down the foods that we eat. These supplements replace the naturally-occurring food enzymes that are lost in cooking and processing. Digestive enzyme supplements may be from animal, plant, fungal or microbial sources. While many products are formulated to support digestion for anyone other supplements are designed specifically to target specific digestive issues including dairy intolerance, gluten intolerance and specific dietary regimens. These enzyme supplements are taken with meals to support digestion and nutrient assimilation. **Digestive enzymes** help break down food into smaller particles. The human body naturally makes digestive enzymes, but the body often does not produce enough enzymes (or the complete spectrum) required for proper digestion. When this is the case, supplemental enzymes can help.

Raw fruits and vegetables are also common sources of **antioxidant enzymes** including catalase, super oxide dismutase (SOD), and various peroxidases. Milk, eggs, and liver can also be a source of these enzymes as well as lactoferrin, lysozyme and lacto peroxidase. Antioxidant enzymes neutralize oxidative compounds and help combat cellular damage caused by free radicals. These enzymes may be included in products designed to be taken with meals or between meals.

**Systemic enzymes** have actions beyond the digestive system. The exact mechanism of action remains unknown. Research indicates that some enzymes may be absorbed while others may signal biochemical reactions without absorption. Proteases are the primary component of systemic enzyme supplements. Common products that include systemic enzymes are designed to support the cardiovascular, immune and musculoskeletal systems. Systemic enzyme supplements are taken between meals on an empty stomach.