

# Enzymes and Health

How digestive and proteolytic enzyme supplements contribute to wellness

**Most known for the role they play in digestion, enzymes occur naturally in the body and in the food we eat.**

Digestive enzymes, secreted along the upper gastrointestinal tract, help break down food so nutrients can be absorbed into the bloodstream. Specific enzymes help the body break down certain food elements. For example, protease acts on protein, amylase on carbohydrates, cellulase on fiber, lipase on fat and lactase on dairy sugar.

Additionally, enzyme supplements taken on an empty stomach can be absorbed intact into the bloodstream where they help restore and maintain healthy blood and tissue functions.

## HISTORY

Health care practitioners and others have used enzyme therapy for more than half a century. Even ancient civilizations wrapped papaya leaves, containing the enzyme papain, around wounds to support the natural healing process.

In the 1920s, Dr. Edward Howell observed that fasting and an enzyme-rich diet promoted health by significantly decreasing the demand for digestive enzyme secretions by the body. Howell observed that enzymes present in raw foods reduced the body's digestive burden. He also found that the metabolic enzymes of the immune system were able to increase detoxifying activity.

A pioneer in enzyme therapy, Dr. Howell founded his first company in 1932 to develop nutritional enzyme supplements to replace the enzymes lost in the cooking and processing of food.

## DIGESTIVE ENZYMES

Raw foods, like apples, bananas and uncooked fish, contain food enzymes that help the body break down and assimilate nutrients. However, natural enzymes are destroyed when processed or cooked.

Most modern diets force the body to rely on digestive organs, such as the pancreas, to compensate for destroyed enzymes.

Fortunately, digestive enzyme supplements can replace enzymes destroyed in cooking and processing. They support proper digestion, which results in fewer digestive problems and helps our bodies release and absorb nutrients to promote and enhance health.

Digestive enzyme supplements predigest foods in the upper stomach for 45 minutes to one hour after food is consumed. As food moves toward the small intestine, this advanced state of digestion is detected, telling the body that fewer pancreas-derived digestive enzymes are needed. This reduction in digestive stress can help with many digestive complaints, including indigestion, gas, bloating and reflux.

Dr. Howell believed the number of enzymes a body can produce is finite, and the body's ability to produce enzymes decreases as we age. Further, Dr. Howell states that this depletion of enzymes leads to chronic conditions.

## PROTEOLYTIC ENZYMES

While enzymes taken with food are completely dedicated to the digestive process, research has shown that protease enzymes, also called proteolytic enzymes, taken on an empty stomach can support immunity and the normal inflammatory process.

Proteolytic enzyme supplements, containing select blends of acidic, alkaline and neutral proteases, have been shown to reduce pain, swelling and redness associated with inflammatory conditions.

In a University of Texas Southwest Medical Center study, a protease-based nutritional enzyme supplement from Enzymes, Inc., accelerated wound-healing time by nearly 20 percent. In the clinical trial, people who took the supplement had less redness in their wounds, a result researchers associated with decreased inflammation.

Safe, natural proteolytic enzymes offer an alternative to nonsteroidal anti-inflammatory drugs (NSAIDs), which have been linked to dangerous side effects. Enzymes, Inc., uses a proprietary blend of proteases, pHydroProtease,™ in many of its vegetarian-based systemic products.

## VEGETARIAN ENZYMES

Vegetarian enzymes are active over a broad pH, from the acidity of the stomach to the alkalinity of the small intestine. Studies have demonstrated that it takes significantly less active units of vegetarian digestive enzymes to provide the same results as animal-based enzymes.

What's more, production of vegetarian enzymes takes place in highly controlled laboratory conditions, which protects against hormones, pesticides, antibiotics and other environmental contaminants associated with animal-based enzymes.

**Your practitioner will be able to recommend the best enzyme products for your needs.**

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# Probiotics and Health

How “friendly bacteria” contribute to wellness

**Probiotics, often referred to as “friendly bacteria,” help restore the flora balance in our digestive systems.**

The rigors of daily life, and the choices we make, can sometimes disrupt colon and digestive health. Beneficial bacteria is negatively affected or destroyed by the following:

- Drugs and antibiotics
- Viruses and illness
- Poor eating habits
- Gastrointestinal disturbances, such as yeast overgrowth

The loss of probiotics in our digestive systems can lead to several digestive problems, including constipation, diarrhea and food intolerances, as well as other health conditions.

## **WHY SHOULD I TAKE A PROBIOTIC?**

There are billions of probiotics in our digestive systems. In fact, it is estimated there are more beneficial bacteria in our intestines than there are cells in the body.

Probiotic organisms impede the growth of harmful bacteria, viruses, fungi and yeast. They also increase the pH of the colon to inhibit tissue changes.

In digestion, probiotics aid in breaking down lactose, fiber and proteins. They help the body properly absorb vitamins and essential nutrients.

## **WHAT TO LOOK FOR IN A SUPPLEMENT**

To sufficiently repopulate the digestive tract, look for a probiotic supplement with 5 billion or more beneficial organisms.

The best probiotics are enclosed in vegetarian capsules with no added fillers.

There are several strains of probiotics that can contribute to digestive health and wellness.

A synergistic mix of probiotic strains, enclosed in a single supplement, provide specific benefits:

### **Bifidobacterium bifidum**

Found to reduce colon inflammation, strengthen the immune system, improve allergies and inhibit bacterial overgrowth

### **Bifidobacterium longum**

Stimulates the immune system and provides gastrointestinal support during antibiotic use

### **Lactobacillus acidophilus**

Creates a positive environment in which other probiotics thrive and inhibits the growth of invasive bacteria

### **Lactobacillus casei**

Stimulates growth of beneficial organisms, enhances immunity, improves digestion and reduces milk intolerance

### **Lactobacillus plantarum**

Reduces the movement of bacteria from the gut to internal organs and helps with the discomfort associated with malabsorption

### **Lactobacillus rhamnosis**

Colonizes and protects the small intestine, inhibits growth of harmful bacteria and helps with lactose intolerance and diarrhea

### **Lactobacillus salivarius**

Supports bowel health and strengthens the immune system

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