



Digestive problems comprise the number one health problem in North America. These concerns, encompassing everything from hemorrhoids to colon cancer, result in more time lost—at work, school, and play—than any other health problem. They also appear to be occurring with much more frequency—while many of them were almost unheard of in our grandparents' times, they are cropping up more and more and at an earlier and earlier age.

One way to help maintain digestive health is to be sure you get enough nutritious foods and digestive enzymes. Enzymes are essential to a healthy body because they transform food into nutrients.



absorbed into the bloodstream and used in body functions. They ensure that we get the greatest possible nutritional value from foods. Digestive enzymes include protease, which digests protein; amylase, which digests carbohydrates; lipase, which digests fats and oils; and maltase, which digests malt sugars and grains.

Food enzymes are enzymes supplied to us through the foods we eat. They include digestive enzymes, but also enzymes unique to the particular foods. Food enzymes help us “predigest” foods; that is, start breaking down foods before our bodies’ enzymes begin to do so. According to Santillo (1993), the enzymes found in raw foods digest 5 to 75 percent of the foods themselves without the help of other enzymes. This way, our bodies’ digestive enzymes have help in the digestive process, and we do not use as many of the body’s “in-house” enzymes.

## Enzymes

Enzymes are the sparks that cause or speed up the essential chemical reactions our bodies need to live. The human body produces millions of enzymes every second. Enzymes are necessary for providing cellular energy, for repairing all tissues, organs, and cells, for stimulating the brain, and for digesting foods. This includes the absorption, transportation, and metabolism of nutrients as well as the elimination of waste. Humbart Santillo, B.S., M.H., in his book *Food Enzymes* (1993), quotes a Scottish medical journal that says it well: “Each of us, as with all living organisms, could be regarded as an orderly, integrated succession of enzyme reactions.”

### Three classes

Three classes of enzymes are metabolic enzymes, digestive enzymes, and food enzymes. Metabolic enzymes catalyze, or spark, the reactions within the cells. The body’s organs, tissues, and cells are run by metabolic enzymes. Without them, our bodies would not work. Among their chores are helping to turn phosphorus into bone, attaching iron to our red blood cells, healing wounds, and seeing that our hearts beat.

Digestive enzymes are secreted by the pancreas and break down foods, allowing their nutrients to be

### The importance of enzymes

Enzyme theory is based on the pioneering work of Dr. Edward Howell in the 1920s. He wrote two books on the subject and theorized that humans are given a limited supply of enzyme energy at birth, and that it is up to us to replenish our supply of enzymes to ensure that their vital jobs get done. If we don’t replenish our supply, we run the risk of ill health. Current research shows that as we age, we produce a reduced number of enzymes.

Enzyme theory became more popular as the Western diet became more dependent on processed and cooked foods. Enzymes are extremely sensitive to heat; food enzymes are destroyed at temperatures above 118 °F. Pasteurizing, canning, and microwaving all destroy enzymes. This means that cooked and processed foods contain few, if any, enzymes, and that the typical diet found in industrialized countries is enzyme-deficient. When we eat cooked and processed foods, we could well be eating for a shorter and less-than-healthy life.

Nutritional studies have shown that a regular diet of cooked and canned foods causes the development of chronic degenerative diseases. This points back to the



importance of eating raw fruits and vegetables. Only raw foods have functional “live” enzymes. And the more raw foods you eat, the more live enzymes you get. Decades ago, Dr. Howell advocated the consumption of large amounts of plant enzymes. More recent studies have examined the effectiveness of plant enzymes in a wide range of conditions (Gardner 1988).

### **The benefits of enzymes**

The benefits of providing the body with more enzymes are many. As noted, getting more enzymes aids the body’s own enzyme supply, which may lead to a healthier life.

Recent studies (Leipner and Saller 2000) show that enzyme therapy could reduce the adverse affects caused by radiation and chemotherapy.

Most widely known is that digestive enzymes help us digest foods more completely. This means that we utilize more nutrients (which might mean that we eat less and maintain a stable weight) and experience better health.

There is another advantage to being sure that foods are well-digested. When foods are not well-digested, they remain in the stomach and can rot and putrefy. This results in a buildup of waste in the colon. This fecal matter begins to decay, producing bacteria and toxins. The toxins eventually seep through the bowel wall, where blood capillaries pick them up and distribute them throughout the body. This can result in health problems. These problems include constipation, stomach bloat, poor digestion, gas, fatigue, weight gain and weight loss, headaches, and more. Using digestive enzymes ensures that your foods are more completely digested, helping to eliminate potential problems due to toxins.

## **AIM PrepZymes®**

AIM PrepZymes® combines cultured enzymes with papaya fruit and alpine wild garlic for the best possible digestive product: one that provides you with important enzymes to help you digest the foods you eat as well as the materials to fight metabolic damage.

### **Papaya fruit and alpine wild garlic**

The papaya fruit found in AIM PrepZymes® contains papain. Papain is an enzyme that sticks to proteins, aids in protein digestion, and has a soothing effect on the stomach.

Alpine wild garlic aids in digestion and also contributes antioxidant activity to the formula.

### **Cultured enzymes**

Cultured enzymes are valuable because they have a wide work environment, that is, they are active in both acidic and alkaline environments. The enzymes are cultivated, strained off, and purified so that no fungi, bacteria, or yeasts remain in the product.

The unique combination of enzymes in AIM PrepZymes® has been specially formulated to

- replace the naturally occurring enzymes lost during food processing, food preparation, and cooking, as well as due to irradiating or the cultivation of depleted soils; and
- meet the digestive needs of the diet found in industrialized countries, which typically includes fats and proteins, hidden sugars, dairy products, snack foods, and processed foods.

### **Following are the enzymes in each capsule of AIM PrepZymes® and their sources:**

- protease I for protein digestion  
*Aspergillus oryzae*, a fungus
- protease II for protein digestion  
*Carica papaya*, a plant
- alpha/beta amylase for carbohydrate digestion  
*Aspergillus oryzae*, a fungus
- lipase for fats and oils digestion  
*Aspergillus niger*, a fungus
- cellulase for dietary fiber digestion  
*Trichoderma*, a fungus
- lactase for dairy products digestion  
*Aspergillus oryzae*, a fungus
- maltase for malt sugars and grain digestion  
*Aspergillus oryzae*, a fungus
- invertase for white sugar digestion  
*Saccharomyces cerevisiae*, a yeast

The lipase in AIM PrepZymes® ensures that fats and oils are properly broken down early in the digestive process. This eliminates the possibilities of proteins becoming coated with oil and escaping predigestive action. The maltase and invertase address the high amounts of “hidden” sugars found in processed foods and snack foods high in dairy, malt, and white sugars.



## Try this

To see firsthand the power of AIM PrepZymes®, try this experiment.

Prepare a bowl of oatmeal and let it sit overnight. Then mix into the oatmeal the ingredients of one capsule of AIM PrepZymes®.

Within 15 minutes, you will notice that the oatmeal becomes more “liquid.” Within one hour, you will practically be able to drink it! This is the action of the enzymes breaking down the oatmeal. This is what AIM PrepZymes® does for the foods you eat!

## How to use AIM PrepZymes®

- To aid in digestion, take 1 capsule before or during each meal. You may take more or less depending on your needs.
- Close tightly after opening and store in a cool, dry, dark place (70-75 °F; 20.1-23.8 °C). Do not refrigerate.

## Q & A

### *Who should use AIM PrepZymes®?*

If you believe that you are not digesting foods well, you should use digestive enzymes. In addition, we have fewer enzymes as we age, so we should always consider using digestive enzymes as we grow older.

### *May children and pregnant women take AIM PrepZymes®?*

Yes, they may. Both children and pregnant women should take the usual adult serving of one capsule before or during each meal. However, when using dietary supplements, it is recommended that you consult your healthcare practitioner.

### *Is there anyone who should not take AIM PrepZymes®?*

Yes, it is recommended that those with gastritis or gastric or duodenal ulcers not use AIM PrepZymes®.

### *If we take enzymes orally, aren't they destroyed by stomach acid before they can do anything?*

According to Santillo, this is not true. In his book *Food Enzymes* (1993), he cites university research that has shown that supplemental enzymes pass through the stomach uninjured. In one study, the enzyme amylase digested starch in the stomach and then moved into the small intestine, where it continued digestion. Santillo (1993) also notes that foods are predigested by enzymes in the upper portion of the stomach, which is known as the cardiac stomach. According to Henry Gray's *Anatomy of the Human Body* (1918), “The cardiac portion of the stomach is a food reservoir in which salivary digestion continues. The pyloric [lower stomach] portion is the seat of active gastric digestion.”

### *May I take AIM PrepZymes® with AIM FloraFood™ or other AIM products?*

You may take AIM PrepZymes® with other AIM products. AIM PrepZymes® and AIM FloraFood™ are both best taken with meals. However, AIM PrepZymes® will break down the bacteria in AIM FloraFood™, so take these products with alternate meals.





## References

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## Suggested Reading

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- Howell, Edward. *Enzyme Nutrition: The Food Enzyme Concept*. Garden City Park, NY: Avery Publishing Group, Inc., 1986.
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## Benefits & Features

### Benefits

- Helps maintain digestive health
- Allows for more thorough digestion of food
- Improves assimilation and utilization of food
- Increases energy

### Features

- Unique and proprietary formula—177 mg of enzymes, 50 mg of alpine wild garlic leaf, and 40 mg of papaya fruit per capsule
- Specially made for high-sugar, high-fat diets commonly found in "industrialized" countries
- Contains cultured enzymes
- Vegetarian capsule
- 100-count capsules

*AIM PrepZymes® is a Digestive Health product. The complete Digestive Health line consists of AIM Herbal Fiberblend®, AIM PrepZymes®, and AIM Para 90®. Use these products to help maintain your digestive health.*

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