

PENNY SAVER NEWS

FAX: 932-5261

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BY: Mary A. Keith, Ph.D., L.D.
Food, Nutrition and Health Agent
Katrina Woodring, Pharm D Intern

HILLSBOROUGH COUNTY

5339 S. County Road 579

Seffner, FL 33584-3334

PH:(813)744-5519 x 136, FAX:744-5776

e-mail:mkeith@ufl.edu

Eat it Up and Break it Down

We've all experienced the uncomfortable feeling of indigestion at least once in our lives, right? Some of us may have even been given advice from our doctor, friends or family to take "digestive enzymes". So, what are these digestive enzymes and do they really work?

Digestive enzymes are proteins that help break down and digest food. They are made by our bodies. Some are also found in foods we eat. To digest the many different kinds of foods we eat, we need many different types of digestive enzymes. Lipases break down fats (called lipids), proteases digest proteins and amylases work on carbohydrates (sugars and starches).

It is true that food cannot be properly broken down without the help of enzymes. The questions are: Can't our bodies make enough on their own? How well do the digestive enzyme supplements work?

Enzymes are destroyed by too much heat. Cooked or processed foods contain very few active enzymes. This seems to be why some people suggest that a supplement of digestive enzymes is needed. They think that without the enzymes in the foods, our bodies won't make enough enzymes of its own to digest the food. But why wouldn't our bodies make them? We've survived for centuries without extra enzymes.

People with cystic fibrosis, pancreatitis, Crohn's disease and malabsorption syndromes benefit from digestive enzymes because their bodies cannot make enough. People with severe cases of indigestion may also benefit in certain cases. It is very uncertain how much benefit healthy people get from taking extra enzymes.

Supplements are often made of many different enzymes packaged together. However, enzymes are proteins and the job of protease enzymes is to break down other proteins. So, when packaged together it seems likely that the proteases will break down the other enzymes. This is why you can't put fresh pineapple in gelatin. The enzymes in the pineapple break down the proteins in the gelatin, turning it liquid.

To work effectively, enzymes must have the right temperature and acidity. The acidity of the mouth, stomach and intestines are all naturally different. Enzymes are picky. If it's too acidic or not acidic enough they don't like it, won't work and may even be destroyed. That means some enzymes only work in the mouth while others only work in the stomach. This is good because digestion needs to start in the mouth and continue in the stomach and intestines, with different enzymes to help all along the way.

Enzymes can be destroyed quickly. If they are destroyed before they have a chance to work, they are useless. Some, but not all, supplements are made with a special coating (called enteric coating) to keep them from dissolving in the wrong place. That is one reason why the directions may say to take the enzymes at the start, half way through, and at the end of a meal. It is unknown how much of the enzymes actually make it to the place where they work best before they are destroyed.

It is always a good idea to ask your doctor or pharmacist for advice when choosing a supplement. Don't forget to tell your doctor if you take digestive enzymes,

especially if you take the blood thinner warfarin (Coumadin). They could interact and your blood thinner dose may need to be adjusted.

Digestive enzymes are needed for breaking down food. Supplements may help with indigestion and other diseases, but depending on factors like packaging and acidity, they might not be helping much at all. Ask your doctor's advice before treating any disease.

Try this recipe for a fun, colorful and refreshing fruit salad. Use fresh raw pineapple and papaya to keep their natural enzymes active and ready to help digest.

Rainbow Fruit Salad

½ cup halved strawberries	½ cup blueberries
1 cup cubed cantaloupe (or papaya)	1 cup honeydew melon
1 cup diced pineapple	1 sliced banana
1 tsp cinnamon	1/3 cup orange juice
1 Tbsp sweetened condensed milk	2 Tbsp sliced almonds (or pecans)

Combine the sweetened condensed milk and the orange juice in a small bowl. Mix all the fruits in a large bowl. Stir in the orange dressing, sprinkle the almonds on top and enjoy! Serves 4-6.

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