

Take a Closer Look . . .

at enzymes

enzyme (ĕn´zīm) n. Any of numerous proteins produced by living organisms and functioning as biochemical catalysts in animals and plants.

The importance of enzymes in our diet

Enzymes play a crucial role in all aspects of health and longevity; they act as catalysts to reduce the amount of energy needed for chemical reactions such as digestion to take place. Found in all living things, enzymes are active in raw foods, but become deactivated when food is cooked, radiated, or exposed to poor storage conditions.

The human body experiences thousands of continuous enzymatic reactions, but produces only two general types of enzymes. *Metabolic enzymes* are present in every tissue and cell, and control virtually every chemical reaction associated with metabolism. *Digestive enzymes* help to predigest our food. Digestive enzymes can be either intrinsic or extrinsic, that is, either created internally by the body or taken in from external sources.

“Man is not nourished by what he swallows, but by what he digests and uses.”
—Hippocrates

Intrinsic enzymes are produced in the mouth, stomach, and pancreas to help break down food throughout the digestive tract. Often called food enzymes, extrinsic enzymes come from raw foods and also in supplement form. Like intrinsic enzymes, they work to break down food in the stomach. With age

and stress, the number of intrinsic enzymes and their activity level decrease. Poor digestion, so common today, contributes to poor health. Increased enzyme intake can support digestion, vitality, and general well-being.*

Unlocking the nutrients in each meal

Even if the diet is perfectly balanced, the body cannot benefit from nutrients until they are unlocked and absorbed from food. With today's highly processed foods, many of the extrinsic enzymes the body depends upon for effective digestion have been destroyed by heat and processing. That's why it is so important to provide the body with vital enzymes before each meal. Food enzymes work together with the body's own digestive enzymes, and without an abundant supply of both, digestion can be severely impaired.

Enzymes 101

The moment the body gets the message (either real or imagined) that “food is coming,” a series of biochemical reactions are triggered and the miracle of human digestion begins. Digestive enzymes such as amylase, released into our saliva, are capable of breaking down all the sugars contained in the carbohydrate portion of our foods, particularly fruits, grains, and vegetables. Protease is secreted to break down the protein portion of our foods (beans, legumes, fish, chicken, beef, etc.). At the same time, the liver, gall bladder, and pancreas are busy working together to

generate lipolytic enzymes that are capable of emulsifying the fatty portion of our foods.

The word “enzyme” comes from the Greek word “enzymas” which means “to ferment” or “to cause a change.” Without enzymes, what we call “biological life” simply would not exist as we normally recognize it. Enzymes are the foundation for all cell regeneration. They play a key role in the transformation of undigested food into the micronutrients that are absorbed at the cellular level. With the proper balance of enzymes we have the energy we need to go about our daily lives.

Why are supplemental digestive enzymes necessary?

Most of us need supplemental digestive enzymes (such as CellTech's Original Formula Enzymes and E-12 Super Enzymes) for many reasons, including improper cooking and preparation methods, inadequate chewing techniques (wolfing down food works great . . . but only if you are a wolf), and a multitude of other stress factors in our modern diets and lifestyles, such as antibiotics, alcohol, caffeine, food additives, overwork, lack of sleep . . . and the list goes on. These stress factors leave people overfed, undernourished, stressed out, toxic, and overwhelmed. Supplemental digestive enzymes provide the biochemical assistance necessary for foods to be thoroughly broken down and liquefied. Only then can the next and very important stages of absorption and assimilation of nutrients occur. **CT**

*This statement has not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

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