



ELITE

Personal Training and Fitness Solutions

# HEALTH TOPIC OF THE WEEK

## 9/26: Digestive Enzymes

If you faithfully follow our health topics, you know that fiber and probiotics are important for overall health. Digestive enzymes play a key part as well. These substances help break down food, but sometimes we just don't produce enough.

### What are digestive enzymes?

The chewing action of your teeth and the churning of your stomach help mechanically break down food into smaller particles. Digestive enzymes chemically break down fats, proteins and carbohydrates into smaller molecules that can then be absorbed through the intestines and make it into the bloodstream. Without digestive enzymes, you would not be able to fully break down the foods you eat or make use of the nutrients they contain.



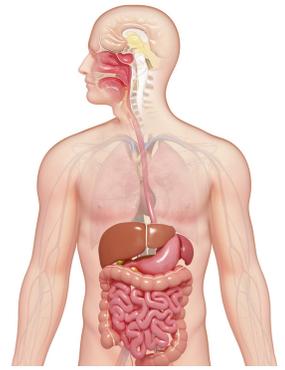
### Key Digestive Enzymes

- Amylase
  - Breaks down complex carbohydrates (made in the mouth and pancreas)
- Protease
  - Breaks down proteins (made in the pancreas)
- Lipase
  - Breaks down fats (made in the pancreas)
- Lactase
  - Breaks down lactose (made in the small intestine)



Elite Personal Training and Fitness Solutions does not provide medical treatment or intervention. We acknowledge scientific evidence that appropriately intensive exercise and sustainable nutritional intervention can have significant impact on chronic health disorders and obesity, dramatically improving symptoms when recommendations are followed. Please visit us at [Eliteptf.com](http://Eliteptf.com) for more information and to schedule your evaluation.

Digestive enzymes are released at various stages of digestion to ensure the optimal breakdown of food and absorption of nutrients. The first of these enzymes are released through the salivary and lingual glands in the mouth (which initiate the digestion of carbs and fats). Then, additional enzymes are secreted through the stomach (which digests proteins) and the small intestine (which further digests carbs, proteins, and fats).



## What happens if you have deficient digestive enzymes?

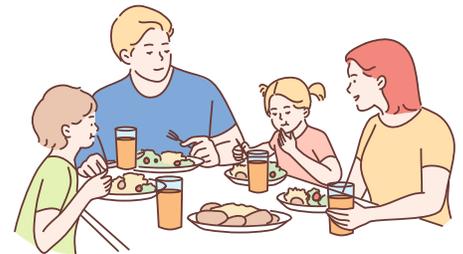
Deficient digestive enzymes can lead to unpleasant symptoms like bloating, cramping, loose bowels, constipation, and gas. Worse yet, these conditions can become chronic.

## Why you might not produce enough digestive enzymes.

Some people have a health condition called exocrine pancreatic insufficiency (EPI), which occurs when the pancreas does not produce enough digestive enzymes. This is usually caused by chronic pancreatitis but can also be caused by other conditions such as celiac disease, diabetes, and inflammatory bowel diseases such as Crohn's disease and ulcerative colitis.

Research has found that digestive enzyme secretion decreases with age. The way you're eating can also prime you for insufficient digestive enzyme production. The act of slowly and thoroughly chewing food triggers the release of digestive enzymes in the mouth as well as digestive enzymes and hydrochloric acid in the stomach.

Cramming, gobbling, and inhaling food - We've all done it. Our busy lifestyle seems to demand it. But please slow down! Your body needs adequate time to produce digestive juices. Hasty eating often leads to truly miserable GI symptoms, as many of us have discovered.



## How to boost your production of digestive enzymes and get more from your diet

If you suspect you have a condition like EPI, getting an appropriate diagnosis and treatment is critical. That said, there are some simple ways to help address a subtle decline in digestive enzymes and to support overall digestive health:



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## 1. Chew slowly and thoroughly.

Ever notice how you eat super-fast when you're stressed? That's a recipe for digestive disaster. Before each meal, make a point to get into a relaxed state (or at least semi-relaxed. Take a few deep breaths and PUT DOWN YOUR PHONE. Make sure you're chewing each bite thoroughly. Chewing triggers the release of enzymes. It primes your whole GI tract for digestion.

## 2. Eat foods that contain natural digestive enzymes.

Minimize the consumption of processed foods. Eat a diet rich in nutrient-dense whole foods. Include plenty of veggies. Adding foods with naturally- occurring digestive enzymes may offer additional benefits. Consider incorporating some of these into your diet.

**Ginger** - contains a protease called zingibain, which helps digest protein.



**Mango** - contains amylase, which assists in the digestion of carbohydrates and starches.

**Pineapple** - Pineapple contains a protease called bromelain, which helps digest protein. Ever feel like your tongue was burning a bit after eating lots of fresh pineapple? You have bromelain to thank for that.



**Banana** - contains amylase and glucosidase, both of which help break down carbohydrates and starches.



**Kiwi** - contains a protease called actinidain, which helps digest protein.



**Fermented foods** - sauerkraut, kimchi, yogurt, kefir, and miso contain probiotics and digestive enzymes —a one-two punch for good digestive health.



Want an additional way to improve your digestion? Many of our clients benefit from taking a digestive enzyme supplement. Please contact us for more information regarding digestive issues and enzyme supplementation.



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