

Enzymes: Digestion and More

We couldn't live without enzymes. They help us absorb nutrients, create valuable hormones, heal muscles, relieve inflammation, fight cellular and other immune threats, and carry out the almost infinite tasks of our body's needs.

Unfortunately, as we age, our bodies create fewer enzymes. And the foods that, in the past, provided the enzymes we need have been so processed that they are seriously depleted of their enzyme content.

But pancreatin, which provides the enzymes protease, lipase, and amylase, can make all the difference for a wide range of health concerns. You may be surprised at the amazing abilities of this natural, full-strength source of enzymes. It helps us digest our foods comfortably and naturally, reduces inflammation, and may even prevent tumor development. We'll explore each of these remarkable traits of pancreatin in this *Terry Talks Nutrition*®.

Pancreatin for Healthy Digestion

If you've experienced gas, bloating, and other stomach discomfort, you aren't alone. Millions of Americans are experiencing the digestive consequences of poor food choices, reliance on antacids and acid blockers, and our high pressure, fast paced lifestyles.

Digestion is About Absorption

The main thing to remember about digestion is that it doesn't matter how healthy of a diet you keep, if you're not properly absorbing nutrients. The body needs proteins, complex carbs, healthy fats, vitamins, minerals, and omega-3s in order to function.

For example, antacids and acid blocking/reducing medications are some of the most popular drugs in America. But the consequences of neutralizing stomach acid include poor absorption of key nutrients like calcium, iron and vitamin B12. Studies have shown that women taking acid blockers have up to a 25% increased risk of bone fracture, and a new study found that elderly people using these same medications have an increased risk of memory problems – probably because of low vitamin B12 levels which are vital to proper brain function.

Pancreatin Helps Repair Your Digestion

I think one of the most important steps to take

in stopping digestive problems is to switch to a natural diet high in fat and protein, and low in carbohydrate content. Sometimes called the Paleolithic Diet, I refer to this way of eating as a traditional diet. You can read more about my recommendations for nutrition at TerryTalksNutrition.com – click on *Terry's Traditional Diet*.

Next, it is important to ensure proper stomach acidity. Without acid, stomach digestion cannot function properly - you won't absorb the nutrients from your food, you are at increased risk of bacterial or viral infections, and you will experience a host of problems, including gas, bloating, indigestion, heartburn, and constipation or diarrhea. If partially digested proteins enter the bloodstream (a condition called leaky gut) you could find yourself facing more serious problems such as arthritis, irritable bowel disease, even cancer!

Although most people think their heartburn is due to high stomach acid, I believe the opposite is actually true – more people have problems with *low* stomach acid than with too much stomach acid. Therefore, I suggest supplementing with betaine hydrochloride at mealtimes (gradually increasing the dose as needed) to help your digestive system function normally. Next, add digestive enzymes with meals to help your food break down properly and minimize problems with gas and indigestion.

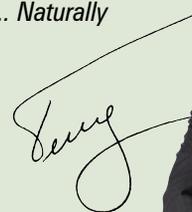
Enzymes are the keys that unlock the nutrients in food. While your pancreas secretes some of the most important digestive enzymes, supplementing with additional enzymes can significantly improve poor digestion.

Why Pancreatic Enzymes? They're the Closest to Our Own

The pancreatic enzymes I recommend are from a porcine source – that is, from pigs. They very closely resemble the enzymes created by the human body, which means they work much more effectively and quickly, and that's why I think they are best when it comes to supporting digestive, muscle and immune health.

For instance, the body doesn't create bromelain – the enzyme from pineapple. It does create pancreatin, and a supplemental form of this

To your good health,
Terry... Naturally




TERRY'S BOTTOM LINE:

If you have problems with gas, bloating, heartburn, muscle pain, or even cancer, there is one natural ingredient that addresses all these concerns.

Pancreatin provides protease, lipase, and amylase for many needs:

- *Relief of common digestive problems*
- *Reducing muscle pain and inflammation*
- *Fighting cancer*

Here is the formula I suggest:

Full Strength Pancreatin (undiluted)	250 mg
Protease Activity	56,250 USP units
Amylase Activity	56,250 USP units
Lipase Activity	8,500 USP units

same enzyme mix will respond to the body's needs much more readily. Bromelain is a fine vegetarian source for an enzyme, but it can't match porcine pancreatic enzymes for sheer usability by the body.

And there are plenty of other plant-based enzyme formulas out there, but they just aren't as close to our own as the enzymes you get from an undiluted, full-strength pancreatin, containing three key enzymes: protease for protein digestion, amylase for carbohydrate digestion, and lipase for fat digestion. I guarantee that if you take pancreatin with your food you will notice the results immediately – less bloating, gas, and discomfort, and your digestion will run much more smoothly!

More...

For Muscle and Anti-inflammatory Support

Enzymes are not just for digestion. Pancreatic enzymes also have powerful anti-inflammatory abilities that fight damage to muscles and joints. Taken *between* – not with – meals, these enzymes relieve pain, lessen muscle damage, and speed recovery. Pancreatin does this, in part, by breaking down fibrin.

Fibrin, a blood-clotting protein (and a product of fibrinogen) rushes to any areas of the body that have been damaged and essentially blocks off tissues that are suffering from physical stress. If you're dealing with a cut or a scrape, this is helpful. If you simply have small muscle tears, it can actually block muscle healing. (Fibrin can also create blood clots which are not so benign – causing heart attacks or strokes.)

Protease, when taken for systemic (rather than digestive) relief, helps prevent damage to muscles after exercise or active physical work. Pancreatic enzymes – especially protease – break down fibrin, allowing the body to heal muscles more quickly and effectively. And since protease has anti-inflammatory ability, there is less cellular damage to the muscles overall, so it helps in more ways than one for muscle recovery.

In fact, protease supplementation (which included pancreatic enzymes) was tested against a placebo in a test of downhill running. Now if downhill running doesn't sound very strenuous, consider that it is the standard form of running used in clinical and scientific evaluations of muscle soreness and recovery. It is an intense workout. Running downhill – as opposed to running on a flat track – puts much more stress on the knees, ankles, and muscle groups, because while your legs are propelling you forward, they are also bracing you against the pull of gravity and helping you keep your balance.

The results of the study showed that those supplementing with enzymes had a much better recovery time and less muscle soreness than those who did not. The study showed that protease may also help heal muscle damage and support better, easier muscle contractions so you don't experience the stiffness that often follows exercise.

For Cancer Prevention

Reversing tumor growth and cancer development using pancreatic enzymes has a fascinating history. One of the pioneers of the practice, Dr. William Kelley, started his own course of treatment after being diagnosed with inoperable pancreatic cancer. He was told he had very little time to live, so he began his own nutritional protocol, which included a strict dietary regimen, detoxification, and supplemental pancreatic enzymes.

It worked brilliantly. Dr. Kelley recovered and helped many others with what conventional medicine had considered "hopeless" cases with very little chance for survival. Dr. Kelley saw that one of the body's primary defenses was pancreatic enzymes, and believed that they were a crucial factor in ridding the body of cancer. They not only help the body properly digest proteins, (which, after all, help build the cells), but they also help dissolve fibrin – the same protein that creates damage in inflamed muscle tissue. In this case, the protease in pancreatin stops fibrin from forming a protective coating around tumor cells, so that Killer T-cells and other protective immune enzymes can go to work and help flush out the cancer. It's a partnership that works well. Killer T-cells use enzymes to help them get at the cancer cells, and the enzymes rid the body of the debris.

In follow-up research to Dr. Kelley's work, Dr. Nicolas Gonzalez conducted a further clinical study to recreate some of the results.

In this study, patients with inoperable pancreatic cancer started a regimen of an organic food diet, a nutritional supplementation regimen, and high-dose pancreatic enzymes.

The results were stunning: by the conclusion of the study, 9 of the 11 patients survived for one year, 5 survived for two years and at the time of the writing, 4 had survived three years. This was far above the standard survival rates reported in the National Cancer Data Base, and showed that an alternative form of treatment truly could make a difference.

Further laboratory research has shown that porcine pancreatic enzymes slowed tumor growth of human pancreatic cancer cells, so there is good evidence growing that pancreatin holds a very important key to the body's overall cellular immune defense.

Additional Immune Support

Aside from tumor inhibition, pancreatic enzymes may help the body's immune balance in other ways. That's because the benefits of pancreatin's strong anti-inflammatory abilities aren't limited to dealing with sore muscles and joints. The same enzymes also break down immune complexes that are linked to rheumatoid arthritis, multiple sclerosis, and Crohn's disease, among many others. Pancreatic enzymes reduce the levels of these immune complexes that can cause the body to turn on itself. They have also been used in the treatment of multiple sclerosis, reducing symptom severity.

We All Need Enzymes

Supplemental pancreatic enzymes simply help the body do what it already does naturally. Whether you've experienced occasional gastric upset and problems digesting your meals, have a more serious health condition like Celiac disease or Crohn's, or simply want to stay active and recover sooner from your exercise, full-strength pancreatic enzymes are the right choice.

Make sure you get an undiluted pancreatin supplement. The United States Pharmacopeia (USP) has set strict definitions for the level of activity – measured by how effectively the enzyme breaks down its targeted nutrient type – for pancreatin. I recommend using pancreatin that is 10 times more potent than the USP minimum. Less potent pancreatin has often been diluted with salt, lactose or galactose. I believe the best results for improving digestion and relieving inflammation come from full strength, undiluted pancreatin. It will provide the support you need for comfortable digestion, pain relief, and more serious health concerns. TM

When in doubt, always consult your physician or health care practitioner. This column is to provide you with information to maintain your health.

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