

What Are Systemic Enzymes and What Do They Do?

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The word "systemic" means body wide. Systemic enzymes are those that operate not just for digestion but throughout your body in every system and organ. But let's take first things first, what is an enzyme?

An enzyme is a biocatalyst - something that makes something else work or work faster. Chemical reactions are generally slow things, enzymes speed them up. Without enzymes the chemical reactions that make up our life would be too slow for life as we know it. (As slow as sap running down a tree in winter). For life to manifest as we know it, enzymes are essential to speed up the reactions. We have roughly some 3000 enzymes in our bodies and that results in over 7000 enzymic reactions. Most of these enzymes are derived or created from what we think of as the protein digesting enzymes. But while digestion is an important part of what enzymes do, it's almost the absolute last function. First and foremost these body wide proteolytic (protein eating) enzymes have the following actions:

Natural Anti-Inflammatory.

They are the first line of defense against inflammation. (1,2,3). Inflammation is a reaction by the immune system to an irritation. Let's say you have an injured right knee. The immune system sensing the irritation the knee is undergoing creates a protein chain called a Circulating Immune Complex (CIC for short), tagged specifically for that right knee. (The Nobel Prize in biology was won in 1999 by a scientist who discovered this tagging mechanism). This CIC floats down to the right knee and causes pain, redness and swelling are the classic earmarks for inflammation. This at first is a beneficial reaction; it warns us that a part of ourselves is hurt and needs attention. But, inflammation is self-perpetuating, itself creating an irritation that the body makes CIC's to in response!

Aspirin, Ibuprofen, Celebrex, Vioxx and the rest of the Non Steroidal Anti Inflammatory Drugs all work by keeping the body from making all CIC's. This ignores the fact that some CIC's are vital to life, like those that maintain the lining of the intestine and those that keep the kidneys functioning! Not to mention the fact that the NSAID's, along with acetaminophen, are highly toxic to the liver. Every year 20,000 Americans die from these over the counter drugs and another 100,000 will wind up in the hospital with liver damage, kidney damage or bleeding intestines from the side effects of these drugs. (4,5).

Systemic enzymes on the other hand are perfectly safe and free of dangerous side effects. They have no LD-50, or toxic dose. (6). Best of all systemic enzymes can tell the difference between the good CIC's and the bad ones because hydrolytic enzymes are lock and key mechanisms and their "teeth" will only fit over the bad CIC's. So instead of preventing the creation of all CIC's, systemic enzymes just "eat" the bad ones and in so doing lower inflammation everywhere. With that, pain is lowered also.

Anti Fibrosis.

Enzymes eat scar tissue and fibrosis. (7). Fibrosis is scar tissue and most doctors learn in anatomy that it is fibrosis that eventually kills us all. Let me explain. As we age, which starts at 27, we have a diminishing of the bodies' output of enzymes. This is because we make a finite amount of enzymes in a lifetime and we

use up a good deal of them by the time we are 27. At that point the body knows that if it keeps up that rate of consumption we'll run out of enzymes and be dead by the time we reach our 40's. (Cystic Fibrosis patients who have virtually no enzyme production to speak of, even as children usually don't make it past their 20's before they die of the restriction and shrinkage in the lungs from the formation of fibrosis or scar tissue).

So our body in it's wisdom begins to dole out our enzymes with an eyedropper instead of with a tablespoon; as a result the repair mechanism of the body goes out of balance and has nothing to reduce the over abundance of fibrin it deposits in nearly every thing from simple cuts, to the inside of our internal organs and blood vessels. This is when most women begin to develop things like fibrocystic breast disease, uterine fibroids, endometriosis, and we all grow arterial sclerotic (meaning scar tissue) plaque, and have fibrin beginning to spider web its way inside of our internal organs reducing their size and function over time. This is why as we age our wounds heal with thicker, less pliable, weaker and very visible scars.

If we replace the lost enzymes we can control and reduce the amount of scar tissue and fibrosis our bodies have. As physicians in the US are now discovering, even old scar tissue can be "eaten away" from surgical wounds, pulmonary fibrosis, kidney fibrosis and even keloids years after their formation. Medical doctors in Europe and Asia have known this and have used orally administered enzymes for these situations for over 40 years!

Blood Cleansing.

The blood is not only the river of life, it is also the river through which the cells and organs dispose of their garbage and dead material. Enzymes improve circulation by eating the excess fibrin that causes blood to sometimes get as thick as catsup or yogurt, creating the perfect environment for the formation of clots. All of this material is supposed to be cleared by the liver on its "first pass", or the first time it goes through but given the sluggish and near toxic or toxic states of everyone's liver these days that seldom happens. So the sludge remains in the blood waiting for the liver to have enough free working space and enough enzymes to clean the trash out of the blood. This can take days, and in some cases, weeks! (8).

When systemic enzymes are taken, they stand ready in the blood and take the strain off of the liver by:

1. Cleaning excess fibrin from the blood and reducing the stickiness of blood cells. These two actions minimize the leading causes of stroke and heart attack causing blood clots. (8).
2. Breaking dead material down small enough that it can immediately pass into the bowel. (8).
3. Cleanse the FC receptors on the white blood cells improving their function and availability to fight off infection. (9).

And here we come to the only warning we have to give concerning the use of Vitalzym or any other systemic enzyme - don't use the product if you are a hemophiliac or are on prescription blood thinners like Coumadin, Heparin and Plavix, without direct medical supervision. The enzymes cause the drugs to work better so there is the possibility of thinning the blood too much.

Immune System Modulating.

Enzymes are adaptogenic seeking to restore a steady state to the body. (9). When the immune system is running low we become susceptible to infectious disease, when it's cranked up too high then the system creates antibodies that attack it's own tissues as are seen in the auto immune diseases of MS. Rheumatoid

Arthritis, and Lupus. Here the enzymes will tone down immune function and eat away at the antibodies the immune system is making to attack its bodies own tissue

Virus Fighting

Viruses harm us by replicating in our bodies. To do this a virus must bond itself to the DNA in our cells through the medium of its exterior protein cell wall. Anything that disrupts that cell wall inhibits the ability of viral replication by rendering individual viruses inert. (10,11). Systemic enzymes can tell the difference between the proteins that are supposed to be in your body and those that are foreign or not supposed to be there, (again the enzyme lock and key mechanism). Vitalzym has the strongest protein eating effect of any enzyme due to its Serrapeptase content and can be of help in combating viruses.

One note: many in the States have learned in school that enzymes are too big a protein to be absorbed through the gut. The pioneering research done in the US by Dr. Max Wolf (MD & PhD x7) at Columbia University in the 40's through the 70's has not made it to the awareness of most doctors. There are currently over 200 peer reviewed research articles dealing with the absorption, utilization and therapeutic action of orally administered systemic enzymes. A search through Pub Med using the key words: serrapeptase, papain, bromelain, trypsin, chymo trypsin, nattokinase and systemic enzyme will yield some of the extensive work. Systemic enzymes now have a 4 decade plus history of widespread medical use in central Europe and Japan.

Vitalzym with it's serrapeptase based blend of enzymes is the strongest and fastest working systemic enzyme on the planet with research to prove it.

References:

- 1) Carroll A., R.: Clinical examination of an enzymatic anti-inflammatory agent in emergency surgery. *Arztl. Praxis* 24 (1972), 2307.
- 2) Mazzone A, et al.: Evaluation of Serratia peptidase in acute or chronic inflammation of otorhinolaryngology pathology: a multicentre, double blind, randomized trial versus placebo. *J Int Med Res.* 1990; 18(5):379-88.
- 3) Kee W., H. Tan S, L., Lee V. Salmon Y. M.: The treatment of breast engorgement with Serrapeptase: a randomized double blind controlled trial. *Singapore Med J.* 1989;30(1):48-54.
- 4) Celebrex article *Wall Street Journal* 19 April 1999.
- 5) No author listed: Regular Use of Pain Relievers Can Have Dangerous Results. *Kaleidoscope Interactive News, American Medical Association media briefing.* July 24, 1997.
- 6) *Enzymes n A Drug of the Future*, Prof. Heinrich Wrba MD and Otto Pecher MD. Published 1993
Eco Med.
- 7) Kakinumu A. et al.: Regression of fibrinolysis in scalded rats by administration of serrapeptase. *Biochem. Pharmacol.* 31:2861-2866,1982.
- 8) Ernst E., Matrai A.: Oral Therapy with proteolytic enzymes for modifying blood rheology. *Klin Wschr.* 65 (1987), 994.
- 9) Kunze R., Ransberger K., et at: Humoral immunomodulatory capacity of proteases in immune complex decomposition and formation. First International symposium on combination therapies, Washington, DC, 1991.
- 10) Jager H.: Hydrolytic Enzymes in the therapy of HIV disease. *Zeitschr. Allgemeinmed.*, 19 (1990), 160.
- 11) Bartsch W.: The treatment of herpes zoster using proteolytic enzymes. *Der Informierte Arzt.* 2 (1974), 424-429.

Chl. Mucronat

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Vit C 3 cc

Mag. Sph. 3 cc

B-6 2 cc

B-complex 1/2 cc

B-12 1 cc

Calum: 6 cc

3 cc complex-B-12

sterile water to fill

3 cc NS