ann arbor Holistic Health

What Are Systemic Enzymes And What Do They Do?

What Are Systemic Enzymes?

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 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, and 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 3,000 enzymes in our bodies, and that results in over 7,000 enzymatic 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...

Systemic Enzymes Are a Natural Anti-Inflammatory

Systemic enzymes are the first line of defense against inflammation.(1,2,3) Inflammation is a reaction by the immune system to an irritation or injury, and systemic enzymes safely and naturally address inflammation and resolve the pain associated with it.

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: 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 CICs to in response!

The traditional medical approach to fighting inflammation is to prescribe a Non-Steroidal Anti-Inflammatory Drug (NSAID). Aspirin, Ibuprofen, Celebrex, Vioxx, and the rest of the NSAIDs all work by keeping the body from making all CICs. This ignores the fact that some CICs 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 NSAIDs, 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 CICs and the bad ones because hydrolytic enzymes are lock-and-key mechanisms, and their "teeth" will only fit over the bad CICs. So instead of preventing the creation of all CICs, systemic enzymes just "eat" the bad ones, and in so doing lower inflammation everywhere. With that, pain is also lowered.

Systemic Enzymes Have an Anti-Fibrosis Effect

Systemic enzymes eat scar tissue and fibrosis.(7) Fibrosis is scar tissue, and most doctors learn in Anatomy class that it is fibrosis that eventually kills us all.

As we age, which starts at 27, we have a diminishing of the body's 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 40s. (Cystic Fibrosis patients, who have virtually no enzyme production to speak of even as children, usually don't make it past their 20s before they die of the restriction and shrinkage in the lungs from the formation of fibrosis or scar tissue.)

So our body, in its wisdom, begins to dole out our systemic 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 everything 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, or endometriosis. Around this same time, we all grow arterial sclerotic (meaning "scar tissue") plaques 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 systemic 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 systemic enzymes for these situations for over 40 years!

Systemic Enzymes Are 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. **Systemic enzymes improve circulation by eating the excess fibrin that causes 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 livers 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) Cleansing 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 supplement: 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.

Systemic Enzymes Are Immune System Modulating

Systemic enzymes are adaptogenic, seeking to restore a steady state to the body.(9) This improved adaptability helps balance the immune system and ensure it functions correctly.

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 its own

tissues, as are seen in the autoimmune diseases of Multiple Sclerosis, Rheumatoid Arthritis, and Lupus.

When you have adequate amounts of systemic enzymes, the body is better able to maintain immune function, ensuring you fight harmful infections or disease mechanisms without attacking healthy cells. In cases of autoimmunity, systemic enzymes can tone down immune function and eat away at the antibodies the immune system is making to attack the body's own tissue.

Systemic Enzymes Are Virus Fighting

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.

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. Studies prove the ability of systemic enzymes to interfere with viruses, including the use of hydrolytic enzymes to combat HIV.(10,11)

Systemic enzymes can attack and disrupt the proteins in virus cell walls, thereby preventing the virus from reproducing or attacking important cells in the body. In systemic enzyme supplements, Serrapeptase in particular can be of help in combating viruses.

Research Supporting Systemic Enzymes

One final note: Many in the United 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 1940s through the 1970s 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 PubMed using the keywords 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.

Please call us at 734-526-4606 or schedule a free consultation to find out more about systemic enzymes and whether supplementation might be right for you.

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