

## **ENZYMES - Systemic/Metabolic**

by Chris Morris ND

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. Unlike digestive enzymes, enzymes used for systemic purposes must be absorbed into the bloodstream in order to be effective. For systemic use the enzymes must be enterically coated or formed into an enteric matrix in some way, which is acid resistant so that the enzymes can pass through the acidic stomach intact. Factors that greatly influence their effectiveness are based on some basic principles like pH level in the body, your body's temperature, substrate concentrations (enzymatic co-factors), the rate of absorption, the amount of co-enzymes or inhibitors, activity level of the enzymes, energetic balance of the body, energetic balance of the related internal organs, as well as whole system health. When the enzymes combine with co-enzymes and co-factors, they form nearly 100,000 various chemicals. And this is what allows us to see, hear, feel, move, digest and think.

[Zymessence](#), our systemic enzyme supplement of choice uses a delivery mechanism that allows for its enzymes to remain intact and bio-available for the systemic absorption to occur. The stability of the enzyme complex allows it to bypass the pH in the stomach. The acids in the stomach do not affect the enzymes and do not break them down because of the specific enteric matrix, and then once it passes into the small intestine, where the pH has changed and is different from the stomach, then the matrix begins to break down. So the enzymes are released in the intestine and into the bloodstream.

An enzyme is a biocatalyst. Something that makes something else work or work faster. For life to manifest as we know it, enzymes are essential to speed up reactions. Unfortunately, as we age, which starts around 25, we have a diminishing of the body's output of enzymes. This is because we lose our ability to replenish enzymes as we used to when we were younger. At this point the body knows that if it keeps up the high rate of consumption we'll run out of enzymes and be sick or dead by the time we reach our 60's. So, our body in its 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, the protein the liver makes and deposits to clot any bleeding from a simple cut, to the mending that goes on inside of our organs and blood vessels.

### **Systemic Enzymes and What They Do**

There are six major actions that are a part of the many things that enzymes do, but these are the six major activities that we look to when we're looking at health and healing. Some functions are the reduction of inflammation, balance and repair mechanisms in the body to prevent sclerotic buildup, cleaning up of debris in the blood, and modulation of the immune system. A fifth area is where enzymes act as powerful anti-oxidants and how enzymes are effective in fighting viruses. So let's look at these six areas, because they are really key and will help anyone appreciate systemic or metabolic enzymes.

### **Reduce Inflammation**

When we're taking systemic enzymes, they reduce inflammation with no side effect. And that's the

key with no side effect. Inflammation is a reaction by the immune system to an irritation. Let's say we have an injured knee. The immune system, sensing the irritation in the knee, creates a marker, tagged specifically for that knee. This marker floats down to the 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, it creates an irritation that in response, the body makes more markers.

Anti-inflammatory drugs work by keeping the body from making the markers but ignore the fact that some markers are vital to life, like those that maintain the lining of the intestines and those that keep the kidneys functioning. There are over 20,000 deaths annually from non-steroidal, anti-inflammatory drugs. We're talking about drugs like aspirin, ibuprofen, acetaminophen, naproxen and all the Rx cox-2 inhibitors. All these different anti-inflammatories impact the body in an adverse way. They can cause intestinal bleeding; they can damage the liver, so we are more prone to liver and kidney disease. They are also shown to greatly increase the risk for heart disease.

Systemic enzymes can tell the difference between the good markers and the bad ones. This is due to the fact that systemic enzymes operate with a lock and key mechanism and the prongs will only fit over the bad markers. So instead of preventing the creation or destruction of all markers, systemic enzymes just scavenge the bad ones and in so doing, lower inflammation where needed and pain is also lowered. With enzymes you have no side effect. As a matter of fact, you have a beneficial effect on the liver and kidneys, and to the GI tract.

### **Clean Up Scar Tissue**

Fibrosis is scar tissue, and we mentioned the anti-fibrotic characteristic of systemic enzymes. As we age and our body produces less enzymes, it is difficult to counteract the amount of fibrin being produced or sclerosis happening to the body. It is fibrosis along with inflammation, dehydration and oxidation that eventually shuts the body down and kills us.

Your connective tissue is supposed to be there, but the excess scar tissue is not. It's like we have two kinds of tissue. We refer to it in physiology as your endogenous tissue and your exogenous connective tissue. The exogenous or excessive scar tissue is what enzymes go in and clean up.

We hear of women beginning to develop things like fibrocystic breast disease, uterine fibroids, and endometriosis. We all grow arterial sclerotic plaque, and fibrin begins to build its spider web formations inside our internal organs, causing cirrhosis of the liver, and fibrosis in the kidneys reducing their size and function over time. If we replace or replenish the reduced enzymes, we can control and reduce the amount of scar tissue and fibrosis in our bodies. Because enzymes can differentiate between the good connective tissue and the connective tissue that's unnecessary, they go in and clean it up. It eats up all the unnecessary exogenous scar tissue. As physicians in the US are now discovering, even old scar tissue can be eaten away from surgical wounds, pulmonary fibrosis, and kidney fibrosis years after their formation. Medical doctors in Europe and Asia have known this and have used orally administered enzymes for over 40 years.

### **Debris in the Blood**

A really good way to understand this is to look at the blood as not just the river of life that feeds us our nutrients, but it's also a river of waste or garbage. It has all the metabolic debris that comes

from the metabolic functions of the body. Given the sluggish and toxic states of people's livers these days where this debris is supposed to be filtered, that seldom happens. So the waste remains in the blood, waiting for the liver to have enough free working space and enough enzymes to clean it. So one of the functions of enzymes is to eat away and clean up all this necrotic debris before it passes through the liver. And what this does it takes a great deal of stress off the liver for anyone that has a liver condition or vascular disorder. The liver is your chemistry set and the major filtering organ of the body. So when we see how enzymes can come in there and clean up the blood, eat away the excess fibrin and debris, to unclog the micro-circulation we can experience a vast improvement in many areas of health in the body.

Enzymes help to unclog the micro circulation and open up the flow of blood that feeds the eyes and the brain so that the tissue in the most minute crevices of the body continue to get nutrition, and to continue to stay alive, healthy and vibrant.

When systemic enzymes are taken, they stand ready in the blood to clean the bio film that accumulates on the cells, improving their function and availability to fight off infection.

*Because of the action [Zymessence](#) has on the blood, don't use the product if you are a hemophiliac or are on prescription blood thinners without the advise of your doctor.*

### **Immune Modulation**

Enzymes work as adaptogens, meaning that they help the immune system to regulate itself. If it's going too slow, it's hypo-immune and they will stimulate it.

When the immune system is running low, we become susceptible to infectious disease. If it's going too strong or too fast, enzymes help gear it down. When it's cranked up too high, then the immune system over creates antibodies that attack it's own tissues, as seen in the autoimmune diseases of MS, Rheumatoid Arthritis, and Lupus. Here the [Zymessence](#) will tone down immune function and eat away at the antibodies the immune system is making to attack its body's own tissue.

It's remarkable to see in dark-field microscopy when looking at a live blood sample. Before taking systemic enzymes, the white blood cells often are lethargic, and then you have a person ingest some [Zymessence](#) and immediately we see within minutes the changes in the blood, the immune cells come to life. The modulation of the immune function kicks in and you see these scavengers go to work and clean up the body. This all creates a powerful preventative effect and a strong defense for our own immunity.

### **Powerful Antioxidant Protection for the Body**

A major sign of enzyme shortage is we don't easily quench or neutralize free radical formations. Consuming a wide variety of antioxidant enzymes, vitamins, minerals, and herbs may be the best way to provide the body with the most complete protection against free radical damage or accelerated aging. Certain enzymes are antioxidants. Most are found to be endogenous (from within the body), and supplementing [Zymessence](#) supports the production and activity of the endogenous forms of anti-oxidant enzymes found in every cell of the body.

### **Anti-microbial Activity**

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. Systemic enzymes can differentiate between the proteins that are supposed to be in your body and those that are not. Our exposure to viruses is just constant, and our immune system is really the key defender. The enzymatic action of the immune system is our first line of defense against microbes. As a matter of fact, many premier athletes not only use enzymes for their anti-inflammatory capabilities but also for their ability to boost the immune system. So all the latent viruses and hidden viruses that you hear about that surface under stress, a great way to get rid of them in the body and to prevent from having any type of viral outbreaks is to use [Zymessence](#) regularly. Think [Zymessence](#) when the news of the next flu pandemic hits the airways in place of any toxic alternative.

Another fascinating property of enzymes is their ability to work with each other, to form cooperative complexes when necessary, and to continually exchange information with other enzyme cooperative complexes. The equilibrium of all systems is maintained by a mutual effort toward a common goal, one of the many extraordinary and positive properties of enzymes and their ability to communicate and regulate metabolic function.

**People are using [Zymessence](#) for the following conditions:**

Fibromyalgia, Arthritis, Chronic Fatigue, Chronic Pain, Inflammation, Clogged Arteries, Fibroids, Spider Veins, Viral Infection, Circulatory Disorders, Systemic Yeast Infection, Autoimmune Diseases, Post-Operative Scarring, Ovarian Cysts, Endometriosis, Fibrocystic Breast Disease, Bladder Infections, and more.