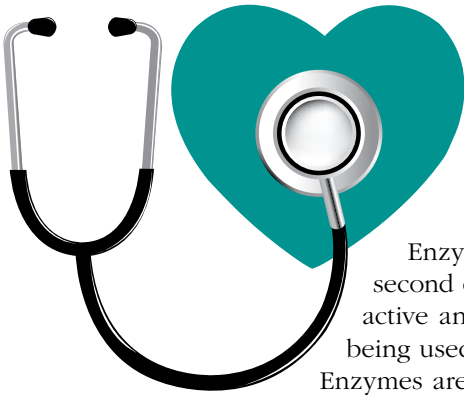


# Enzyme **POWER** for the Heart & Circulation

by Margy Squires



There are more than 3000 known enzymes in the human body. Research has only begun to scratch the surface to reveal the therapeutic potential of these remarkable agents. **There is one thing they do know: without them you die.**

Enzymes are the catalyst of life, enabling you to move, breathe, digest and repair every second of every day. They are part of every living organism. As catalysts, enzymes are very active and very fast. They can start, speed up or slow down biochemical reactions without being used up in the process, moving on to their next task in an orderly and efficient manner.

Enzymes are very specific in function; like the ones for digestion. It's little wonder that doctors and researchers turned to these remarkable workers more than 50 years ago to harness their healing power for a whole range of disorders. Enzyme therapy has proved effective and safe. This article will focus on the *systemic or proteolytic* enzymes that help your heart and circulatory system. By definition, *proteo-* refers to protein and *lytic* to break down or separate. Their name helps explain their activity.

## The Inflammatory Factor

Proteolytic enzymes are best known for their ability to quench inflammation. As therapeutic agents they help the body heal itself, no matter what the source of insult – sprains, cuts, bruises, broken bones, poor circulation, surgery. By deactivating pro-inflammatory cytokines, they prevent the initial insult or resolve an inflammatory cascade in progress.

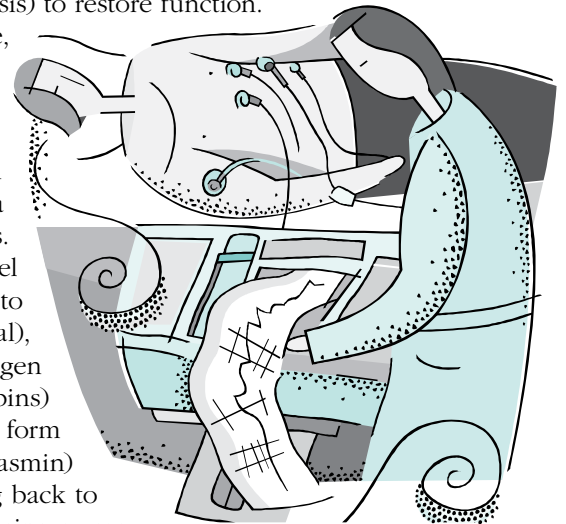
Inflammation is a natural part of the healing process in a defensive sort of way. When an injury occurs, capillary permeability increases, encouraging a fluid buildup (swelling) in the area, a perpetual wall of insoluble proteins (fibrin) help keep infection out and help blood clot to close the wound. Enzymes help, stimulating the immune system to act against any viruses or bacteria, to shorten recovery. When the “battle” is over, other enzymes go in and clean up cellular debris and excess fluid to restore “status quo” once more.

On the other hand, prolonged inflammation and excessive fibrin can harden cells, tissue, blood vessels and organs so that flexibility and function are compromised. It can also prolong healing. Taking systemic enzymes with their proteolytic action prevents excessive scarring and also breaks up fibrin in old, hard scars (fibrosis) to restore function.

In the same manner, systemic enzymes are helpful for cardiovascular disease, reducing harmful blood clots that cause heart attacks and strokes.

## Fibrin, Heart & Circulation

Heart attacks are the number one killer of Americans. Much of heart health depends on the life flow of the blood. The circulatory system is made of a network of blood vessels that vary in size from tiny capillaries to larger arteries. Some vessels are so small they are only one blood cell wide. In order to travel the network (estimated at 60,000 miles long if you lined up all vessels end to end), blood must have certain fluidity. At a time of injury (internal or external), blood flow thickens to initiate repair. Strands of linked protein called fibrinogen float harmlessly through the blood for this purpose. Special enzymes (thrombins) separate the strands, making them unstable. They attach to other strands to form fibrin, a glue-like substance that patches up the injury. Another enzyme (plasmin) cleaves the fibrin back to fibrinogen strands and they float away; everything back to normal. This cycle of proteolytic activity is innate and occurs without your being aware that these little powerhouses are busy at work.



*Continued*

## Enzyme Power...

*continued*

The body produces about 2 grams of fibrin daily. Some of that fibrin lines the blood vessels for stability. If the breakdown or removal of fibrin is impaired, it can harden into plaque, damaging vessels and/or forming life-threatening clots. A clot that breaks away and travels to the heart can cause a heart attack; to the brain, a stroke.



Dr. Anthony Cichoke, author and advocate of enzyme therapy states, "Maintaining proper enzyme levels in the blood can also help *prevent* cardiovascular disease". Research shows that proteolytic enzymes dissolve any fibrin clots to get blood flowing more freely and improve circulation. This action also reduces the inflammation around the clot to protect the vessel itself. Nutrient and oxygen supply to cells and tissues is restored as well.

According to Cichoke, "Plasmin levels decrease with age (by 60), blood flow is more sluggish, toxic debris remains in vessels and tissues and vessels become narrower and harden."



Your risk of heart attack and stroke increases. High cholesterol and high blood pressure are both typical symptoms of potential circulatory problems. With heart disease the number one killer and proteolytic enzymes able to travel anywhere they're needed, perhaps they are an underused therapy.

## Enzyme Activity, Sources & Helpers

Enzyme supplements are assayed for their specific activity and listed in units on a product label. The therapeutic value of an enzyme is directly related to that activity. If no unit measurement is given, you should question the product's effectiveness. Sources of enzymes can be animal, plant or fungal. Serrazimes® is a fungal enzyme derived from the edible fungi, *Aspergillus oryzae* and *Aspergillus melleus*, developed and patented by the National Enzyme Company. These patented enzymes are backed by research and shown to operate at a broader spectrum of pH (degree of acidity) so do not need to be enteric-coated to remain intact through the stomach and GI tract. To facilitate entry to their circulatory freeway, though, take them 20-30 minutes before a meal.

Enzymes do not act alone; they need vitamin and mineral cofactors. Magnesium is one; assisting in more than 325 enzyme reactions in every cell. One way to support your enzymes is with a high potency multivitamin to help them stay active.

## Summary

Enzymes are catalysts that can help your body operate more efficiently and heal faster. Proteolytic enzymes carry that power to the heart by helping the circulatory system. With its fibrinolytic activity systemic enzymes reduce inflammation that can damage blood vessels. They remove excess fibrin

## What Enzyme Therapy Helps\*

- ◆ Angina pectoris
- ◆ Arteriosclerosis
- ◆ Atherosclerosis
- ◆ Circulatory Disease
- ◆ Coronary Artery Disease
- ◆ High Blood Pressure
- ◆ Intermittent Claudication
- ◆ Lymphatic Edema
- ◆ Phlebitis
- ◆ Swelling (edema)
- ◆ Thrombosis



\*Partial Listing

Source: Dr. Anthony J. Cichoke  
*Complete Book of Enzyme Therapy*

that contributes to clot formation to lower your risk of heart attack and stroke. As we age, enzymes decrease in number and effectiveness. Supplementing with enzymes is one way to get these powerhouses back into action again.

## Resources

1. Bohager, T. *Everything You Need to Know About Enzymes: A Simple Guide to Using Enzymes to Treat Everything from Digestive Problems and Allergies to Migraines and Arthritis*. Greenleaf Book Group Press, 2009.
2. Cichoke, A. *The Complete Book of Enzyme Therapy*. Avery, 1999.
3. Loes, M. *The Healing Response*. Freedom Press, 2002.
4. Lopez, DA; Williams, R; Miehle, K. *Enzymes, the Fountain of Life*. Neville Press, 1994 (Germany)

**Caution:** Due to their fibrinolytic and thrombolytic activity, do not take proteolytic enzymes if you have a bleeding disorder, are on blood-thinners (coumadin, warfarin), have peptic ulcers, are pregnant, nursing or planning a pregnancy.

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