

Lumbrozyme (Lumbrokinase Enzymes)

Nature's most potent fibrinolytic enzyme

Another South African first by Neogenesis Health

What is Lumbrokinase?

Lumbrokinase (LK) is a group of six novel proteolytic enzymes derived from the earthworm *Lumbricus rubellus*. These enzymes have potent fibrin-dissolving properties, decrease fibrinogen, lower blood viscosity, and markedly reduce platelet aggregation.

The last 10 years have been a busy time for scientists exploring the medicinal treasures of earthworms. Laboratory, animal and human studies have shown isolated enzymes and compounds from the earthworm to be potent and safe fibrinolytics.[1]

Earthworms are amazing in that they can kill bacteria and lyse foreign cells in spite of the fact that, unlike us, they have no adaptive immune system and do not form antibodies. Earthworms happily munch their way through garbage teeming with bacteria and fungi, and not only fight off infection but also alter that garbage so that their nitrogen- and mineral-rich castings transform it into fertile, oxygen-rich soil.

Lumbrokinase is nature's most powerful fibrinolytic enzyme. It has been shown to be:

- **30 TIMES STRONGER** than Nattokinase
- **300 TIMES STRONGER** than Serrapeptase

Key Benefits:

- Dissolves fibrin
- Degrades fibrinogen
- Lowers Inflammation
- Breaks down biofilm

Fibrin – a critical heart disease risk factor

Fibrin is a protein formed in the blood that is part of the normal clotting process of the blood. This is essential to stop bleeding, but fibrin forms in the blood in response to many other factors, including chronic inflammation. In these cases it becomes a serious problem as it restricts blood flow, leading to heart disease, thrombosis (clotting), and embolism (a clot traveling in a vein).

Biofilm – bacterial architecture

Most people think of bacteria in the body as free-floating single cells. However, that's not how most bacteria live in the human body. Rather, they exist in colonies called biofilms. When bacteria stick to a surface, they create slimy substances out of minerals, sugar molecules, and other nutrients that they steal from your body, as well as fibrin. This is what's known as a biofilm.

While some biofilms may be beneficial, most aren't desirable for your tissue and organ health. Bacteria hide out, feed and replicate in biofilms, which allows them to remain undetected by your immune system and escape intervention. This is largely because of the biofilm's outer polysaccharide protective covering, which includes fibrin protein. Biofilms have been implicated in a variety of health conditions, and scientists claim that over 80% of microbial infections can be attributed to biofilm.

Lumbrokinase has been shown to break down biofilm by dissolving the fibrin that holds the biofilm matrix together. What sets it apart from other enzymes used to break down biofilm is that it is not only much stronger than those enzymes, but it is also safer in that it only becomes active in the presence of fibrin, and it does not interfere with the blood's clotting cascade. As it does not affect INR or aPTT, it is compatible with blood thinners, including heparin and Warfarin®.

Lumbrozyme

+ Fibrin + Biofilm + Inflammation

Nature's most potent fibrinolytic enzyme.

Lumbrokinase is used to:

- ✓ Dissolve Fibrin
- ✓ Reduce Inflammation
- ✓ Dissolve Biofilm

Contains 40mg Lumbrokinase (>720,000 lumbrokinase units) per capsule



www.neogenhealth.com

Pack Size: 30 capsules

Lumbrozyme - Additional Information & Research Highlights

Lumbrokinase, a combination of six enzymes enzyme derived from the common earthworm, is known for its ability to support healthy blood flow, heart and brain health. Now scientists have discovered that this novel enzyme group may be able to assist with a whole lot more.

Enzymes known as proteolytic or fibrinolytic enzymes are designed to break down proteins, but not just the proteins in your food. When you take enzymes with food, they stay in your intestinal tract to digest food. However, when you take proteolytic enzymes between meals or when food isn't in your stomach, they quickly enter your bloodstream, help clean up your blood and make their way to your tissues and organs.

These special enzymes go to work in a seek-and-destroy-type mission to help break down and clear out proteins that don't belong there. Think of them as a Pacman in a video game – when food isn't present, they seek out foreign proteins throughout your body.

Fibrinolytic enzymes also help remove fibrin, a clotting material that your body makes that can restrict blood flow in your arteries and connective or muscle tissue.

We have been using Lumbrokinase enzymes in our practices for a few years with phenomenal results in cases of clotting where modern allopathic medicine failed. We have also seen great results with chronic infections of all kinds and slow healing wounds.

Live blood analysis practitioners will see improvements in these indicators:

- Fibrin (darkfield)
- Neutrophil viability
- Platelet aggregation
- Chronic infection indicators
- L-form (CWD) bacteria
- Pleomorphic bacterial phases

We have used it successfully in practice in:

- Chronic viral Infections (combined with Lamaria and other supportive herbal therapy)
- Chronic CWD Infections like Lyme, Rickettsia and other co-infections (combined with Lamaria and other supportive herbal therapy)
- Infections that do not respond to traditional herbal treatments
- Immune-depressed patients
- Blood clotting issues
- Pain and inflammation
- Elevated fibrin
- Poor circulation (combined with Ceraflow)
- Venous issues (combined with Venaflow)
- Recovery from stroke (combined with Ceraflow)
- Heart and artery health (combined with Arterioflow or Hawthorn)
- High blood pressure (combined with Tenseguard and Nephrolin)

Is fibrin getting in the way of your well-being?

So how can you tell if fibrin or rogue proteins are affecting your health?

- Do you have concerns about your blood pressure or heart health?
- Do you have blood flow issues anywhere in your body?
- Are you troubled by pain?
- Do you have a build-up of scar tissue from an injury or surgery?
- Do you feel tired and can't seem to get enough rest to feel fully recharged?
- Are you deficient in certain minerals?

All of these are just a few of the signs that you might benefit from proteolytic or fibrinolytic enzymes.

Fibrinolytic enzymes help break down fibrin and:

- Support dissolving and removing fibrin's cross-linked proteins.
- Improves blood flow to tissues by reducing platelet aggregation or blood cell clumping, sometimes called "sticky blood."
- Inhibit proinflammatory prostaglandins like thromboxane.
- Support your body's ability to reduce hardening of your arteries.

With sticky blood, small blood clot deposits containing fibrin protein occur on the lining of blood vessels and can interfere with healthy blood flow.

The Key to Lumbrokinase: Active Only in the Presence of Fibrin

One key, remarkable property of lumbrokinase is that, unlike other fibrinolytic agents, it is only active in the presence of fibrin. Though it dissolves fibrinogen and fibrin very specifically, it hardly hydrolyses other important blood proteins such as plasminogen or albumin.[2] It has very low risks of causing haemorrhage due to excessive fibrinolysis.[3]

A 2001 study tested one of the six enzymes of LK to determine whether it passes into the blood from the intestines while maintaining its biological activity.[4] The study found that approximately 10% of the full-size enzyme could pass through the intestinal epithelium intact and into the blood.

Human Studies Demonstrate Potency and Efficacy

Clinical trials in humans have found Lumbrokinase to be safe and effective as a thrombolytic agent.

Freeze-dried earthworm powder was given orally at a dosage of 120mg to seven healthy volunteers aged 28 to 52 years old three times a day for 17 days.[5] Blood was drawn before the trial to establish a baseline, and then at selected intervals through the trial until the end of the study. Fibrin degradation products, tissue plasminogen activator (tPA) levels, and fibrinolytic activity were measured in the blood. The tPA levels and fibrinolytic activity gradually increased through the entire experiment.

In an even more significant study from Shanghai Medical University in 2000, LK was used in 51 patients who had suffered a stroke.[6] Several measures of blood viscosity were evaluated, as well as the Chinese stroke score. In the treatment group, tPA activity and D-dimer level increased and fibrinogen decreased significantly, while plasminogen activator inhibitor activity and prothrombin time were unchanged. This suggests that LK may not only be beneficial for ischemic stroke, but also that it does not increase the risk of excessive bleeding as anticoagulants can. Since the original publication, a larger, multi-centre study published in 2013 showed treatment of ischemic stroke patients with Lumbrokinase for one year reduced not only fibrinogen levels but also decreased vulnerable plaques and carotid artery intima-media thickness, among other things, compared to control.[7]

How Biofilms Allow Bacteria to Hide Out in Your Body

Biofilms can form just about anywhere in the body, such as in your mouth, sinuses, ears, heart and arteries, kidneys, bladder and gastrointestinal tract. Biofilms can form anywhere where there's a surface and enough moisture. Dental plaque that forms on your teeth each day is a biofilm.

Your GI tract is an ideal location for bacteria and the formation and survival of their biofilms. There's a lot of surface area and no shortage of moisture or nutrients.

If your intestinal lining is damaged (GMOs and glyphosate are just two things that can damage your gut lining) or have less-than-optimal gut health, this can create the perfect opportunity for bacteria to take hold and construct a biofilm.

Biofilms are extremely difficult to detect. Even if you knew where they lingered in your body, obtaining a sample would require an invasive procedure. And if you did have one in the lining of your GI tract, there's no current procedure available to remove it.

A healthy immune system is your best way to help slow biofilm formation. When your immune system detects one forming, it goes to work to help break it down. Once biofilms take hold, proteolytic enzymes can give your body a helping hand in breaking them down.

If you're not already taking Neoflora, I highly recommend you do so. Research shows that probiotics and fulvic acid may help disrupt the activity of biofilms in your gut.

The "Chinese Secret" to Busting Fibrin and Biofilms: Lumbrokinase Enzymes

There are several oral proteolytic enzymes available today that can help break down fibrin and biofilms. These include pancreatic enzymes, bromelain, nattokinase, serrapeptase, and lumbrokinase.

Extensively studied in China, lumbrokinase is a group of very strong and novel fibrinolytic enzymes sourced from earthworms. Earthworms have been used in Traditional Chinese medicine in East Asia for thousands of years, but it's only recently that earthworm fibrinolytic enzymes, or EFEs, from *Lumbricus rubellus* have become available.

Researchers have discovered that EFE from *L. rubellus* is not one, but a mix of six enzymes – all serine protease components with different fibrinolytic activities. These EFEs, or lumbrokinase as it's called, are effective at breaking apart fibrin and the fibrin protein that holds the biofilm matrix together. And because it breaks down fibrin protein, lumbrokinase can also improve sticky blood which could otherwise enhance risk for blood clots.

Lumbrokinase is believed to be able to penetrate through thick clumps of gut bacteria or biofilms. Here's something else that makes lumbrokinase stand apart from the others: it has a built-in balancing mechanism that promotes both fibrinolysis and fibrinogenesis. That means it can both break down and build up fibrin, depending upon your body's needs. I believe this is likely what gives lumbrokinase such a great safety record of use, and why it has been so helpful to many people.

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