The Possible Benefits of Fibrenase III - Lumbrokinase, a Dietary Supplement

- Helps regulate fibrin levels in the circulatory system
- Supports healthy blood viscosity & platelet function
- Supports control of hypercoagulative conditions associated with aging

Description

According to the ancient Chinese medical publication Ben Cao Gang Ma (Compendium of Materia Medica), earthworm (*Lumbricus rubellus*) was said to unblock the body's meridians and channels, and was used to improve blood circulation and in the treatment of limb numbness and hemiplegia. In 1883, in a book discussing the action of worms, Charles Darwin observed that earthworm digestive fluids can dissolve fibrin. In the 1980s, Japanese researchers extracted a fibrin dissolving enzyme from *Lumbricus rubellus*, and found that it consisted of six proteolytic enzymes, collectively named lumbrokinase (LK). Since 1992, LK has been extensively studied and used in China.

Research has shown LK supports the body in breaking up and dissolving unhealthy coagulation of the blood and enhances fibrinolytic activity, similar to nattokinase. LK consists of a group of proteolytic enzymes including plasminogen activator and plasmin. The plasminogen activator (e-PA) in LK is similar to tissue plasminogen activator (t-PA) from other sources. Lumbrokinase’s mechanisms of action include participation in the activation of plasminogen, and direct activity on fibrin itself. LK primarily proteolyzes fibrinogen and fibrin, hardly hydrolyzing other plasma proteins including plasminogen and albumin. The enzymes in LK have very strong fibrinolytic activity, are stable in a wide pH range, and show great stability against thermal inactivation and degradation. They are alkaline trypsin-like proteases that are greater than trypsins in their stability and tolerance to organic solvents. Significant amounts of LK have been shown to be transported through the intestinal epithelium, even in healthy subjects.

In vivo and animal studies demonstrate the anticoagulative, fibrinolytic and antithrombotic effects of LK, which include normalization of blood fibrinogen levels, euglobulin clot lysis time (ELT), blood viscosity, platelet coagulation potential and platelet adhesion. In a study of cerebral infarction, LK decreased certain stroke scores over control groups. Specifically, KPTT was prolonged, t-PA activity and D-dimer levels increased, and the content of fibrinogen decreased significantly. There were no significant changes of PT and PAI activity in both groups. The beneficial effect of LK was related to both the inhibition of the intrinsic coagulation pathway and the activation of fibrinolysis via an increase of t-PA activity. In another study, 120 mg of lyophilized earthworm powder was administered orally to 7 healthy volunteers (aged 28-52 years old) after meals three times every day for 17 days. The t-PA antigen levels gradually increased to the 17th day, and fibrinolytic activities increased during the experiment. The researchers concluded that earthworm powder might be applicable for Mediterranean anemia, an inherited form of anemia caused by faulty synthesis of hemoglobin. Four phases of clinical studies have been done on LK at the Beijing Xuanwu Hospital (the top hospital in nerve & internal medicine in China), and the use of LK has become prevalent in over 100 hospitals in Beijing since 1995. LK is widely used elsewhere in Asia, including Jakarta, Hong Kong and Taiwan, and in Europe.

In China, LK has a certificate of GMP and is approved by the Ministry of Public Health as a state class new therapy. It has been recognized with multiple official awards, including selection as...
National Key New product by 6 major ministries, and gold prize at China's Achievement in Medicine and Public Health Technology Fair. Over 60,000 people have received LK without any hemorrhage or other major side effects. Long term animal tests have shown that LK is non-toxic and free of side effects. There is no evidence that it adversely affects bleeding time or clotting time. Product of China.

Each capsule contains:  Lumbrokinase 230 mg
Other ingredients:  Starch
Suggested use:  As a dietary supplement, 1-2 capsules in the morning, 1-2 capsules in the afternoon and 2 capsules at bedtime, or as directed by a healthcare practitioner. May be taken with or without food. Take with 8-10 oz of water.
Contraindications:  If taken with anticoagulant drugs use under medical supervision. Contraindicated in any conditions associated with bleeding.

References
Sugimoto M, Nakajima N. Molecular cloning, sequencing, and expression of cDNA encoding serine protease with fibrinolytic activity from earthworm.

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