

## Benefits

Serrapeptase is a proteolytic enzyme isolated from the non-pathogenic bacteria *Serratia* species found in the digestive tract of the Japanese silkworm. Serrapeptase has been used as a nutritional supplement in Europe and Asia for nearly three decades. Each enteric-coated vegetarian capsule of Best Serrapeptase contains pure serrapeptase designed for optimal absorption in the intestinal tract.

**Note:** Doctor's Best Serrapeptase contains 40,000 Serratiopeptidase units, which refers to the enzyme activity level. Enzymes, like Serrapeptase, are not measured in mg, but in an unassociated measure of units. Doctor's Best Serrapeptase has 40,000 Serratiopeptidase (units) of activity per capsule. This is a very high amount of activity.

Serrapeptase has been used widely in clinical practice in Japan and Europe for over 30 years. Dr. Hans Nieper, a legendary medical doctor known for his extensive use of proteolytic enzymes, named it the "Miracle Enzyme" because of its unique potency. Serrapeptase is made by the bacteria *Serratia* E15 found in the digestive tract of silkworms, which harness the serrapeptase enzyme to break down food and the walls of their silk cocoons as they emerge in their moth state.

Proteolytic enzymes function in the body to digest and break down proteins into their amino acid components. When taken as supplements away from meals, these enzymes enter the bloodstream and are available to facilitate chemical reactions throughout the body. They work in part by helping to support a healthy inflammatory response and by modulating the immune system. \*

Studies thus far suggest that serrapeptase is a promising, safe and useful supplement to help support the immune system and normalize mucus secretion.\* Research indicates Serrapeptase helps modulate molecules involved in both the immune and blood clotting systems [1-5]. Double-blind studies have shown that serrapeptase supports the body's immune response, thins mucus, and modulates the body's immune response after surgery [3, 6].

Serrapeptase has been used for years in Japan for supporting healthy sinus function.\* Several human studies have shown that serrapeptase thins mucus in some individuals. An open-label study in 2003 looked at the effects of 30 mg/day (equivalent to ~ 60,000 units of activity) of serrapeptase in 29 individuals with problems expectorating their sputum. After 4 weeks of treatment, those taking serrapeptase had significantly less morning sputum, and it was thinner and less elastic in nature compared to those taking placebo. The serrapeptase group also had less inflammatory cells (neutrophils) in their sputum, and they coughed significantly less than those in the control group [7].

## POTENCY

Doctor's Best discloses the potency details of Serrapeptase so you know exactly what you're getting. Enzyme strength is measured in terms of activity. Enzymes may be present, but unless they are functional, they will not do any good. Instead of weight

(such as milligrams) the important measurement with enzymes is the activity and potency of the enzyme. A product label should list enzyme strength in standard activity units rather than by weight. Each enteric-coated vegetarian capsule of Best Serrapeptase contains 40,000 Serratopeptidase units of pure serrapeptase.

## Safety

As with any nutritional supplementation program, it is best to consult your physician before beginning an enzyme treatment program. Enzymes such as Serrapeptase are safe for most people when used according to the recommended dosage. People prone to forming blood clots, such as those with atrial fibrillation or with chronic venous insufficiency, should consult their physician before using Serrapeptase. People with other bleeding disorders, ulcers, those who've had neurosurgery or ischemic stroke, or those taking blood thinning medications should also consult their physician before taking any enzyme supplements.

**Suggested Adult Use:** Take 1 to 3 capsules daily, away from food.

**Does Not Contain:** *milk, egg, wheat, corn, sugar, sweeteners, starch, salt, or preservatives.*

## Scientific References

1. Majima, Y., et al., *The effect of an orally administered proteolytic enzyme on the elasticity and viscosity of nasal mucus.* Arch Otorhinolaryngol, 1988. **244**(6): p. 355-9.
2. Majima, Y., et al., *Effects of orally administered drugs on dynamic viscoelasticity of human nasal mucus.* Am Rev Respir Dis, 1990. **141**(1): p. 79-83.
3. Mazzone, A., et al., *Evaluation of Serratia peptidase in acute or chronic inflammation of otorhinolaryngology pathology: a multicentre, double-blind, randomized trial versus placebo.* J Int Med Res, 1990. **18**(5): p. 379-88.
4. Mecikoglu, M., et al., *The effect of proteolytic enzyme serratiopeptidase in the treatment of experimental implant-related infection.* J Bone Joint Surg Am, 2006. **88**(6): p. 1208-14.
5. Kee, W.H., et al., *The treatment of breast engorgement with Serrapeptase (Danzen): a randomised double-blind controlled trial.* Singapore Med J, 1989. **30**(1): p. 48-54.
6. Tachibana, M., et al., *A multi-centre, double-blind study of serrapeptase versus placebo in post-antrotomy buccal swelling.* Pharmatherapeutica, 1984. **3**(8): p. 526-30.
7. Nakamura, S., et al., *Effect of the proteolytic enzyme serrapeptase in patients with chronic airway disease.* Respirology, 2003. **8**(3): p. 316-20.