Doctor's BEST® Science-Based Nutrition™

# Best Proteolytic Enzymes

## Best Proteolytic Enzymes

90 Veggie Caps

Ingredients per 3 capsule:

| | |
|---|---|
| Bromelain | 576 GDU |
| Papain | 10,077,000 PU |
| Amylase | 36,000 DU |
| Lipase | 405 FCC FIP |
| Neutral protease | 738 NU |
| Fungal protease4.0 | 34,800 HUT |
| Bacterial protease | 62,250 HUT |
| Rutin | 30 mg |
| Serratiopeptidase | 120,000 SPU |

Excipients: Vegetarian capsule (cellulose).

Suggested Adult Use: Take 3 capsules daily away from food (one hour before or two hours afterwards), or as recommended by a healthcare professional.

Suitable for vegetarians.

## Ingredients

Best Proteolytic Enzymes is a potent formulation containing a broad spectrum of proteolytic enzymes (proteases). Proteolytic enzymes function in the body to digest and break down proteins into their amino acid components. When taken as supplements, studies show that various proteolytic enzymes, including bromelain (from pineapple), papain (from papaya), serratiopeptidase (from bacteria), and fungal protease (from a non-pathogenic fungus medium), are absorbed through the lining of digestive tract and into the circulation.[1] These enzymes, once in the bloodstream, are available to facilitate chemical reactions throughout the body and have a wide range of applications.

Doctor's Best designed this exceptionally potent, high-quality proteolytic enzyme formula to include a broad spectrum of proteolytic enzymes from a variety of plant, bacterial, and fungal proteases. The goal was to create a blend that works at a variety of pH levels to support the body's native enzymatic needs. Maintaining optimal enzymatic function is a key factor in supporting the foundation for health and wellness of numerous individuals.

Bromelain – a general name for a family of proteolytic enzymes derived from the pineapple plant. Bromelain effects various systems in the body through a variety of physiological mechanisms, including inhibiting the formation of bradykinin, limiting the generation of fibrin, increasing the breakdown of fibrin, modulating prostaglandins, and decreasing platelet aggregation.

Papain – a proteolytic enzyme derived from the sap (also called latex or milk) of unripe papaya. Traditionally used with bromelain.

Fungal amylase – an enzyme derived from the fungus Aspergillus oryza. Breaks down carbohydrates, such as starch, and glycogen.

Lipase – the main enzyme responsible for breaking down fats. Lipases hydrolyze triglycerides (fats) into their component fatty acid and glycerol molecules.

Protease (bacterial, fungal, neutral) – a group of enzymes whose catalytic function is to hydrolyze (breakdown) peptide bonds of proteins. Proteases differ in their ability to hydrolyze various peptide bonds. Bacterial proteases are optimally active in alkaline conditions, fungal proteases in more acidic conditions, and neutral proteases (from bacteria) are optimally active at a neutral pH.

Rutin – an antioxidant citrus flavonoid consisting of sugar molecules bound to a quercetin backbone. Rutin is known to modulate the immune and circulatory systems.

Serratiopeptidase - the "Miracle Enzyme" according to Dr. Han's Nieper, a legendary medical doctor known for his extensive use of proteolytic enzymes. This proteolytic enzyme has been shown to be more powerful than the pancreatic enzymes proteolytic enzymes chymotrypsin and trypsin.

## Benefits

### Proteolytic Enzymes Provide Support for Muscle, Joint, and Overall Tissue Health*

In addition to their role in digestion, proteolytic enzymes serve another, much larger role in the body's chemical reactions: they activate tissue repair and break down the debris left by cells after irritation or injury. This can improve the ability of important molecules and cells involved in the body's immune response to modulate the restorative processes within our tissues.

Human studies have demonstrated the effectiveness of proteolytic enzymes in supporting healthy joint and musculoskeletal health. Two recent double-blind studies conducted in Austria, for instance, found that systemic enzymes support joint health.[2,3] In both studies, researchers treated a total of 163 men and women for 6-7 weeks with either a common European over-the-counter medicine used to support healthy joints or a systemic enzyme formula. At the conclusion of the study, there was significant overall improvement in joint health in both the over-the-counter conventional medication and the proteolytic enzyme groups. A number of other clinical studies also support the use of proteolytic enzymes for joint support.[4,5]

A large number of scientific studies published in the literature indicate proteolytic enzymes can provide support to other tissues in the body, in addition to joints, and to modulate the body's immune system.[6,9]




Studies have also examined the benefits of proteolytic enzymes for improving the elasticity and viscosity of nasal mucous.[10] A recent clinical trial, for example, found that proteolytic enzymes are beneficial for children with acute sinus infections. In this German study of 116 patients, taking bromelain lead to statistically significant faster recovery from sinus symptoms compared to other treatments.[11] In 1994, the German

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Commission E officially approved the use of the proteolytic enzyme bromelain for treatment of swelling of the nose and sinuses caused by surgery or trauma.

### Serratiopeptidase Modulates the Immune System and the Secretion of Mucous*

Serratiopeptidase (or Serrapeptase) is a powerful proteolytic enzyme that has been used widely in clinical practice in Japan and Europe for over 30 years to modulate the immune system and the secretion of mucous. It is made by the bacteria Serratia E15, found in the digestive tract of silkworms, which harness the serratiopeptidase enzyme to break down food and the walls of their silk cocoons as they emerge in their moth state.

Serrapeptase appears to thin mucus and modulate molecules involved in both the immune and blood clotting systems.[12, 16] Studies thus far suggest that serrapeptase is a promising, safe and useful supplement to help support the immune system and thin mucus. *

Serrapeptase has been used for years in Japan for treating mucus related symptoms. 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 damaging inflammatory cells (neutrophils) in their sputum, and they coughed significantly less than those in the control group.[17]

Other double-blind studies have shown that serrapeptase supports the body's immune response to infections and that it modulates the body's immune response after surgery.[4, 18]

### Potency

Doctor's Best discloses the potency details of every individual enzyme 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.

Some enzyme manufacturers conceal the actual amounts of ingredients in their formulations or list the potencies in misleading ways. For example, they list measurements based on weight without providing any information on enzyme activity. Each of the enzymes in Best Proteolytic Enzymes is listed in terms of enzyme potency and activity using standard activity units.

## Safety

As with any nutritional supplementation program, it is best to consult your physician before beginning an enzyme treatment program. Enzymes 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 taking any type of substance that may effect the blood viscosity. 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.

*This statement has not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

## Scientific References

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Best Proteolytic Enzymes is a potent formulation containing a broad spectrum of vegetarian proteolytic enzymes. Proteolytic enzymes function in the body to digest and break down proteins into their amino acid components. Studies show that various proteolytic enzymes are absorbed through the gut wall into circulation. Enzymes are required to facilitate chemical reactions throughout the body. Supplementing with proteolytic enzymes may augment the normal metabolic functions of enzymes present in the body.*

***These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.**

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Doctor's BEST®

Science-Based Nutrition™

Dietary Supplement

# Best Proteolytic Enzymes

BROAD SPECTRUM PROTEOLYTIC ENZYME FORMULATION*

90 Veggie Caps

## Supplement Facts

Serving Size 3 capsules
Servings per container 30 servings

| | Amount per serving | % Daily Value |
|---|---|---|
| Bromelain | 576 GDU | † |
| Papain | 10,077,000 PU | † |
| Amylase | 36,000 DU | † |
| Lipase | 405 FCC FIP | † |
| Neutral protease | 738 NU | † |
| Fungal protease 4.0 | 34,800 HUT | † |
| Bacterial protease | 62,250 HUT | † |
| Rutin | 30 mg | † |
| Serratiopeptidase | 120,000 SPU | † |

† Daily Value not established.

**Other ingredients:** Vegetarian capsule (cellulose).

**Suggested Adult Use:** Take 3 capsules daily away from food (one hour before or two hours afterwards), or as recommended by a healthcare professional.

**Suitable for Vegetarians**

**CONTAINS NOTHING OTHER THAN LISTED INGREDIENTS**

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