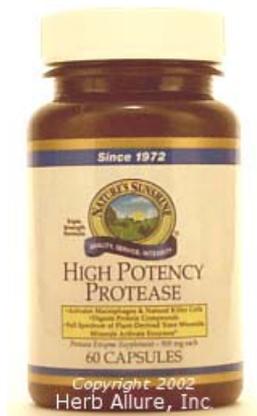


High Potency Protease

Stock #1876-1 (60 capsules)



High Potency Protease is a concentrated source of protease enzymes, which have been shown to improve protein digestion, reduce inflammation and speed the healing of wounds, inhibit the formation of blood clots, protect against intestinal parasitic infection and the overgrowth of yeast, and support immune function. High Potency Protease also contains bentonite, a concentrated source of minerals and trace nutrients—all enzyme activities involve minerals.^{1,2}

Enzymes are essential nutrients that initiate virtually all of the chemical reactions occurring within the body. Enzymes also aid in the elimination of toxins, including potentially harmful allergens and environmental pollutants. Unless obtained in the diet (from raw fruits and vegetables or dietary supplements), the constant demands on the body to manufacture enzymes can cause enzyme deficiency—a common problem that can lead to digestive dysfunction, cardiovascular disease, obesity, cancer and other illnesses. For example, enzyme deficiency is believed to be part of the mechanism that enables cholesterol deposits

to accumulate along the inside of arterial walls, ultimately manifesting in heart disease.¹⁻⁴

Incomplete digestion can be a major contributor to the development of numerous disease conditions. Approximately 58% of the population is believed to suffer from some type of digestive disorder. Not only can digestive dysfunction lead to nutritional deficiency and upset of healthy bowel flora, but in addition, incompletely digested macromolecules can be absorbed into the systemic circulation (the bloodstream). This can lead to a variety of immune complex diseases and is theorized to play an integral role in the etiology (origin) of food allergies. Antigenic (capable of producing an immune response) macromolecules can trigger the body's defenses against exposure to what is perceived as foreign protein, thus producing symptoms of allergy. Furthermore, incompletely digested protein creates a favorable environment for "unfriendly" colonic bacteria, many of which create toxic substances that are absorbed by the body.^{2,4-6}

Protease enzymes—also referred to as proteolytic enzymes—break down proteins into single amino acids and are capable of breaking down 300 grams of protein per hour. However, protease supplementation is beneficial for more than just improving digestion. Numerous human studies show that supplemental proteases given orally are absorbed intact into the bloodstream where they are able to act systemically (affecting the whole body), providing analgesic (pain-relieving), anti-inflammatory and edema-reducing activities—proteolytic enzymes are important regulators and modulators of the inflammatory response. Thus, protease enzymes have been used to treat acute inflammatory conditions such as sports injuries, surgery and wounds, as well as reduce pain in various rheumatic diseases, including peri-arthritis of the shoulder and osteoarthritis of the knee. Proteolytic enzymes have even been shown to reduce pain, as well as significantly reduce the need for analgesics in women undergoing episiotomy—a surgical incision into the perineum and vagina to prevent traumatic tearing during childbirth. In addition, proteolytic enzymes have been used therapeutically to reduce and eliminate food allergies; fight cancer and infections, including viral infections such as shingles (*Herpes zoster*) and AIDS; and combat auto-immune diseases such as rheumatoid arthritis, multiple sclerosis and scleroderma. Plus, research shows that proteases are largely responsible for keeping the small intestine clear of parasites, including bacteria, intestinal worms, protozoa and yeast. Thus, a lack of protease can greatly increase the chances of intestinal infection and the overgrowth of the yeast *Candida albicans*. Furthermore, proteases stimulate phagocytosis—the ingestion of waste material, harmful microorganisms or other foreign bodies by specialized cells—within the immune system and accelerate the elimination of cell debris, fibrin (insoluble protein that forms the essential portion of a blood clot) and toxins by way of the lymphatic system and blood vessels.^{1,2,5,7-16}

In addition, protease is an important component in preventing tissue damage during inflammation and the production of fibrin clots. Protease increases the breakdown of fibrin—a process known as fibrinolysis. Fibrin promotes inflammation by forming a wall around the area of inflammation, blocking blood and lymph vessels and causing swelling. Increased fibrin formation is also believed to be associated with production of cholesterol and fatty material, which inhibit circulation and contribute to heart disease. In addition, fibrin can cause blood clots to develop, which, if they become dislodged, can cause strokes or heart attack. Therefore, protease enzymes are often used therapeutically to treat thrombophlebitis—a disease where blood clots develop in veins, the veins become inflamed, and the clots dislodge, causing a stroke or heart attack.^{1,5,8,9,11,16}

Protease's ability to dissolve fibrin is also beneficial in the treatment of cancer. Cancer cells are covered with a thick "coat" of adhesive fibrin (referred to as "fibrin masking"), thus making the cancerous cells no longer recognizable by the body's immune cells. In response, protease enzymes effectively dissolve the fibrin coating of cancer cells, exposing their antigens to destruction by macrophages and the entire immune system. European oncologists have,

for many years, included enzyme supplements as a natural, non-toxic adjuvant therapy against cancer; while nearly all of the leading alternative cancer specialists treating Americans prescribe enzymes as either primary or adjuvant cancer therapies. A review of clinical trials of systemic enzyme therapy in oncology—the study of diseases that cause cancer—has shown that enzyme therapy can reduce the adverse effects caused by radiotherapy and chemotherapy, and there is also evidence that, in some types of tumors, survival may be extended. Research also indicates the importance of oral administration of proteolytic enzymes in the supporting treatment of malignant processes in multiple myeloma.^{1,4,5,10,17-21}

For example, a 2-year pilot study of 11 patients with inoperable pancreatic adenocarcinoma (pancreatic cancer) led to significantly increased survival using large doses of proteolytic enzymes, combined with an aggressive nutritional therapy. The National Cancer Data Base reports that survival rates for all stages of pancreatic cancer are 25% survival at 1 year and only 10% survival at 2 years. However, 9 patients (81%) in the pilot study survived 1 year and 5 patients (45%) survived 2 years. Additionally, 4 patients were still living at 3 years.^{1,22}

In addition, a controlled, clinical trial involving 649 breast cancer patients was conducted to determine the effects of treatment with an oral enzyme preparation given postoperatively in conjunction with antineoplastics—substances that prevent the development of abnormal tissue growth. The results showed that the typical disease- and therapy-associated signs and symptoms in patients receiving oral enzymes were significantly less—75% of the test group versus 55% of the control group experienced "no signs and symptoms." A clear reduction in the side effects of radiotherapy and chemotherapy was also documented in 74% of the test group compared to 55% of the control group. In addition, analysis of survival, recurrence, and metastasis demonstrated a reduced number of events in the test group, with evidence of a beneficial influence of oral enzymes on the length of time to event. Researchers concluded that complementary treatment of breast cancer patients with oral enzymes improved the quality of life by reducing signs and symptoms of the disease and the side effects of adjuvant antineoplastic therapies. This study also provided evidence that patients may gain benefit from oral enzymes by prolonging the time to event for cancer recurrence, metastasis and survival. Similar results were also found in a study involving patients with colorectal cancer.^{23,24}

Furthermore, protease enzymes are essential for dissolving and preventing the deposit of immune complexes in body tissues. Immune complexes are inflammatory byproducts of antibody attacks on antigens that are normally eliminated from the bloodstream by macrophages. Immune complexes that continue to circulate can be deposited in tissues where they can cause significant local tissue damage. Diseases such as AIDS, ankylosing spondylitis (arthritis of the spine), Crohn's disease, *lupus erythematosus*, multiple sclerosis, pulmonary fibrosis, rheumatoid arthritis, scleroderma, and ulcerative colitis are associated with high levels of circulating immune complexes. Fortunately, both experimental and clinical studies show that protease preparations are extremely effective in decreasing levels of circulating immune complexes and activating macrophages to break up and eliminate them. Clinical improvements have been shown to correspond with reductions in immune complex levels.^{1,5,9,14,25,26}

Each capsule of NSP's High Potency Protease delivers 180,000 HUT's (Hemoglobin units, tyrosine basis) of protease. Each capsule of High Potency Protease provides the same benefits as three Protease Plus capsules.

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