

ENZYME SCIENCE®

PRACTITIONER DIVISION OF ENZYMEDICA



MyoMend®

Proteolytic Blend for Muscle & Joint Function*

Muscle soreness and discomfort are common after exercise, prolonged sitting or inactivity, or after a new physical activity. According to research conducted by the Centers for Disease Control and Prevention, one in four American adults sit for more than eight hours a day and 40% are physically inactive.¹

Delayed onset muscle soreness, resulting in uncomfortable and stiff muscles, is common after unaccustomed or strenuous exercise. While muscle strains induced by exercise are quite common in athletes, individuals with a lack of muscle fitness, and weak muscles as a result of aging, muscle and joint discomfort can also be the result of free radical damage and oxidative stress.

Formulated to Support Physical Recovery*

Though essential for survival, oxygen is also involved in toxic reactions that are a constant threat to our well-being. Most of the potentially harmful effects of oxygen are believed to be the result of the formation and activity of free radicals.² Oxidative stress, encompassing oxidative damage to proteins, is brought on by the imbalance between free radical production and available antioxidants. Balance is of utmost importance for proper physiological function.

Excessive free radicals from a normal body metabolism that includes glycation, for example, are believed to be major contributors to aging, muscle soreness and joint discomfort.^{3,4} Studies have shown that intense aerobic exercise can induce oxidative stress. Our body burns fuel at a faster rate with high-intensity physical exercise, which causes rapid chemical reactions that make free radicals at a faster rate.^{4,5,6} Glycation occurs when sugar bonds with a protein or lipid to form compounds known as advanced glycation end products (AGE). These molecules speed up the oxidative process and damage cells. Research suggests that the accumulation of glycation end products in joint tissues cause joint stiffness and discomfort.⁷

Our body's response to oxidative stress includes redness, soreness, stiffness or general discomfort. The immune system response to a physical condition under oxidative stress is perfectly normal and is actually a very important part of a healthy body. Our body naturally produces defense mechanisms in the form of antioxidants to quench free radical reactions. Enzymatic and non-enzymatic antioxidants work to neutralize oxidative stress by breaking down and removing free radicals and interrupting free radical chain reactions.⁸

Therapeutic Proteolytic Enzymes

Proteolytic enzymes are responsible for protein degradation. When proteins are ingested, they pass thru stomach partially digested. In the small intestine, they are further degraded by proteolytic enzymes into smaller fragments. Studies have shown the therapeutic effect of proteolytic enzymes and potentially digesting oxidatively damaged protein accumulated as cellular debris.⁵ Identifying and degrading damaged proteins into smaller fragments for elimination may prevent accumulation or build-up that could otherwise create discomfort in joints and muscles.⁹

Proteolytic enzymes may also reduce muscle soreness and speed up recovery after an intense physical activity. In a small cohort study in men aimed to examine the effects of protease supplementation on delayed onset muscle soreness after an extraneous run. They concluded that protease supplementation including papain and bromelain in the blend may facilitate muscle healing and allow for faster muscle recovery after an intense physical activity.⁶ In

- Supports physical recovery*
- With Rutin to optimize mobility*
- Includes Nattokinase & Serrapeptase

With high-potency nattokinase and serrapeptase, plus the phytochemical rutin.*

MyoMend™ is an advanced blend of proteolytic enzymes to support physical recovery, including joint and muscle function.* Each targeted-delivery capsule helps break down damaged proteins to speed recovery and promote flexibility and mobility.*

SUPPLEMENT FACTS

Supplement Facts

Serving Size: 2 Capsules
Servings Per Container: 30

Amount Per Serving	%DV
Bromelain	1,250 GDU **
Protease Thera-blend®	100,000 HUT **
Catalase	100 Baker **
Rutin	60 mg **
Papain	3,500,000 PU **
Serrapeptase	100,000 SPU **
Nattokinase blend w/ NSK-SD®	700 FU **

** Daily Value (DV) not established

OTHER INGREDIENTS:

100% vegetarian capsule (gellan gum, HPMC, water)
CONTAINS NO: Casein, crustaceans, eggs, fish, gluten, milk, nuts, sesame, shellfish, soy, wheat; Artificial colors, fillers or flavors

RECOMMENDED DOSE:

2 capsules 3 times per day on an empty stomach (1/2 hour before or 2 hours after a meal). More may be taken as recommended by your healthcare practitioner. Consult a physician before use if you are pregnant or nursing, taking medications or have a medical condition.



addition, bromelain has shown to diminish the damaging effects of advanced glycation end products by degrading the protein receptor for AGE.¹⁰ Research has shown that enzymes including bromelain, papain and serrapeptase may be effective at reducing stress on muscle and joint function. One experimental study found that administering proteolytic enzymes that includes serrapeptase exhibit a therapeutic effect on oxidative stress reduction.^{11,12}

Catalase, an antioxidant enzyme, is one of the body's natural defenses against free radicals and oxidative stress. Oxidative cellular metabolism produces hydrogen peroxide molecules contributing to free radical damage. Catalase works to break down peroxide into water and oxygen thus protecting cells from free radicals. This enzyme is crucial in suppressing or preventing the formation of free radicals or reactive species in cells. Non-enzymatic antioxidants, such as the bioflavonoid rutin, is known to scavenge free radicals and contribute to protecting cells from oxidative stress. One study in vitro has shown that rutin had a therapeutic effect in reducing the amount of oxidative stress.¹³ In traditional medicine, rutin is known for its ability to help strengthen blood vessels and improve circulation. A review published in the International Journal of Molecular Sciences suggested that rutin may help reduce leg discomfort and cramping, likely due to its therapeutic effect in supporting the capillaries and overall leg circulation.¹⁴

In addition to the individual effects of antioxidants and proteolytic enzymes, these compounds interact in synergistic ways by protecting one another against oxidative destruction. Proteolytic enzymes are vital to many physiological processes in our body due to their catalytic function. With this known proteolytic property of proteases, they inhibit symptoms of physical conditions such as soreness and discomfort.⁶

MyoMend™ for Optimal Health*

Enzyme Science formulated MyoMend™ to include an array of vegetarian proteolytic enzymes including bromelain, papain, protease Thera-blend®, serrapeptase, nattokinase and antioxidants to support muscle and joint health. This unique combination of natural ingredients may help achieve targeted goals, whether it be decreasing muscle soreness, speeding recovery after physical activity, or supporting joint mobility. In order to be effective, supplemental enzymes must reach muscle tissue and joints after absorption from the gastrointestinal tract. To reach this area of need, the enzymes must not be subjected to the acidic environment of the stomach. MyoMend™ is formulated in a special targeted delivery capsule for the enzymes to safely bypass stomach acid and remain intact. This unique capsule functions as an enteric-coated capsule without the plasticizers or phthalates that are common in enteric coatings.

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Additional information was made available by the ingredient manufacturers.

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*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.



As the practitioner division of Enzymedica, America's #1 digestive enzyme company, we know you trust us to help your clients – our integrity and quality reflect the values of your practice. This is our promise.