MAGNESIUM BISGLYCINATE

Highly bioavailable and absorbable form of elemental magnesium

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WHAT IS MAGNESIUM BISGLYCINATE?

Magnesium Bisglycinate features a chelated, highly absorbable form of elemental magnesium. The buffered combination of magnesium bisglycinate chelate and magnesium oxide helps to promote the bioavailability of magnesium and helps to support a healthy magnesium status. Magnesium plays an important role as an enzyme cofactor for energy production. This underlies its importance for supporting and maintaining energy generation, which makes this mineral especially beneficial for both recreational and serious athletes. Magnesium also supports athletes' muscle function and performance and helps mitigate exercise-induced muscle soreness.

Owing to a unique patented process that forms a very stable chelate between each magnesium ion and two molecules of the amino acid glycine, this formula may not cause any unfavorable gastrointestinal (GI) complaints that are sometimes associated with magnesium supplementation, such as loose stools or upset stomach. One of the best-absorbed forms of magnesium is a stable chelate with glycine that bypasses normal modes of absorption in the intestines; this avoids competition that occurs between minerals for absorption.

FORMULA HIGHLIGHTS

- 300 mg of magnesium (as magnesium bisglycinate chelate) per 2-capsule serving
- Highly absorbable and bioavailable form of magnesium
- Gluten-free, dairy-free, soy-free; non-GMO
- NSF Certified for Sport®

MAY SUPPORT MUSCULOSKELETAL FUNCTION AND PERFORMANCE

Magnesium is used in over 300 enzymatic reactions in the body and is integral in muscle contraction, relaxation, and protein synthesis.[1,2] This mineral contributes to muscle function in healthy adults with adequate baseline magnesium levels but may be even more beneficial for those who are low or deficient in magnesium.[1–4] A recent systematic review of 663 adults indicates that the recommended daily intake (350 mg/day for adult men and 300 mg/day for adult women) is often unmet, as 60% of the athletes studied with a low dietary intake of magnesium-rich foods were deficient in this critical mineral.[5] This systematic review also found that athletes with a low dietary intake of magnesium who supplemented 300 to 500 mg/day over a 1- to 4-week period experienced improvements in strength and fatigue resistance.[5]

One randomized controlled trial (RCT) tested the efficacy of 350 mg of daily magnesium supplementation on 25 professional male volleyball players for four weeks. The study revealed that those who supplemented with magnesium experienced significantly reduced lactate production during intense activity and improvements in jump performance (3 cm) compared to the placebo group, even in athletes with adequate baseline magnesium levels.[4] Some amount of lactate production during intense exercise can support the energy production within muscle cells, but the buildup and dissociation of lactic acid, creating an acidic environment in muscle cells, may negatively impact muscle performance.[6]

Another RCT evaluated the effect of 12 weeks of 300 mg daily of magnesium supplementation on the physical performance of 139 healthy women aged 68 to 70. At the end of the study, the women supplementing with magnesium exhibited better Short Physical Performance Battery (SPPB) scores, represented by significantly better chair standing time and 4-minute walking speeds, compared to the placebo group.[2] This study suggests magnesium's role in helping preserve and support muscle mass and function throughout the lifespan.[2]

In addition to impacting muscles, magnesium plays a key role in bone health. Its primary role is as a cofactor for the enzymes necessary for synthesizing bone matrix.[7] A systematic review of over 93,000 adults concluded that an adequate total magnesium intake from either food, supplementation, or a combination, results in higher bone mineral density, specifically of the hip and femoral neck.[7]

MAY HELP MITIGATE EXERCISE-INDUCED MUSCLE SORENESS

Magnesium's role in muscle function extends to mitigating muscle damage during intense exercise and supporting the healing

process of muscle fibers, helping to attenuate post-exercise muscle soreness.[3,8,9] Athletes engaged in intense physical exercise may consider supplementing with magnesium two hours before training, which may help temper the onset of muscle soreness.[9] Additionally, such athletes may consider magnesium intake 10% to 20% higher than is needed for sedentary people.[9] This was seen in a systemic review of 855 athletes which found that serum magnesium concentrations were significantly lower in athletes compared to untrained populations, despite a higher dietary magnesium intake.[10]

A double-blind RCT explored how 350 mg/day of supplemental magnesium for 10 days would influence muscle soreness and performance in 22 college-aged subjects. The results showed that magnesium supplementation significantly reduced muscle soreness (1 to 2 units on a 6-point scale) at 24, 36, and 48 hours post-exercise compared to the placebo group, which saw no significant reduction.[3] No significant difference was seen in performance, but perceived recovery did improve significantly in the magnesium group.[3]

Magnesium may also help influence muscle performance and recovery by supporting a healthy inflammatory response to exercise.[8] This was seen in a small double-blind crossover RCT of nine recreationally active men who compared supplementation of 500 mg of magnesium with a placebo on muscle soreness and inflammatory markers. After a 10 km downhill run, they found that when taking magnesium, they experienced mitigations in muscle soreness and mitigations of interleukin-6 (an inflammatory marker) during and post-exercise compared to when taking a placebo.[8]

Magnesium may also support muscle health by promoting healthy blood sugar metabolism and promoting normal lactate clearance in muscles during exercise.[11]

BENEFITS

- May support muscle performance such as with walking, jumping, and squatting[2,4]
- May help mitigate age-related muscle loss[1,2]
- Helps mitigate muscle soreness post-exercise[3,8]
- Supports healthy blood sugar metabolism[8,11]
- Supports bone health[7]

HOW TO TAKE

Adults and Adolescents 9 and over: Take 1 capsule twice per day, or as directed by your health care practitioner.

Please read the product label for any cautions and warnings before use to ensure this product is right for you.

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