

Magnesium Bisglycinate – Helps Maintain Bone and Muscle Function

About Magnesium Bisglycinate

- Over 600 enzymes in the body require magnesium as a cofactor for optimal activity.¹
- Magnesium is needed for a wide range of cellular processes, ranging from energy production and DNA synthesis, to signalling in muscle and nerve cells, and the regulation of blood pressure.²
- Despite the many requirements for magnesium, dietary intake of this important mineral often falls short. Estimates from a national cohort in the United States suggest that two-thirds of all adults have an intake below the recommended amount.³
- Magnesium bisglycinate is a chelated form of this mineral that is highly bio-available and well-tolerated. It is more easily absorbed than other forms, such as magnesium oxide, and is less likely to have the laxative effect of other forms.^{4,5}
- Muscle and bone health are both impacted by an insufficient magnesium intake. Among healthy older women, for example, supplementation with 300 mg of magnesium per day was associated with significant improvements in performance compared to the control group. This finding suggests that magnesium may play a role in preventing age-associated decline.⁶
- Magnesium is important for muscle health and repair. It has been shown to relieve muscle cramps from various causes, including pregnancy-induced muscle cramps.^{7,8}
- Magnesium is also both important to bone health and a major component of bone, with about two-thirds of all magnesium stored in the bone. Both osteoblasts and osteoclasts (bone-building and remodelling cells) rely on sufficient magnesium. In a large systematic review of nearly 120,000 participants, a low magnesium intake was associated with a 58% greater risk for bone fracture.⁹

How to Use Magnesium Bisglycinate

- **Capsules:** Take 1 capsule daily or as directed by a health care practitioner.
- **Powder:** Take 1 serving (2.9 g) per day or as directed by a health care practitioner. Mix well in 250 mL of water until fully dissolved.

Cautions and Contraindications

- Keep out of the reach of children. Individuals with impaired renal function should use this product under medical supervision to monitor the potential for hypermagnesemia.

PATIENT NAME: _____

PRACTITIONER NOTES:

Drug Interactions

- When taken together, magnesium can decrease the absorption of levodopa/carbidopa¹⁰, quinolone antibiotics¹¹, and tetracycline antibiotics¹², and can increase the absorption of sulfonylureas.¹³ Magnesium levels may be depleted by aminoglycoside antibiotics¹⁴, amphotericin B¹⁵, cyclosporine¹⁶, digoxin¹⁷, potassium-wasting diuretics¹⁸, oral contraceptives¹⁹, foscarnet²⁰, sodium phosphates²¹, tacrolimus²², and proton-pump inhibitors.²³

Quick Tips for Optimal Health

- Rich sources of dietary magnesium include nuts, green leafy vegetables, legumes, and whole grains. Processed foods are typically very low in magnesium, yet the majority of Americans and Europeans get their magnesium through processed food intake.²
- Magnesium is important for blood sugar regulation. It has been estimated that low blood levels of magnesium are ten times more common among people with very poor blood sugar control than healthy individuals.²⁴
- Stretching is helpful for the treatment of exercise-associated muscle cramps. While stretching is often recommended as a prophylaxis for cramps, the research does not show a clear benefit.²⁵
- Staying well-hydrated is associated with a lower risk for exercise-associated muscle cramps, and sweating more heavily increases their likelihood. It's also possible that fatigue and poor conditioning (or increases in intensity) may present the highest risk for muscle cramps.²⁵
- Sleep plays a role in muscle function. This was demonstrated using sleep deprivation among healthy athletes, which found that muscle glycogen levels are decreased and performance is impaired without sufficient sleep.²⁶
- Magnesium appears to interact with other nutrients to influence muscle strength. For example, in a large population of older adults, low magnesium was not predictive of handgrip strength overall, but it was predictive among older individuals who also had low vitamin D levels. Indeed, individuals with low vitamin D and low magnesium levels had the greatest loss of handgrip strength.²⁷
- Muscle strength and performance (not muscle mass) are important predictors of bone health and fracture risk in both men and women.²⁸ High-intensity resistance exercise and high-impact training may be the most effective for improving bone health, but should be initiated under supervision.²⁹

PRACTITIONER CONTACT INFORMATION:

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