GENESTRA BRANDS®

Magnesium Glycinate Powder

Magnesium glycinate in a convenient powder

- Provides a gentle form of magnesium that is less likely to cause loose stools[1,2]
- Helps to maintain proper muscle function, including the heart muscle
- Supports nutrient and energy metabolism
- Aids in the development and maintenance of bones and teeth
- Offers 205 mg of magnesium per scoop

Magnesium is a cofactor in over 300 metabolic reactions. It is involved in the maintenance of muscle function, nutrient metabolism and muscle contraction, among several other important physiological roles.[3] Magnesium helps to maintain bone health by regulating the production of parathyroid hormone (PTH) and calcitriol, which helps to increase calcium absorption and minimize risk of calcium deficiency.[4,5] In Canada, insufficient magnesium intake is estimated to occur in more than one-third of adolescents and adults, with even higher levels of insufficient intake in elderly individuals.[6,7] Magnesium glycinate (also known as magnesium bisglycinate) is a highly water-soluble amino acid chelate of magnesium and two glycine molecules. Clinical evidence indicates that magnesium glycinate has a significantly higher bioavailability than magnesium oxide, and is less likely to cause a laxative effect.[1,2] Supplementation with magnesium glycinate has been shown to decrease the severity of muscle cramping.[2] In a clinical trial of 86 healthy pregnant women with recurrent muscle cramps, supplementation with 300 mg of magnesium glycinate for four weeks reduced both the frequency and intensity of leg cramps.[2]

EACH SCOOP (2.7 g) CONTAINS:

Magnesium (magnesium bisglycinate)	205 mg

Recommended Dose
Adults and Adolescents (9 years and older): Take 1 scoop daily or as recommended by your healthcare practitioner.

Product Size
164 g Powder

Product Code
04229

NPN 80089662

Non GMO · Gluten Free · Dairy Free · Vegan

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Scientific Rationale:

Magnesium is the fourth-most abundant mineral in the human body and a cofactor in over 300 metabolic reactions.[1] Nearly half of the body's magnesium is stored in the bones, where it helps promote the differentiation of bone-forming osteoblast cells.[2] In addition to supporting bone health, this mineral helps to maintain normal muscle function by regulating calcium homeostasis.[2] By mediating ion channels and calcium flow in the heart, magnesium is also involved in maintaining the function of the heart muscle.[2] Furthermore, magnesium aids in energy and nutrient metabolism, tissue formation, and the maintenance of normal electrolyte balance.

Despite its importance in supporting good health, many Canadian adults consume inadequate levels of magnesium. Specifically, more than one-third of those over the age of 19 reported intakes below the estimated average requirement, with inadequate intakes increasing to at least half of those over 71.[3] And adolescents have been reported to take in especially low amounts: Approximately 41% of boys and 66% of girls aged 14-18 have been found to consume inadequate levels of magnesium.[4] Contributing factors for low-dietary magnesium intake include mineral-deficient agricultural soil (magnesium levels in produce have decreased 20-30% in the last 60 years) and food processing (which reduces magnesium content by 80-90%).[2]

Magnesium supplements may be useful in increasing serum magnesium levels; however, the type of magnesium found in these products can have varying solubility and bioavailability properties. Compared to inorganic salts, organic salts and amino acid chelates are generally more soluble and have better bioavailability.[5,6] For example, clinical evidence indicates that magnesium bisgycinate has a significantly higher bioavailability than magnesium oxide, an inorganic form.[5,7] Magnesium bisglycinate is an amino acid chelate of magnesium and two molecules of glycine (a conditionally essential amino acid) that is freely soluble in water.[8,9] The addition of two glycine molecules may help to minimize the binding of dietary inhibitors of absorption and prevent oxidation reactions that would otherwise limit magnesium absorption.[9]

Certain magnesium forms may also impact bowel movements. After ingestion, magnesium oxide is metabolized in the stomach and intestinal tract, where it increases osmotic pressure and exerts a strong laxative effect.[10] While magnesium citrate (an organic form) has a higher bioavailability than magnesium oxide, it also acts as an osmotic laxative, which could limit patient compliance if intended for regular use.[6,11] Compared to magnesium oxide, supplementation with a single 100 mg dose of magnesium glycinate resulted in a significantly lower laxative effect.[5] Furthermore, another study reported that daily supplementation with 300 mg of magnesium glycinate for four weeks did not significantly increase diarrhea incidence when compared to placebo intake.[7]

Magnesium glycinate has also been researched for its ability to support muscle function in pregnant women. Magnesium intake may be especially important in this population, as pregnant women typically have lower serum magnesium levels and often experience leg cramps.[7] In one randomized, double-blind, placebo-controlled trial involving healthy pregnant women with recurrent muscle cramps, magnesium glycinate supplementation was shown to help maintain muscle function.[7] Participants consumed either a placebo or 300 mg of magnesium glycinate daily for four weeks.[7] When compared to baseline measurements, the frequency of leg cramps was reduced by half in 86% of participants, and approximately 70% of participants experienced a 50% reduction in leg cramp pain intensity.[7] Improvements in leg cramp frequency and intensity were also significantly greater in the magnesium glycinate group than the placebo group.[7] Therefore, magnesium glycinate supplementation may be a useful way to support muscle function in pregnant women.[7]

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