MAGNESIUM BISGLYCINATE

200 mg · Pure · Powder

NPN 80091128

RESEARCH INFORMATION

Feature summary

Natural Factors Magnesium Bisglycinate Pure provides 200 mg of this essential mineral to help support muscle function, including the heart muscle. This one-per-day magnesium powder is suitable for vegetarians and vegans, and is provided in the bisglycinate form that is easy on the stomach.

Magnesium is an essential nutrient needed as an enzyme cofactor in more than 300 metabolic reactions to help support healthy bones, teeth, muscles, and nerves. We also need magnesium to metabolize nutrients and produce the body's main form of energy, adenosine triphosphate (ATP).

Diets high in processed foods often lack magnesium, but depletion is possible even on a healthy diet. This is caused by decreased levels of magnesium in the soil, excess dietary calcium, and medications affecting the absorption and elimination of magnesium. In addition, low stomach acid compromises the absorption of common forms of magnesium. Fortunately, magnesium bisglycinate does not require stomach acid for absorption, is easy on the stomach, and does not cause diarrhea.

Magnesium Bisglycinate Pure is non-GMO, gluten-free, and comes in a convenient powdered format that can be mixed easily into water and other liquids. Just one serving per day can help restore magnesium levels to support muscle function and energy metabolism.

How it works

Magnesium is a cofactor in more than 300 metabolic reactions, including the generation and storage of adenosine triphosphate (ATP), the body's main form of energy. Magnesium is a cofactor of enzymes involved in lipid, protein, and nucleic acid synthesis, and it also stabilizes cell membranes, modulates calcium activity, and is a signal transducer.

Magnesium is required for the development of healthy bones and teeth, protein and fatty acid formation, activation of B vitamins, muscle activity support, nerve transmission and sleep, relaxation of blood vessels, blood clotting, temperature regulation, and intestinal mobility for regular bowel movements. Magnesium plays a role in the integrity of bone, supporting the function of osteoblasts (bone-building cells) and osteoclasts (bone-resorbing cells) (Jellin et al., 2019).

Magnesium also plays a role in insulin metabolism, and insulin is an important regulator of magnesium retention and excretion. As such, hypomagnesemia can cause insulin resistance and insulin resistance can cause low serum magnesium concentrations.

In addition, magnesium plays a role in regulating levels of sodium, potassium, and calcium in between cells, with effects on muscles, blood vessels, and cell membranes. Too little magnesium can affect glucose metabolism and is associated with elevated serum concentrations of inflammatory markers such as tumour necrosis factor-alpha (TNF-alpha) and C-reactive protein (CRP).

Low levels of magnesium may also affect blood vessel constriction, platelet aggregation, and neurotransmitter levels, all of which have been linked to the incidence of migraines.

Research

Magnesium is an important factor in muscle mass and repair, and maintaining an adequate daily intake is necessary for supporting proper muscle function. In a cross-sectional study, a higher daily magnesium intake was found to be associated with greater skeletal muscle mass and leg power. This link was also observed to be seven times more relevant than the association between protein intake and skeletal muscle mass (Welch et al., 2016).

In a double-blind, randomized, placebo-controlled trial, 86 healthy pregnant women at 14–34 weeks of gestation who had leg cramps at least twice per week were given either 300 mg of magnesium bisglycinate or a placebo. After four weeks, 86% of the women receiving magnesium had at least a 50% reduction in leg cramp frequency, compared to just 61% in the placebo group. Cramp intensity was also reduced by at least 50% in 70% of the women receiving magnesium, compared to 49% taking the placebo (Supakatisant & Phupong, 2015).

Magnesium also supports energy metabolism, with magnesium depletion adversely affecting stamina and performance. In one randomized, placebo-controlled trial, older women who received the equivalent of 300 mg of bioavailable magnesium per day had significant improvements in walking speed, chair stand exercises, and balance after 12 weeks (Veronese et al., 2014).

Around 60% of the body's total magnesium is stored in the bone, where it serves as a reservoir that can be drawn from, to help maintain magnesium levels in the blood and other tissues as needed (Castiglioni et al., 2013). When intake is low, magnesium stores in the bone become depleted. Chronic magnesium deficiency contributes to osteoporosis by affecting bone crystal formation, bone remodelling, parathyroid hormone, and vitamin D activity (Castiglioni et al., 2013; Shils, 1999). Calcium and vitamin D supplementation without magnesium have been shown to be ineffective in maintaining normal calcium status (Shils, 1999).

Magnesium also helps prevent low-grade inflammation that contributes to losses in bone calcium (Shils, 1999; Castiglioni et al., 2013). Research suggests that a low magnesium intake is associated with a 1.48–1.75 times higher risk of elevated CRP, a marker of systemic inflammation. In adults over 40 with a BMI of >25, consumption of less than 50% of the RDA for magnesium correlates with a 2.24 times higher risk of elevated CRP (Jellin et al., 2019). Furthermore, deficiencies in magnesium are associated with calcium deposits in the arteries and tissues, which can contribute to a higher risk of cardiovascular problems (Uwitonza & Razzaque, 2018).

Because many common forms of magnesium require stomach acid for absorption, magnesium levels can be compromised in older adults with low stomach acid, as well as in people using antacid medications (Rico et al., 2016). Magnesium bisglycinate does not require stomach acid for absorption, making it easy on the stomach.

According to Health Canada, magnesium intake is below the estimated average requirement (EAR) for more than half of adults aged 50 or older, more than 60% of adults 71 or older, and more than 34% of Canadians over the age of 19 (Health Canada, 2012). A standard western diet is relatively poor in micronutrients, including magnesium, and such a diet may also increase the body's need for many micronutrients (Castiglioni et al., 2013; Rosanoff et al., 2012).

Ingredients

Each serving (2.9 g) contains:

Magnesium (bisglycinate) ..... 200 mg

Dosage

Recommended adult dose: 1 serving (2.9 g) daily or as directed by a health care practitioner. Mix well in 250 mL of water until fully dissolved.

Cautions

Keep out of the reach of children.

References

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