VITAMINS & MINERALS

Magnesium (glycinate)

HIGHLY BIOAVAILABLE MAGNESIUM CHELATE FOR SENSITIVE INDIVIDUALS

Magnesium glycinate is a highly absorbable, well tolerated form of magnesium. Each capsule delivers 120 mg of magnesium chelated with (bound to) glycine. This structure ensures optimal bioavailability with minimal gastrointestinal discomfort.[1‡]

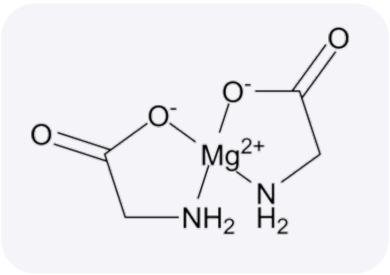
- Supports a calm, relaxed mood‡
- Promotes healthy cardiovascular, cognitive and neuromuscular function‡
- Helps with calcium metabolism and bone mineralization‡
- Supports the metabolism of carbohydrates, amino acids and fats for energy production‡
- Highest dose pure magnesium glycinate per capsule* among leading professional brands

WHO IS THIS SUPPLEMENT FOR?

- Patients who are sensitive to other forms of magnesium. Magnesium glycinate is highly absorbable and less likely to cause gastrointestinal side effects compared to other forms of magnesium, such as magnesium oxide or citrate.
- Patients with low intakes of magnesium-rich foods (leafy green vegetables, legumes, nuts and whole grains). Nearly half (48%) of Americans fail to meet the estimated average requirement for magnesium (255-350 mg). Elderly and adolescents tend to have lower magnesium intakes.
- Patients with cognitive, cardiovascular or neuromuscular health needs
- Individuals needing support for a relaxed mood
- Patients taking certain medications

MECHANISMS OF ACTION

Enzyme cofactor.



Magnesium plays a crucial role for over 300 enzymatic reactions. It serves as a cofactor in numerous biochemical pathways, including those involved in energy production, protein synthesis, and muscle and nerve function. Magnesium activates the enzymes necessary for numerous physiological functions, including neuromuscular contractions, cardiac function and the regulation of the acid-alkaline balance in the body.[2-5]

*Without other forms of magnesium added

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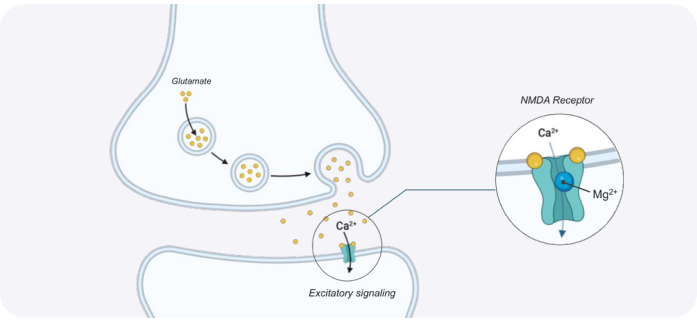

Magnesium binds to glutamate (NMDA) receptors, inhibiting the calcium influx that mediates excitatory neurotransmission.

Neurotransmission. Magnesium plays essential roles in neuronal communication (neurotransmission), supporting the function of GABA, which has calming and relaxing effects, while moderating the excitatory function of glutamate.[6-9] Accordingly, higher dietary magnesium intakes are associated with healthy responses to stress, positive mood and emotional well-being.[10-14]

Cardiovascular health. Magnesium supports endothelial function by maintaining cytokine balance, nitric oxide bioavailability and vascular smooth muscle relaxation.[15]

RESEARCH HIGHLIGHTS‡

Cardiovascular Health Support

- Adequate magnesium intake helps to maintain healthy blood pressure already within the normal range. In a meta-analysis of 34 trials involving 2028 participants, magnesium supplementation, at a median elemental daily dose of 368 mg for a median duration of 3 months, provided significant vascular relaxation support.[6]

Metabolic Health

- Magnesium plays an important role in maintaining healthy insulin sensitivity. Supplementation with 250 mg elemental magnesium for 3 months resulted in a significant decrease in HbA1C (8.32 to 7.96%, $p < 0.001$), insulin (15.56 to 12.18 µIU /mL, $p < 0.001$) and HOMA.IR (6.16 to 4.44, $p < 0.001$).17 Another study of 2,582 adults found that those with the highest magnesium intake had 37% lower risk of metabolic impairment during a seven year follow-up. Risk among subjects with the highest intake was 53% of those with the lowest intake.[18]

Mood & Relaxation

- In an open-label, randomized crossover trial of 126 adults, supplementation with 248 mg of elemental magnesium per day for 6 weeks resulted in a clinically significant net improvement in mood, assessed by PHQ-9 scores (improvement by -6.0 points (CI -7.9, -4.2; P<0.001) and anxiety scores (-3.9 points; CI -4.7, -3.1).[13]
- An analysis of 17 clinical trials (n = 896 participants total) also indicated that quercetin significantly decreased blood pressure. Supplementation for at least 8 weeks also resulted in favorable changes in lipid profile.[17]

	MEN	WOMEN
Recommended Dietary Allowance (RDA)	400-420 mg	310-320 mg
Estimated Average Requirement (EAR)	255-350 mg	

CHOOSE THE RIGHT MAGNESIUM FORM FOR YOUR PATIENTS

Patient	Best Form of Magnesium	Benefits‡	Pure Encapsulations offerings (delivery forms and elemental dose per serving)
Patients experiencing occasional constipation	Magnesium citrate	• Works as a mild osmotic laxative • High bioavailability, aids in digestion and absorption. Good for patients with digestive issues or needing quick absorption	Capsule (150 mg) Liquid (215 mg) Gummy (150 mg) Taste-free powder (250 mg)
Patients needing general magnesium repletion and/or muscle health support	Magnesium citrate-malate	• Same as magnesium citrate, but less laxative effect • Provides malate, a key intermediate in energy metabolism.	Capsule (120 mg)
Patients with sensitive GI tracts needing general magnesium repletion	Magnesium glycinate	• High bioavailability, but gentle on the digestive system • Ideal for relaxation and stress relief • Excellent tolerability makes it ideal for higher dose regimens	Capsule (120 mg) Liquid (165 mg/ 2 tsp)
Patients looking for cognitive and brain health support	Magnesium L-threonate	• Promotes cognitive function, learning ability and working memory‡	Capsule (72 mg)

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POTENTIAL INTERACTIONS

DRUG INTERACTIONS

Bisphosphonates. Magnesium supplements may reduce the intestinal absorption of alendronate (Fosamax) and possibly other orally administered bisphosphonates, when both are taken at the same time.[20]

Tetracycline antibiotics. Magnesium supplements may bind to tetracycline antibiotics, forming poorly absorbed, insoluble complexes that may diminish drug absorption.[21]

To check whether a medication may have clinically significant interactions with [nutrients and] ingredients based on doses commonly used in dietary supplements, visit our **Drug-Nutrient Interaction Checker**.

Drug-induced NUTRIENT DEPLETIONS

Proton pump inhibitors & H2 receptor antagonists. Long-term use of proton pump inhibitors (PPIs) may reduce plasma magnesium levels. The PDR advises practitioners to supplement with magnesium as needed.[22] This may also occur with other acid-reducing drugs, such as H2-receptor blockers (cimetidine, ranitidine and famotidine).

Thiazide diuretics. Thiazide diuretics increase urinary magnesium excretion. This may increase dietary magnesium requirements. A cross-sectional analysis of 9820 subjects, the use of thiazide diuretics was associated with lower serum magnesium concentrations.[23]

Metformin. Long-term use of metformin is associated with increased excretion of magnesium.[4]

Supplement Facts

1-4 capsules daily. Consume with food.

Each (size 00) vegetarian capsule contains:

Magnesium (as magnesium glycinate)	120 mg

Other ingredients: vegetarian capsule (cellulose, water), ascorbyl palmitate

Vitamins & Minerals

Magnesium (glycinate)	Quantity	Order Code
	360	MG3
	180	MG1
	90	MG9

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