Evolve Magnesium



Educate. Empower. Evolve.





Product Overview*

- Magnesium as Albion® Di-Magnesium Malate, Magnesium Citrate
 USP & Albion® Magnesium Bisglycinate Chelate
- · Magnesium in chelate form for enhanced absorption
- · Supports over 600 enzymatic reactions within the body
- · 100% Vegetarian
- · Excipient free formula
- · 3rd party potency tested

Product Summary*

Magnesium is an essential mineral, playing a key role in over 600 enzymatic reactions within the human body.¹ Despite the critical role that magnesium plays in human health, data obtained from the 2006-2008 National Health and Nutrition Examination Survey (NHANES) indicates that greater than 50-66% of the American population fails to meet the daily dietary requirement.² Additionally, even in instances of adequate dietary intake, one can develop a clinical or subclinical magnesium deficiency related to a medication induced nutrient depletion.³ These medications include but are not limited to: PPI's, bisphosphonates, diuretics, immunosupressants and beta adrenergic agonists.

For this reason, Evolve Wellness brings you Evolve Magnesium which, per capsule, contains 250mg of magnesium per serving. Evolve Magnesium contains three reacted forms of magnesium to support absorption while minimizing GI distress.

Target Market/Population*

A wide range of individuals may benefit from consumption of Evolve Magnesium including those taking magnesium depleting medications as well as those looking to support overall wellness.

Suggested Use

Evolve Wellness recommends consuming 2 capsules of Evolve Magnesium per day before bed or as recommended by a healthcare professional.

The Science

Cardiovascular Support*

Magnesium plays a key role in blood pressure regulation through its influential role in the production and release of nitric oxide; a key signaling molecule responsible for smooth muscle relaxation and dilation of blood vessels.⁴ Multiple studies suggest that magnesium supports healthy blood pressure levels as well as blood lipid levels in various populations.⁵⁻⁸

Insulin Support*

The body's ability to properly secrete and respond to insulin is reliant upon dietary magnesium.⁹ Within the pancreas, low intracellular magnesium levels appear to disrupt beta cell function, leading to increased insulin release even in the absence of carbohydrates. In a study conducted by Rosolova et al, it was found that fasting insulin levels were >2x higher in those with the lowest vs. highest plasma magnesium levels.¹⁰ Furthermore, research suggests that low intracellular magnesium

decreases insulin sensitivity at peripheral tissue as well as promotes production of various pro-inflammatory molecules.9

The use of magnesium to support a normal insulin response has been noted in a variety of populations.¹¹⁻¹³ One meta-analysis, which reviewed data from 21 different trials, found that magnesium supplementation ≥ 4 months appeared most beneficial in supporting insulin balance.13

Mood, Cognition and Brain Support*

Within the brain, magnesium is essential for synapse formation and maintenance, membrane phospholipid synthesis as well as regulation of serotoninergic, dopaminergic and cholinergic transmission.¹⁴ Low dietary magnesium intakes have been associated with decreased mood and cognitive function. 15-16

Additionally, in a 2016 randomized double blind study published in the journal Nutrition, it was found that supplementing with 500mg of magnesium per day improved mood in individuals with a magnesium deficiency.¹⁷ Similarly, Tarleton et al. found that 250 mg of supplemental magnesium was able to improve mood in 112 study participants in their 2017 open label trial.18

Sleep Support*

Magnesium plays a key role in assisting a healthy sleep cycle through multiple mechanisms which promote sleep. Within the brain, magnesium acts as an antagonist to excitatory NMDA receptors within the brain, which, when fully activated prevent one from both falling as well as maintaining a normal, healthy sleep cycle.¹⁹ When given to individuals experiencing insomnia, magnesium has been shown to improve one's sleep time, sleep efficiency, sleep onset latency and melatonin production.20

Chelated Magnesium*

Not all forms of magnesium are equal; when chelated with an organic acid, magnesium may be absorbed more efficiently.²¹⁻²³ For this reason Evolve Magnesium uses Albion® Di-Magnesium Malate, Magnesium Citrate USP & Albion® Magnesium Bisglycinate Chelate.

Albion® is a registered trademark of Balchem Corporation or its subsidiaries.

Supplement Facts

Serving Size: 2 Capsules **Servings Per Container: 90**

> %DV **Amount Per Serving**

Magnesium (as Albion® 250mg Di-Magnesium Malate, Magnesium Citrate USP, Albion® Magnesium

60%

Bisglycinate Chelate)

Other Ingredients: Rice Flour, Vegetable Capsule (HPMC)



References

- de Baaij JH, Hoenderop JG, Bindels RJ. Magnesium in man: implications for health and disease. Physiol Rev. 2015;95(1):1-46.
- Moshfegh, Alanna; Goldman, Joseph; Ahuja, Jaspreet; Rhodes, Donna; and LaComb, Randy. 2009 What We Eat in America, NHANES 2005-2006: Usual Nutrient Intakes from Food and Water Compared to 1997 Dietary Reference Intakes for Vitamin D, Calcium, Phosphorus, And Magnesium. US Department of Agriculture, Agricultural Research Service.
- Gröber U, Schmidt J, Kisters K. Magnesium in Prevention and Therapy. Nutrients. 2015;7(9):8199-8226. Published 2015 Sep 23
- Cunha AR, Umbelino B, Correia ML, Neves MF. Magnesium and vascular changes in hypertension. Int J Hypertens. 2012;2012:754250.
- Hatzistavri LS, Sarafidis PA, Georgianos PI, et al. Oral magnesium supplementation reduces ambulatory blood pressure in patients with mild hypertension. Am J Hypertens. 2009;22(10):1070- 1075.
- Dibaba DT, Xun P, Song Y, Rosanoff A, Shechter M, He K. The
 effect of magnesium supplementation on blood pressure in
 individuals with insulin resistance, prediabetes, or
 noncommunicable chronic diseases: a meta-analysis of
 randomized controlled trials. Am J Clin Nutr.
 2017;106(3):921-929.
- Rodríguez-Morán M, Simental-Mendía LE, Gamboa-Gómez Cl, Guerrero-Romero F. Oral Magnesium Supplementation and Metabolic Syndrome: A Randomized Double-Blind Placebo-Controlled Clinical Trial. Adv Chronic Kidney Dis. 2018;25(3):261-266.
- 8. Asbaghi O, Moradi S, Nezamoleslami S, Moosavian SP, Hojjati Kermani MA, Lazaridi AV, Miraghajani M. The Effects of Magnesium Supplementation on Lipid Profile Among Type 2 Diabetes Patients: a Systematic Review and Meta-analysis of Randomized Controlled Trials. Biol Trace Elem Res. 2020 May 28.
- Kostov K. Effects of Magnesium Deficiency on Mechanisms of Insulin Resistance in Type 2 Diabetes: Focusing on the Processes of Insulin Secretion and Signaling. Int J Mol Sci. 2019 Mar 18;20(6):1351.
- Rosolova, H.; Mayer, O., Jr.; Reaven, G.M. Insulin-mediated glucose disposal is decreased in normal subjects with relatively low plasma magnesium concentrations. Metabolism 2000, 49, 418–420.
- Rodríguez-Morán M, Guerrero-Romero F. Oral magnesium supplementation improves insulin sensitivity and metabolic control in type 2 diabetic subjects: a randomized double-blind controlled trial. Diabetes Care. 2003;26(4):1147-1152.
- Rodríguez-Moran M, Guerrero-Romero F. Oral magnesium supplementation improves the metabolic profile of metabolically obese, normal-weight individuals: a randomized double-blind placebo-controlled trial. Arch Med Res. 2014;45(5):388-393.

- 13. Simental-Mendía LE, Sahebkar A, Rodríguez-Morán M, Guerrero-Romero F. A systematic review and meta-analysis of randomized controlled trials on the effects of magnesium supplementation on insulin sensitivity and glucose control. Pharmacol Res. 2016;111:272-282.
- 14. Botturi A, Ciappolino V, Delvecchio G, Boscutti A, Viscardi B, Brambilla P. The Role and the Effect of Magnesium in Mental Disorders: A Systematic Review. Nutrients. 2020 Jun 3;12(6):1661.
- 15. Li B, Lv J, Wang W, Zhang D. Dietary magnesium and calcium intake and risk of depression in the general population: A meta-analysis. Aust N Z J Psychiatry. 2017 Mar;51(3):219-229.
- 16. Lo K, Liu Q, Madsen T, Rapp S, Chen JC, Neuhouser M, Shadyab A, Pal L, Lin X, Shumaker S, Manson J, Feng YQ, Liu S. Relations of magnesium intake to cognitive impairment and dementia among participants in the Women's Health Initiative Memory Study: a prospective cohort study. BMJ Open. 2019 Nov 3;9(11):e030052.
- 17. Rajizadeh A, Mozaffari-Khosravi H, Yassini-Ardakani M, Dehghani A. Effect of magnesium supplementation on depression status in depressed patients with magnesium deficiency: A randomized, double-blind, placebo-controlled trial. Nutrition. 2017;35:56-60.
- 18. Tarleton EK, Littenberg B, MacLean CD, Kennedy AG, Daley C. Role of magnesium supplementation in the treatment of depression: A randomized clinical trial. PLoS One. 2017;12(6):e0180067. Published 2017 Jun 27.
- 19. Johnson JW, Ascher P. Voltage-dependent block by intracellular Mg2+ of N-methyl-D-aspartate- activated channels. Biophys J. 1990 May;57(5):1085-90.
- 20. Abbasi B, Kimiagar M, Sadeghniiat K, Shirazi MM, Hedayati M, Rashidkhani B. The effect of magnesium supplementation on primary insomnia in elderly: A double-blind placebo-controlled clinical trial. J Res Med Sci. 2012 Dec;17(12):1161-9.
- 21. Schuette SA, Lashner BA, Janghorbani M. Bioavailabilty of magnesium diglycinate vs magnesium oxide in patients with ileal resection. JPEN J Parenter Enteral Nutr. 1994 Sep-Oct;18(5):430-5.
- 22. Werner T, Kolisek M, Vormann J, Pilchova I, Grendar M, Struharnanska E, Cibulka M. Assessment of bioavailability of Mg from Mg citrate and Mg oxide by measuring urinary excretion in Mg-saturated subjects. Magnes Res. 2019 Aug 1;32(3):63-71. doi: 10.1684/mrh.2019.0457.
- 23. Walker AF, Marakis G, Christie S, Byng M. Mg citrate found more bioavailable than other Mg preparations in a randomised, double-blind study. Magnes Res. 2003 Sep;16(3):183-91.