

ACTIVATED MAGNESIUM + POTASSIUM

CLINICAL APPLICATIONS

- Provides Highly-Absorbed Magnesium and Potassium for a Variety of Protocols
- Supports Cardiovascular Health
- Helps Maintain Healthy Blood Pressure and Glucose Levels Already Within the tNormal Range
- Promotes Energy Production and Muscle Relaxation

This product provides 170 mg of magnesium and 85 mg of potassium per serving, both ideally formulated using amino acid chelate forms, including Albion® magnesium glycinate chelate buffered and potassium glycinate complex for enhanced absorption, optimal utilization and gastrointestinal (GI) comfort. Some individuals, who take other forms of magnesium-potassium supplements, may experience GI side effects, including gas, bloating, diarrhea, constipation or a combination of these symptoms. Supplementing the right form of these minerals can be key to maintaining GI comfort while achieving healthy levels of these important minerals in the body.

Overview

There are two important minerals integral to heart health: magnesium and potassium. Nerve cells use these minerals to fire off messages that keep the heart pumping and muscles contracting.¹ Maintaining magnesium and potassium balance is the key to sustaining healthy cardiovascular function. Potassium and magnesium deficiencies often coexist, so supplementation with extra potassium alone, does not always correct a potassium deficiency. Studies have shown that supplementation with magnesium can assist in regaining potassium balance. Potassium and magnesium are minerals required in tandem for proper functioning of the cells and organs in the body.

Bioavailability – The Mineral Chelate Difference[†]

The importance of bioavailability is obvious. If consuming a mineral supplement has little effect on improving the body's mineral balance, there is no reason to ingest it. Signs of inferior mineral supplements include the use of cheap,

poorly absorbed, rock-salt minerals like calcium carbonate and magnesium oxide (See Figure 1). These mineral forms slow and limit absorption, relying on adequate stomach acid to release magnesium ions which then enter the body via passive diffusion. And, because they tend to remain in the intestines longer, these forms of mineral supplements can cause intestinal distress such as constipation (calcium carbonate) or diarrhea (magnesium oxide).

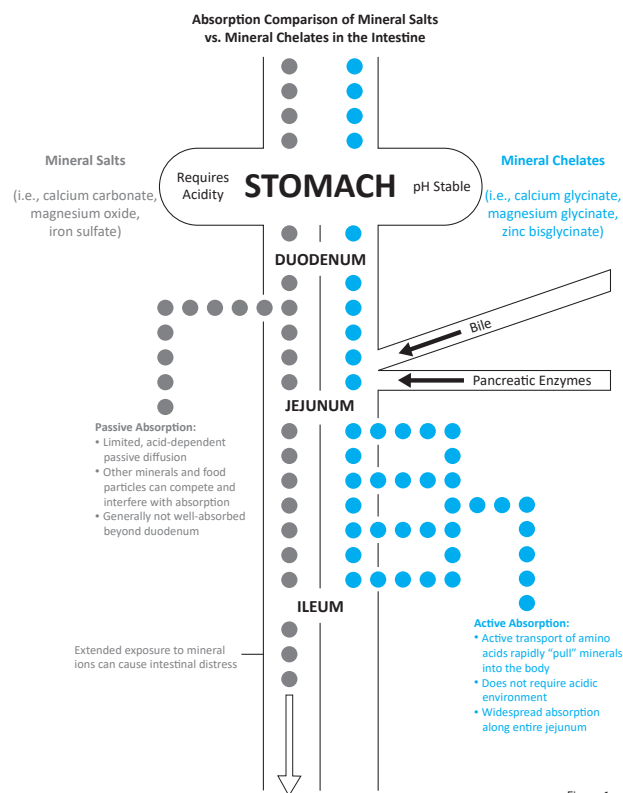
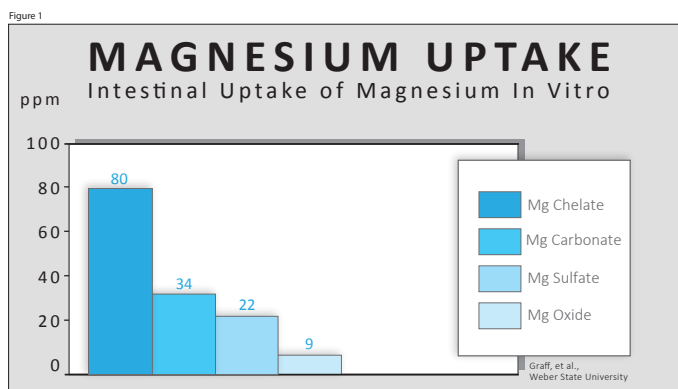


Figure 1

Reacted Magnesium and Potassium provides the additional benefit of highly-absorbed, Albion® mineral chelates. Albion® is the world leader in manufacturing highly bioavailable mineral chelates, a specialized form of minerals bound to amino acids. This patented process creates organic mineral compounds which use active absorption mechanisms in the gastrointestinal tract to greatly enhance mineral absorption. In a magnesium comparison study reported by Graff et al. at Weber State University, Albion®'s magnesium amino acid chelate had (See Figure 1)²:

- 8.8 times greater absorption than magnesium oxide
- 5.6 times greater absorption than magnesium sulfate
- 2.3 times greater absorption than magnesium carbonate



In addition, other comparison studies have shown significantly superior absorption of magnesium chelates compared to other mineral forms:

- At a dose of 400 mg, magnesium chelate significantly reduced or eliminated menstrual abdominal discomfort.^[3]
- Multiple double blind studies found urinary excretion of magnesium chloride higher than magnesium glycinate, proving superior absorption.^[4-6]
- Magnesium glycinate is shown to have a reduced laxative effect when compared to other forms of magnesium.^[7]

Mineral chelates are gentle, "gut-friendly" minerals that do not cause diarrhea that often accompanies magnesium oxide and other rock-salt forms. Albion®'s mineral chelates have extensive clinical research proving their superior bioavailability, biologic activity, stability, and improved tolerance.

Magnesium†

Magnesium is an abundant mineral in the body that is found naturally in many foods, like green leafy vegetables. It is also found in over-the-counter medications, such as laxatives. The average American intake of magnesium, according to the National Health and Nutrition Examination Survey (NHANES Study) is critically low: Many Americans fail to consume the

estimated average requirement (EAR) established by the Institute of Medicine.⁸ In addition, more than 57 % of the population does not meet the United States Department of Agriculture requirements for magnesium in their diet. Intracellular magnesium levels are decreased by excessive intake of alcohol, salt, coffee, phosphoric acid found in sodas, diets high in calcium, and high stress levels.⁹ Because of the widespread nature of magnesium deficiencies, adequate daily intake of magnesium is critical for proper hydration, stress response, muscle relaxation, promoting healthy blood pressure levels, optimal bone mineral density, and blood sugar regulation.^{10,11}

Directions

1-2 capsules three times per day or as recommended by your health care professional.

Does Not Contain

Gluten, yeast, artificial colors or flavors.

Cautions

If you are pregnant or nursing, consult your physician before taking this product.

Supplement Facts ^{V2}		
Serving Size 2 Capsules		
Servings Per Container 30		
	Amount Per Serving	% Daily Value
Magnesium (as DiMagnesium Malate, 170 mg Albion® Minerals Magnesium Lysinate Glycinate Chelate)	170 mg	40%
Potassium (as Potassium Glycinate Complex)	85 mg	2%

References

1. Manz M, Susilo R. Therapy of cardiac arrhythmias. Clinical significance of potassium- and magnesium aspartate in arrhythmias. *Fortschr Med Orig*. 2002;120(1):11-5.
2. Graff et al. Magnesium: wide spread benefits. *Albion Research Notes* 1992; 1(2):1.
3. Abraham GE, Primary dysmenorrhea, *Clin Ob Gyn*, 21:139-145, 1978.
4. Abrams SA, et al., Advances in Magnesium Research Nutrition and Health, *Op Cit*, 109-114, 2001.
5. Schuette SA, Lashner BA, Janghorbani IY. Bioavailability of Magnesium diglycinate vs. magnesium oxide in patients with ileal resection. *J Parent Ent Nutr*, 18:430-435, 1994.
6. Roussouw J, Brummelen R. The bioavailability of four magnesium preparations. Publication pending.
7. Institute of Medicine (IOM). Food and Nutrition Board. Dietary Reference Intakes: Calcium, Phosphorus, Magnesium, Vitamin D and Fluoride. Washington, DC: National Academy Press, 1997.
8. Moshfegh A, Goldman J, Ahuja J, Rhodes D, LaComb R. 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. U.S. Department of Agriculture, Agricultural Research Service.
9. Johnson S. The multifaceted and widespread pathology of magnesium deficiency. *Med Hypotheses* 2001; 56(2): 163-70.
10. Ryder KM, Shorr RI, Bush AJ, Kritchevsky SB, Harris T, Stone K, Cauley J, Tylavsky FA. Magnesium intake from food and supplements is associated with bone mineral density in healthy older white subjects. *J AM Geriatr Soc* 2005; 53(11):1875-80.
11. Gobbo LCD, Imamura F, Wu JH, Otto MCO, Chiuve SE, Mozaffarian D. Circulating and dietary magnesium and risk of cardiovascular disease: a systematic review and meta-analysis of prospective studies. *Am J Clin Nutr* 2013; published online May 29, 2013.
Institute of Medicine (IOM). Food and Nutrition Board. Dietary Reference Intakes: Calcium, Phosphorus, Magnesium, Vitamin D and Fluoride. Washington, DC: National Academy Press, 1997.
12. Rude RK. Magnesium. In: Coates PM, Betz JM, Blackman MR, Cragg GM, Levine M, Moss J, White JD, eds. *Encyclopedia of Dietary Supplements*. 2nd ed. New York, NY: Informa Healthcare; 2010:527-37.
13. Rude RK. Magnesium. In: Ross AC, Caballero B, Cousins RJ, Tucker KL, Ziegler TR, eds. *Modern Nutrition in Health and Disease*. 11th ed. Baltimore, Mass: Lippincott Williams & Wilkins; 2012:159-75.
14. Weaver CM. Potassium and health. *Adv Nutr*. 2013 May 1;4(3):368S-77S.