

MAGNESIUM

WITH 75% OF AMERICANS DEFICIENT, IT'S NO WONDER WE ARE SO STRESSED



Magnesium is crucial for health, yet most of us don't get enough from our diets. In fact, it is estimated that three-fourths of Americans do not get sufficient quantities of magnesium to function optimally on a day-to-day basis.

The importance of magnesium cannot be overstated: magnesium is a vital catalyst for enzyme activity, affecting over 300 enzymatic reactions in the body including supporting cardiovascular health, bone building, muscle relaxation, protein synthesis, energy generation and brain neurotransmitter activities that regulate moods and sleep. Because magnesium is required for muscle relaxation, its deficiency is a leading cause of the widespread stress that plagues America and the West.

Throughout the world, researchers have confirmed the human need for magnesium. Renowned

Swedish researcher P.O. Wester, in the *American Journal of Clinical Nutrition* (1987;45:1305-12) wrote, "The fact that magnesium is indispensable to the metabolism of ATP means that it is essential in a great many metabolic processes such as glucose utilization; synthesis of fat, protein, and nucleid acids; muscle contraction; and some membrane transport systems." It is so fundamental to health that eminent nutritionist and biochemist James South stated that even though magnesium is basic and inexpensive, due to its widespread deficiency and critical importance to human health, it is possibly the most important nutritional supplement one can take.

Whether you are primarily interested in energy, heart health, brain health or just overall good health, Source Naturals offers a wide array of magnesium products for your optimal well-being. Join us to learn more about this mineral and how it benefits your health.



Strategies for Wellness SM

WHY ARE WE MAGNESIUM DEPLETED?

Many Americans exhaust the natural magnesium they obtain from their diets with such substances as caffeine, alcohol and soft drinks—all notorious for their depletion of dietary magnesium.

Physical or emotional stress also decreases this important mineral. Our stressful reactions to our environment use up the magnesium stores. Our dietary choices as a society—choosing junk food over green, magnesium-rich vegetables, for example—also contribute to this deficiency. In fact, lack of greens in the diet is a very strong indication of magnesium deficiency because magnesium is at the center of the chlorophyll molecule that gives the green color to vegetables, herbs, and other plants. Dietary imbalances such as high intakes of fat or calcium can intensify magnesium inadequacy, especially under conditions of stress. These various diet and lifestyle choices leach away or diminish the mineral, so we lose its availability for the body's needs.

Sometimes the causes of magnesium deficiency are beyond our control: many believe that our foods contain less magnesium than they should because commercial fertilizers do not replace the magnesium that has been depleted from the soil. The food preparation practices of many people can contribute to magnesium deficiency. And many people, as they age, have decreased abilities to absorb magnesium regardless of their diet or lifestyle. The result of all of these factors is a huge segment of society that is nutritionally starved for magnesium's benefits.

LIFE-ENHANCING MINERAL

The breadth of magnesium's applications is amazing. It's in the soil we walk on and grow our food in, and it is used in everything from jet aircraft and high-tech metal alloys to medicines and pyrotechnic displays. But that wide range of uses is

nothing compared to the vast array of magnesium's functions in the body.

Magnesium is a vital catalyst for **enzyme activity**, affecting over 300 enzymatic reactions in the body. These reactions impact nearly every system of the body, including cardiovascular function, mobility, digestion, brain function, and energy.

Magnesium supports **cardiovascular health**—it is a fundamental part of maintaining regular heartbeat and consistent blood pressure. It is a key biochemical part of **protein synthesis**. It is involved in enzyme-controlled reactions such as the **Krebs cycle, carbohydrate and mineral metabolism, energy storage, and DNA metabolism**.

Inflammation, the body's response to attack, is balanced with magnesium, allowing the body to respond appropriately.

Magnesium helps the body to maintain its **pH balance**, which is slightly alkaline, thereby helping the healthy function of all of the body's cells.

Magnesium is important for relaxation, particularly **muscle relaxation**. Our ability to handle our stressful lives can be helped by sufficient quantities of magnesium.

Magnesium helps in the **formation of bone** by regulating calcium delivery throughout the body.

Magnesium is, simply put, fundamental to human health.

In fact, of the twelve SystemiCare™ systems, those bodily systems most important for vibrant health, magnesium positively supports an astounding ten: Energy, Cells/DNA, Inflammation Response, Sugar Regulation, Metabolism/Hormones, Circulation, Cognition/Nerves, Immunity, Structure/Connective Tissue.

Although magnesium is found in many foods, such as dairy products, fish, meat, seafood, apples, apricots, avocados, bananas, and blackstrap molasses, because of lifestyle and environmental factors, many of us are deficient in this mineral. Because of unsustainable farming practices and unnatural fertilization, much soil is depleted, so many foods lack the magnesium they once had.

WHICH FORM OF MAGNESIUM IS BEST?

Source Naturals offers an entire line of magnesium products to fit your needs.

ULTRA MAG™

High-Efficiency Magnesium Complex Maintains Muscle and Nerve Function

ULTRA MAG is a complex blend of magnesium citrate, taurinate, malate, glycinate and succinate, supplying 100 percent of the body's daily magnesium needs, combined with vitamin B-6. **ULTRA MAG** provides all of the benefits of the various forms of magnesium—producing and storing energy (ATP), allowing muscles to relax, regulating the heartbeat, and activating over 300 key metabolic enzyme reactions. The addition of vitamin B-6 makes this form of magnesium a highly efficient means of supporting cardiovascular health. During protein digestion, amino acids, including methionine, are released. Homocysteine is an intermediate in the metabolism of methionine. Even moderately elevated levels of homocysteine in the blood have been associated with heart function issues, and there are two pathways to clear homocysteine from the blood. One pathway converts homocysteine to the amino acid cysteine and requires two vitamin B6-dependent enzymes. Adequate B-6 and magnesium levels, therefore, are an important tool for heart health.

MAGNESIUM SERENE™

Magnesium to Support Calmness and Total Body Health

While many are familiar with its roles in heart health, bone strength, and a healthy immune system, fewer people are aware of its role in muscle relaxation and nervous system balance. During times of stress, magnesium stores in the body are depleted. Supplementation with **MAGNESIUM SERENE** calms the muscles and nerves. This good-tasting, powdered drink mix supports relaxation and at the same time, replenishes this important mineral to the body for all of its benefits: for heart, nerves, bones, immune system, and over 300 enzymatic processes.

MAGNESIUM MALATE

Metabolic Energy and Metal Cleansing

MAGNESIUM MALATE combines all of the benefits of magnesium with malic acid, a natural fruit acid. This compound is most highly esteemed for two reasons: helping the body to eliminate aluminum and produce energy. Malic acid crosses the blood-brain barrier and binds to aluminum. It draws aluminum away from the tubulin enzyme so magnesium can plug into the receptor sites instead, supporting nerve cell growth and communication. The harmful aluminum can now be flushed out of the brain and the body. Malic acid is a metabolite in the Krebs cycle, the biochemical reactions that produce 90 percent of the energy in the cells of the body.

MAGACTIVE™

Liquid Ion Magnesium and Trace Minerals

Magnesium supports the heart, bones, and muscles, and plays a part in energy generation and in the immune, endocrine and nervous systems. Source Naturals **MAGACTIVE** is a purified liquid concentrate of activated ionic magnesium, in a broad spectrum of many other essential and trace minerals. **MAGACTIVE** is

naturally derived from the Great Salt Lake and has had 99% of the sodium removed.

MAGNESIUM CITRATE

High Bioavailability

In numerous studies, magnesium citrate is found to be better absorbed than inorganic magnesium compounds such as magnesium carbonate or magnesium oxide. Urine, blood and saliva tests have shown that humans absorb more magnesium with this form, and therefore more magnesium is available for the body's needs. Optimal intake of magnesium is essential for cardiovascular health and the function of all muscles, for the maintenance of bone and connective tissue, and to promote healthy sugar regulation, such as in glucose metabolism.

MAGNESIUM BIS-GLYCINATE

Superior Bioavailable Chelate

The amino acid glycine is attached ("chelated") to the mineral magnesium, giving your body greater benefits. The pairing with the two glycines speeds the magnesium across the intestinal wall as part of digestion, and the addition of glycine gives additional support to body function. Along with the benefits to the heart, muscle, bones, and metabolism, **MAGNESIUM BIS-GLYCINATE** has been shown to have importance in maintaining the body's healthy inflammation response. Glycine acts on the macrophages (white blood cells) that are involved in the body's defense mechanisms. Magnesium and

glycine keep inflammatory signaling systems—called transcription factors—running smoothly

MAGNESIUM FOR OPTIMAL WELLNESS

Along with the six products discussed above, you may want to look into other Source Naturals products that contain potent amounts of magnesium.

CALCIUM & MAGNESIUM, CORAL CALCIUM & MAGNESIUM, LIFE FORCE™ MULTIPLE, MAGNESIUM (amino acid chelate), **MAGNESIUM ASCORBATE, LIQUID CALCIUM WITH MAGNESIUM, K-MAG KG™** (magnesium and potassium), **K-MAG™ ASPARTATE, AND K-MAG C™**.

Our understanding of the importance of magnesium grows as we learn more about cellular function. Whether you are interested in keeping your bones strong or your heart pumping at peak function, whether you are interested in cleansing your body of aluminum, decreasing stress or increasing energy, the fundamental element magnesium is a wise choice.

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