

News You Can Use

Magnesium

Magnesium should be one of the most plentiful minerals in the soft tissue. In a healthy normal body it is found in high concentrations inside cells namely those of the brain and heart. The average adult body would contain around 20-28 g of magnesium with about 60 percent present in the bones. The rest is in the muscle, soft tissue and body fluids.

Symptoms of Magnesium Deficiency

Some of the symptoms of magnesium deficiency are outlined beautifully in a recent article by Dr. Sidney Baker. Magnesium deficiency can affect virtually every organ system of the body. With regard to skeletal muscle, one may experience twitches, cramps, muscle tension, muscle soreness, including back aches, neck pain, tension headaches and jaw joint (or TMJ) dysfunction. Also, one may experience chest tightness or a peculiar sensation that he can't take a deep breath. Sometimes a person may sigh a lot.



Symptoms involving impaired contraction of smooth muscles include constipation; urinary spasms; menstrual cramps; difficulty swallowing or a lump in the throat- especially provoked by eating sugar; photophobia, especially difficulty adjusting to oncoming bright headlights in the absence of eye disease; and loud noise sensitivity from stapedius muscle tension in the ear.

Continuing with the symptoms of magnesium deficiency, the central nervous system is markedly affected. Symptoms include insomnia, anxiety, hyperactivity and restlessness with constant movement, panic attacks, agoraphobia, and premenstrual irritability. Magnesium deficiency symptoms involving the peripheral nervous system include numbness, tingling, and other abnormal sensations, such as zips, zaps and vibratory sensations.

People with magnesium deficiency often seem to be "uptight." Other general symptoms include a salt craving, both carbohydrate craving and carbohydrate intolerance, especially of chocolate, and breast tenderness.

Causes of Magnesium Deficiency

Magnesium deficiency can be caused by increased amounts of fluoride, chlorine and calcium; depleted soil and magnesium deficient produce; poor diets especially ingestion of processed foods; stress; insufficient stomach acid; reduced level of transport proteins; low water consumption; diseased intestines for instance *Candida albicans* overgrowth; increased phosphorus in diet sodas or increased potassium or sodium; supplemental iron, which can impede magnesium absorption; high consumption of tea, spinach, soy powders, soy milk, and chard, which have ingredients that interfere with magnesium absorption, many different medications, and insufficient vitamin D, which is necessary for the body's utilization of magnesium. Rarely, people have conditions of magnesium wasting where too much of this mineral is lost through the kidneys.



Dietary surveys suggest that many Americans do not get recommended amounts of magnesium. There is concern that many people may not have enough body stores of magnesium because dietary intake may not be high enough. Having enough body stores of magnesium may be protective against disorders such as cardiovascular disease and immune dysfunction.

Magnesium is needed for more than 300 biochemical reactions in the body. It helps maintain normal muscle and nerve function, keeps heart rhythm steady, supports a healthy immune system, and keeps bones strong. Magnesium also helps regulate blood sugar levels, promotes normal blood pressure, and it is known to be involved in energy metabolism and protein synthesis. There is an increased interest in the role of magnesium in preventing and managing disorders such as hypertension, cardiovascular disease, and diabetes.

- At the molecular level, a healthy magnesium concentration is a natural antioxidant protecting molecules from free-radical damage.
- At the enzyme level there is enough magnesium for all energy reactions and enzymes that need magnesium to enable them to function well.
- At the cellular level, a normal electrolyte balance is maintained. Calcium, sodium, potassium and magnesium concentrations shift and adjust as needed. There is no abnormal calcification, hyperexcitability or tendency to overreact to adrenaline.
- At the tissue level, blood flows freely, without an abnormal tendency to clot,

and heart and blood vessel muscle tissue can relax and contract in proper response to healthy nerve and hormonal signals. When danger comes, the fight-or-flight reaction works and then subsides as necessary.

- At the organ level, proper magnesium levels allow the heart to pump out blood efficiently, prevent high blood pressure and a hardening of the arteries or arteriosclerosis.
- At the organ-system level, the heart pumps continuously, without palpitations or arrhythmia, efficiently sending blood into flexible arteries that open and close in direct response to the body's immediate needs, delivering necessary oxygen and nutrients to all of the body's cells, especially those of the heart.

The observed associations between magnesium metabolism, diabetes, and high blood pressure increase the likelihood that magnesium metabolism may influence cardiovascular disease.

Some observational surveys have associated higher blood levels of magnesium with lower risk of coronary heart disease. In addition, some dietary surveys have suggested that a higher magnesium intake may reduce the risk of having a stroke. There is also evidence that low body stores of magnesium increase the risk of abnormal heart rhythms, which may increase the risk of complications after a heart attack. These studies suggest that consuming recommended amounts of magnesium may be beneficial to the cardiovascular system. They have also prompted interest in clinical trials to determine the effect of magnesium supplements on cardiovascular disease.

Bone health is supported by many factors most notably calcium and vitamin D. However, some evidence suggests that magnesium deficiency may be an additional risk factor for postmenopausal osteoporosis. This may be due to the fact that magnesium deficiency alters calcium metabolism and the hormones that regulate calcium. Several human studies have suggested that magnesium supplementation may improve bone mineral density.

Older adults are at increased risk for magnesium deficiency. The 1999-2000 and 1998-94 National Health and Nutrition Examination Surveys suggest that older adults have lower dietary intakes of magnesium than do younger adults. This combination of factors places older adults at risk for magnesium deficiency. It is very important for older adults to get recommended amounts of dietary magnesium.

Magnesium is an important therapy for patients with fibromyalgia and chronic fatigue syndrome. In both of these conditions, magnesium deficiency is common. Magnesium supplements reduce fatigue, muscle pain, chemical sensitivity, and sleep disturbances in these conditions.



Nature's Sunshine has several different formulas that feature magnesium.

Yours in Good Health!

Sincerely,

Chris Ritchason
Dr. Jack & Verlyn Ritchason, Founders
The Back to Herbs Team

References

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