Magnesium, the Stress Mineral
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Magnesium is essential in over 300 enzyme reactions in the body; it is involved in almost every bodily function. Magnesium is required in more than fifty biochemical processes, and is the number one stress mineral affecting all 657 muscles in the body. Over the past several years the focus has been on calcium for the prevention and treatment of osteoporosis, to lower blood pressure and to keep muscles in the body operating properly. Few people, if any, know that magnesium is needed for the same reason plus many more.

In the process of trying to get sufficient amounts of calcium, most everyone pays little attention to their intake of magnesium. Like calcium, magnesium also helps assure that you have strong bones and teeth, lower blood pressure and maintains muscle health. While calcium is needed for muscle contraction, magnesium is required for muscle relaxation.

According to Sherry Rogers, M.D., an expert in the field of environmental medicine and magnesium research, many people have spastic conditions that are clearly caused by a deficiency of magnesium. Dr. Rogers' research has shown the following conditions are due to a magnesium deficiency: asthma, migraines, colitis, angina, chronic back and neck pain, muscle spasms, arrhythmias, vasculitis, PMS, hypertension, eye and muscle twitches, kidney stones, stiffness, cystitis, tremors, seizures, Raynaud's disease, infertility and nystagmus. Other physical conditions that are directly linked to magnesium deficiency are fatigue, vertigo (dizziness), psychosis, confusion, eclampsia, diabetes, constipation, phlebitis, exhaustion, TIA's (transient spasms of the arteries in the head), refractoriness to potassium therapy and insulin. My research with patients presenting with symptoms of anxiety, depression, panic, fear and phobias all showed a marked improvement after adding Mag Link to their daily regime. Mag Link is a form of magnesium chloride, the same type of magnesium that naturally occurs in the body cells. Magnesium helps relieve the symptoms of chronic fatigue syndrome (CFS). Studies show that red-blood-cell magnesium levels measure considerably lower in CFS patients.

In her book Tired or Toxic, Dr. Rogers describes patients with chronic back and neck pain, constant muscle spasms, and trigger points as being very magnesium deficient. Magnesium deficiency leads to neuromuscular malfunctions such as tremors, convulsions, high excitability, behavior disorders, neuromuscular pain, and depression. Magnesium acts as an excellent muscle relaxant. The stress of pain lowers serum magnesium. The extent of depletion is greater thereby increasing the pain level.

Many professional athletes complain of recurrent back spasms that keep them out of competition for several days at a time; this is an indication of magnesium deficiency. Everyone in sports should be taking adequate magnesium daily. Mildred Seelig, M.D. author of The Magnesium Factor and magnesium specialist, recommends athletes in sports and training take at least 6-10 mg/kg/day or 2.7-4.5 mg/lb/day of magnesium to replace the losses from sweating, competition stress and exertion. In many cases athletes who become totally depleted had to be given an I.V. to bring up their level. Men, 200-220 lbs. should take 600-1,000mg daily and women, 140-160 lbs. should take 400-680 mg daily. If the pain is intense and chronic, an I.V. of magnesium can bring up the level of magnesium, then follow-up with daily oral doses of Mag Link to keep the magnesium level up.

Science News in 1988 reported the average American diet provides less than half or 40% of the magnesium that a person requires in a day. Sweating accelerates magnesium loss and magnesium deficiency can cause sudden cardiac arrest. It is probable that magnesium deficiency contributed to the sudden deaths of runner, Jim Fixx, Boston Celtics, Reggie Lewis, and Hank Gathers. Sherry Rogers, M.D. in her Health Letter, May-June, 1995, states having a normal magnesium level vastly increases your chances of surviving a heart attack. In one study of 22 patients admitted with cardiac arrest, serum magnesium was drawn immediately. When the data was analyzed later, they found the patients that entered with low magnesium levels were unable to be resuscitated—100% died. But of those who entered with a normal serum magnesium 60% were successfully resuscitated and lived. Genetic differences in magnesium utilization may account for differences in your body's response to stress, anxiety, depression, trauma, or injury. Research documents your heart cannot function efficiently without the...
needed amount of magnesium. Sports, stress, and work tax the heart. If the muscle is lacking magnesium, it does not relax between contractions and recover normally to a regular beat.

Many patients who complain of PVC's (premature ventricular contractions), a condition that causes a great deal of anxiety, have low levels of magnesium. Increasing magnesium intake often stops PVC's. Is magnesium important? Your life could depend on it!

Conditions associated with magnesium deficiency include: gastrointestinal disorders such as mal absorption syndromes due to bowel resection, prolonged diarrhea, alcoholic cirrhosis, and pancreatitis. Other conditions associated with magnesium deficiency are osteoarthritis, depression, premenstrual syndrome, increased histamine release, swelling, edema, fluid retention, hyperthyroidism, cardiovascular disease, insomnia, excessive perspiration, and body odor. Diuretic therapy, excessive lactation, renal disease, and endocrine disorders also have magnesium deficiency reports.

Patients treated at the Pain & Stress Center for chronic pain, fibromyalgia, stress (including mental, emotional and overwork), too much physical activity, surgery or trauma are placed on a daily magnesium program. In a trial of 12 patients aged 40 to 55 diagnosed with fibromyalgia and chronic pain syndrome, all 12 noted a remarkable improvement in overall feelings after they were given malic acid combined with magnesium and vitamin B-6, morning and evening. They reported less stiffness and soreness after one week. Patients with anxiety and depression were given extra magnesium in the form of Mag Link, twice daily. For more information about fibromyalgia and chronic pain, read my book entitled, Malic Acid and Magnesium for Fibromyalgia and Chronic Pain Syndrome.

Stress and anxiety drain the body of magnesium. Patients placed on the magnesium protocol reported maximum improvement in physical and mental well-being within 24 hours. Most people short change themselves in magnesium along with other critically needed nutrients. Although the R.D.A. for magnesium is 400 milligrams, the typical American diet only supplies between 200 to 300 milligrams daily.

For our patients we usually recommend a daily intake of two capsules of magnesium chloride (Mag Link) twice daily. Mag Link supplies 260 milligrams of magnesium chloride in a timed-release form. Magnesium chloride is efficiently absorbed in the alkaline area of the small intestine. Mag Chlor 85 mg liquid (magnesium chloride) is also available. For people who need rapid absorption, this form of magnesium is very beneficial. B6 increases magnesium absorption. The most common adverse reaction to magnesium supplementation is diarrhea. If this occurs, decrease the amount taken by one capsule, or try increasing the interval between doses.

If you have kidney disease, consult your physician before taking any magnesium supplements.

Many people ask what test they should run to find out just how deficient they are. Blood tests like CBC (complete blood count) or serum magnesium are practically useless. Magnesium is such an essential mineral that the body will keep the blood level normal even when deficiencies. The tests miss about 80% of the people that are deficient in magnesium. A RBC magnesium is a better indicator, but still is not a "true" indicator of magnesium status.

Dr. Jon Pangborn suggests that if specific amino acids are low in a 24-hour urine amino acid analysis, then a deficiency of magnesium exists. Magnesium levels can also be determined with a collection of urine for 24 hours. Then load challenges of magnesium are given and another 24-hour urine is collected for analysis of magnesium uptake and excretion. So urine, not blood will be a better indicator of magnesium deficiency. Cellular magnesium is the best measure since over 90% of the body's magnesium is inside the cells.

For those who suffer from chronic pain, magnesium is a must. The stress of chronic pain lowers magnesium levels, which in turn, causes an increase in pain. Fibromyalgia sufferers all have a magnesium deficiency. That is why they have so many hot spots and muscle spasms. Antidepressants and pain medications only treat the symptoms. Magnesium corrects the deficiency so that muscles are nourished, and the pain decreases.

This vital mineral is a major partner in the more than 300 enzymatic reactions in the body including the generation of cellular energy and muscle relaxation. Anyone who drinks alcohol is undoubtedly deficient in magnesium. Even a small amount drains magnesium levels. Alcoholics are all nutritionally deficient, but especially in magnesium which they so desperately need. Colas and other soft drinks rich in phosphates inactivate magnesium. Chronic stress and anxiety also deplete available magnesium. Vitamin B-6 increases magnesium absorption.

Life is said to begin at 40, but I'm afraid the same cannot be said of bone mass. At the age of 35, after reaching its peak, bone mass starts to decline due to an imbalance of the modeling process and bones starts to lose both their mineral and their gelatinous matrix. Women in menopause begin a sort of bone crisis. At this time rapid decrease in bone mass
occurs. Women not taking supplements sustain more fractures than those taking a regular supplement program that includes enough magnesium.

In summary, remember several major points. As with many minerals, the average diet is deficient. The usual diet only provides 40% of the R.D.A. Dr. Mildred Seelig, M.D., a nationally recognized magnesium specialist, estimates that over 80% of the population is magnesium deficient. Considering all the research showing the importance of magnesium to our health, we should all reevaluate our magnesium intake.

Special Note: A.D.D. and A.D.H.D. children and adults display symptoms of magnesium deficiency. Magnesium calms the central nervous system, and with magnesium supplementation symptoms of A.D.D. and A.D.H.D. decrease. Liquid magnesium can be added to fruit juice and taken once or twice daily, as needed. Mag Link or Mag Chlor 85 can be used on a daily basis.

References:

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