

Magnesium

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Pharmaceutical agents can never satisfy a nutritional deficiency. Let me say that again, pharmaceutical agents can never satisfy a nutritional deficiency. They may manage the symptoms temporarily but eventually drugs will create secondary side effects especially as polypharmacy efforts are employed. So, it behooves us to look for the major deficiencies and treat them as we encourage an anti-inflammatory diet which reduces processed foods and toxins.

One of biggest nutrient deficiencies we experience is magnesium. Conservative estimates suggest 50% of the world's population is magnesium deficient. And since magnesium is responsible for over 600 cellular processes a deficiency can have a full spectrum of negative effects in ALL the body.

You can see links to the right for a magnesium overview but let's look at some aspects of magnesium you probably haven't considered. Let's start with energy. Not only do our



mitochondria need magnesium but we need it to make CO Q10. We need magnesium for protein synthesis, carbohydrate metabolism, and synthesis of nucleic acid for DNA production. It is also critical for maintaining DNA stability.

Here's one I never knew, “Magnesium is the body's primary protectant against uncontrolled inflammation.” Severe magnesium depletion occurs under conditions of chronic inflammation such as: autoimmune diseases, diabetes, unrelieved stress, chronic infections, and trauma. The loss of magnesium in cases of severe stress,

extensive trauma, intense inflammatory bowel disease, and prolonged or overwhelming infections makes the inflammation and the damage it causes even worse.

Another aspect of magnesium we do not think of is the way it enhances the effectiveness or activates vitamin D. Research has shown that the higher incidence of cardiovascular disease and colorectal cancer associated with low Vitamin D levels can be improved by supplementing with magnesium.

We know the primary cause of death in COVID -19 patients

that suffer major lung infections is called a cytokine storm. Cytokine storms creates excitotoxicity, a process Dr. Russell Blaylock coined immuno-excitotoxicity. We know vitamin D reduces the effects of the cytokine storm. Magnesium plays a complimentary role by significantly reducing excitotoxicity. Dr. Mildred Seelig, formerly one of the world's authorities on magnesium, stated that stress, both physical and emotional, evokes release of the stress hormones catecholamines and corticosteroids which deplete magnesium.

So how much magnesium do we need? Dr. Seelig suggests a sliding scale based on sex, weight and stress. Her opinion was that it is better to give more than less. For maintenance in the adult female, she suggests 6 mg/kg/day. For a woman weighing 160 pounds, we divide 160 by 2.2 to get the number of kilos and multiply by 6. That gives us 436 mg. For men the level increases to 7-10 mg/kg/ day. This translates to 509 to 731 mg per day.

However, for "new tissue formation and repair" which is most of the people who come into your office, higher intakes are desirable. For a male 160 lbs. Dr. Seelig suggests 15 mg/kg/day and possibly more. 15 mg/ kg is 1,090 mg. Biotics Research has 4 different forms of Magnesium, Aqua Mag-CL, Mg-Zyme, Mg-Orotate 500 and Acti-Mag Plus. Aqua Mag-CL is a liquid that supplies 200 mg of magnesium as a chloride form. Use with patients who want a liquid and have low chloride levels.

Mg-Zyme is a capsule that contains 100 mg of magnesium as aspartate, glycinate and gluconate. Mg-Orotate 500 contains 62.6 mg per 2 capsules in an orotate form. Acti-Mag Plus, however, has become my favorite form of magnesium for several reasons. It comes as a powder with a refreshing berry flavor and can easily be mixed in water. Acti-Mag Plus provides 400 mg of elemental magnesium as glycerophosphate, which does not cause loose stools. Also, as we just discussed, magnesium is important to make energy. In Acti-Mag Plus

the anion, glycerophosphate, contains phosphate to make ATP.

In addition, B-Vitamins are added in their bioavailable phosphorylated forms to support the Krebs cycle. 200 mcg of folate as MTHF is added to support methylation. Act-Mag Plus was further enhanced by adding 425 mg of Organic Beet Juice, 200 mg Bamboo Shoot Extract and 200 mg of Taurine.

The nitrites in organic beet juice are converted to nitric oxide supporting healthy vascular function. Beet Juice also is important to support the microbiome. Bamboo Shoot Extract is the best form of organic silica which is important for calcium- magnesium balance. But many people are not aware that silica will displace aluminum that accumulates in the brain. Taurine has a plethora of benefits. Taurine is especially important for healthy neurotransmitters, particularly GABA. It is also important to pull magnesium and potassium inside cells. As a reminder, magnesium and B6 are needed to convert the excitatory neurotransmitter glutamate into GABA, the body's main relaxing neurotransmitter.

We've talked about how important magnesium is for energy production, but it's also essential for healthy relaxation and sleep. I opened our conversation with the statement that pharmaceutical agents can never satisfy a nutritional deficiency. Based on our conversations I think we can agree that many, many people are taking drugs when their body is really deficient in magnesium. I've included a link to a 45 second video to promote Acti-Mag Plus. Share it on social media, it's a great way to start a conversation about magnesium. Thanks for watching I look forward to being with you again next Tuesday.