

MAGNESIUM

The Master Mineral for Health

by Margy Squires



Magnesium may be the 11th most abundant mineral in your body but it is #1 when it comes to your healthy heart, weight, blood pressure, osteoporosis and so much more. Why, it's the master mineral of almost every metabolic process in your body and essential to life. Need I say more?

R-e-s-p-e-c-t. Seems magnesium is one of the few minerals lacking in respect from the medical community despite more than a 100 years of medical research lauding its merits. For instance, did you know magnesium was found low in osteoporosis as early as 1984 in postmenopausal women? Or helped control type 2 diabetes symptoms in 1998? And recent studies show magnesium still reduces heart disease and hypertensive risk so why has it taken so long for the supplement spotlight to shine on this master mineral?

Could it be because the proverbial health statistic bean counters are looking at the medical costs facing America's future? There's a \$190 billion price tag on heart disease according to Dennis Goodman, M.D.'s book *Magnificent Magnesium* that inexpensive magnesium could help prevent. Or maybe the fact that "wonder" bone drugs for osteoporosis haven't worked wonders as predicted in preventing fractures without adding calcium, vitamin D *and magnesium*. America's osteoporosis bill could reach \$25 billion by 2025. The cost of cancer is \$216 billion a year yet studies in 1984 show magnesium could help control cancer cell growth. In fact, renowned magnesium expert of 40 years, Mildred Seelig, M.D. suggested magnesium as part of a cancer protocol in 1994.

You may be asking if one mineral can make such a difference in your health and well-being. The answer has to be a big YES. That is why it is critically important that you know what this mineral can do for you if you are one of the estimated 80% of Americans (according to Goodman) who are running on empty.

Magnesium is master of metabolism by its action on enzymes. In her book *The Magnesium Factor*, Seelig explains: "Magnesium is directly necessary to the enzymes that break down glucose, control the production of cholesterol, make nucleic acids such as DNA, make proteins and break down fats... in addition to the more than 350 enzymes for which magnesium is directly necessary, it is indirectly required for thousands of others". Without adequate magnesium, Seelig adds those enzymes will "either not act, act wrong or both". Remember enzymes are what make things happen in your body. Magnesium helps them happen "right".

The truth is that magnesium makes a difference in the disease process *when* you correct a deficiency but it makes a bigger impact on health if you take it *before* you become deficient. I've posted a few studies on the next page to show you. Some of these study authors chose healthy adults (pre-disease) and checked their magnesium status to see if there was a link to developing the disease. Again, the answer is a big YES.

How to test for deficiency. If you have been a TyH reader for a while, you'll know the best way to check your magnesium level is a red blood cell (RBC) magnesium blood test. With only 1% of magnesium found in the bloodstream, the RBC test is more indicative of what's available to your cells and tissues.

Lest you forget, magnesium directs more than 300 metabolic processes, including making energy for every cell (and you) to live. Without magnesium, you die. With low magnesium, you may live but understandably less healthy. Since there is no way one article can describe everything this masterful nutrient does, you'll find more in-depth reads in the TyH online library. So be wise and magnesium well!

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TyH Online Library Reads

- ◆ *Magnesium, Malic Acid & Energy*
- ◆ *Magnesium & Metabolic Syndrome*
- ◆ *Magnesium & Migraines*
- ◆ *Magnesium, The Dirt on Magnesium*

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Magnesium, the studies



How does magnesium (Mg) affect the disease process? This is only a sampling of the more than 92,000 studies from around the world involving Mg in *PubMed*, a database service of the US National Library of Medicine®.

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Normal Weight + Low Mg = Obesity Risk

Despite a normal weight, you could be hiding risk factors of insulin resistance, high fasting blood sugar and triglycerides. Even high blood pressure (BP). The missing link? Magnesium (Mg), which regulates both sugar and lipid metabolism. In this randomized double-blind, placebo-controlled trial, 47 subjects with metabolic abnormalities were treated with an oral supplement of 382 mg of Mg a day for 4 months. Although there were no differences between the two groups at the start, the Mg supplement group lowered fasting sugar levels 12%, triglycerides 47% and insulin resistance index 46%. Systolic BP was 2.1% lower and diastolic 3.8% lower while non-supplement subjects had an increase in BP (systolic 3.9%, diastolic 7.5%). Overall, the authors conclude that “Oral Mg supplementation improves the metabolic profile and blood pressure of metabolically obese, normal weight individuals”. Source: *Arch Med Res* 7/14



Low Mg + Hypertension = Heart Disease & Stroke

Researchers compared both serum and red blood cell (RBC) Mg levels in hypertensive women and found those with the lowest Mg had the highest blood pressure values.



They checked vascular (and carotid artery) health via carotid ultrasound, radial applanation and peripheral arterial tonometry. Results were associated with thicker, stiffer arteries and higher risk factor for heart disease and stroke according to the Framingham Risk Score. Source: *J Am Soc Hyperten* 9/13 [Editor Note: Low RBC Mg will show up sooner than serum Mg levels, which the body tries to keep normal, even if it has to “steal” from other places like cells and bones!]

Mg in Osteoporosis (OP)

Mg was tested to boost bone density in this early 1993 study of 31 postmenopausal women with OP. When Mg was given at 750 mg daily for 6 months, then 250 mg for 18 months, bone density increased “significantly” on all after 1 year and remained unchanged after 2 years. Source: *Magnes Res* 6/93 [Editor note: Make a difference in OP with organic Albion minerals Mg and calcium in *Fibro-Care Cal*.™]



Low Mg in Diabetes

A study by the American Diabetes Association supports the use of Mg supplementation to improve the symptoms of type 2 diabetes. In type 2 diabetes, your body has trouble using or making enough insulin to metabolize sugar, typically becoming “insulin resistant”. The study showed magnesium’s ability to improve insulin sensitivity and blood sugar levels in Mg deficient individuals such that the ADA issued a statement that diabetics with low Mg take supplementation. The Mg RDA for adult men is 400 mg, women 325 mg. Source: www.ada.org

Low Mg = Higher CRP & Inflammation

Both low Mg levels and low dietary intake (less than 250 mg/day) are associated with elevated serum C-reactive protein (CRP). CRP is an inflammatory marker in several disease processes including cardiac and diabetes complications. CRP also predisposes an individual to disease. Restoring Mg levels can reduce CRP and “should be considered a nutrient of significant concern for health and well-being”. Source: *Curr Opin Clin Nutr Metab Car* 7/14



Low Mg Precedes “Pre-Hypertension”

Could low Mg play a role in developing hypertension in healthy people? Researchers chose 175 healthy men and non-pregnant women 20 to 65 years of age. They excluded subjects with conditions that could affect Mg status (cancer, chronic diarrhea, impaired kidney function, hypertension, type 2 diabetes) and anyone taking Mg as supplements. Serum Mg was defined as low if less than 0.7 mmol/L. Body mass index, waist circumference, fasting glucose, triglycerides, and alcohol consumption was assessed. Of the 175, 68 were deemed “pre-hypertensive” based on the criteria of 120-139/80-39 mmHg (Normal is 120/80 or less). The pre-hypertensive group had lower Mg and higher triglyceride levels. Thus the researchers’ findings “showed a significant association between hypomagnesemia and prehypertension”. Source: *Eur J Intern Med* 2/14

“Only you can make the decision to improve your well-being with magnesium. The choice is yours.”

Dennis Goodman, M.D.
Magnificent Magnesium

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