

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®.

by Margy Squires

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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