USANA HEALTH SCIENCES

essentials of health

March 9th, 2011

In a new report, researchers found that supplementing with magnesium for six months improved two out of three measures of insulin sensitivity. Additionally, blood sugar levels (measured as fasting levels of glucose in the blood) improved by seven percent.

ORAL MAGNESIUM SUPPLEMENTATION MAY REDUCE RISK OF TYPE 2 DIABETES

Incidence of insulin resistance and metabolic syndrome correlates with availability of magnesium (Mg). Insulin resistance occurs when insufficient insulin is released to produce a normal glucose response from fat, muscle, and liver cells. Magnesium supplementation may improve sensitivity to insulin and help reduce the risk of diabetes in overweight individuals.

Researchers recently studied the effect of oral magnesium (Mg) supplementation on insulin sensitivity and other characteristics of metabolic syndrome in overweight, insulin resistant, non-diabetic patients with normal magnesium levels.

Subjects were tested for eligibility using an oral glucose tolerance test, then randomized to receive either magnesium at 365 mg per day or placebo for 6 months. Trial endpoints included several measures of insulin sensitivity, plasma glucose, serum insulin, blood pressure, and a lipid profile. Compared to placebo, magnesium supplementation resulted in a significant improvement of fasting plasma glucose and insulin sensitivity.

Dietary sources of magnesium include green leafy vegetables, meats, starches, grains and nuts, and milk. Earlier dietary surveys showed that a large portion of adults do not meet the RDA for magnesium (320 mg per day for women and 420 mg per day for men).

In this group of overweight, non-diabetic patients with normal magnesium blood levels, two measures of insulin sensitivity improved following magnesium supplementation. There was also a trend for improvement in blood pressure in the magnesium-supplemented group, though it didn't reach statistical significance.

Mooren FC, et al. Oral magnesium supplementation reduces insulin resistance in non-diabetic subjects – a double-blind, placebo-controlled, randomized trial. 2011. Diabetes Obes Metab 13(3):281-4.