

Clinical Update

Supplemental magnesium may reduce blood pressure in people with high blood pressure, but seemingly normal magnesium levels, says a new study from Korea.

(Nutrition, Metabolism and Cardiovascular Diseases, January 2009)
(Journal of Internal Medicine, August 2007)

On the other hand, the supplements had no effect on the blood pressure measurements of normo-tensive individuals, according to findings published online in *Nutrition, Metabolism and Cardiovascular Diseases*. The study adds to findings from epidemiological studies which reported that more magnesium, potassium and calcium may reduce the risk of hypertension in certain populations.

High blood pressure (hypertension), defined as having a systolic and diastolic blood pressure (BP) greater than 140 and 90 mmHg, is a major risk factor for cardiovascular disease (CVD).

Study details

Since very little is known about how magnesium may effect insulin sensitivity and blood pressure in healthy individuals, the researchers recruited 155 people to take part in a double-blinded, placebo-controlled, randomised trial. The subjects, who had an average BMI of 23 kg/m², were randomly assigned to receive either daily supplements of 300 mg of elemental magnesium in the magnesium oxide form or placebo for 12 weeks.

At the end of the study, no significant differences were observed between the magnesium or placebo groups. However, when the researchers looked specifically at hypertensives, significant decreases in both systolic and diastolic blood pressure were observed in the magnesium group (17.1 and 3.4 mmHg, respectively), compared to placebo (6.7 and 0.8 mmHg, respectively).

Magnesium and diabetes

A meta-analysis of prospective cohort studies by researchers at Stockholm's Karolinska Institutet, reported that for every 100 milligram increase in magnesium intake, the risk of developing type-2 diabetes decreased by 15%.

Writing in the *Journal of Internal Medicine* Susanna Larsson and Alicia Wolk concluded that while it is too early to recommend magnesium supplements for type-2 diabetes prevention, increased consumption of magnesium-rich food "seems prudent."

Source: www.nutraingredients.com

