

## PRESS RELEASE

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# STUDY SHOWS INCREASED DIETARY MAGNESIUM INTAKE ASSOCIATED WITH IMPROVED DIABETES-RELATED HEALTH OUTCOMES

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March 27, 2015 (Northridge, CA) – A recent analysis published in the *Journal of Human Nutrition & Food Science* reveals a beneficial relationship between dietary magnesium intake and diabetes-related outcomes including decreased risk for metabolic syndrome, obesity or overweight, elevated blood pressure, and reduced HDL (good) cholesterol.

This secondary analysis examined the relationship between dietary magnesium intake from food and food combined with supplements and diabetes and other related health factors in adults ( $\geq 20$  years) using data from the National Health and Nutrition Examination Survey (NHANES), 2001-2010. NHANES is a program of studies designed to assess the health and nutritional status of adults and children in the United States, conducted by the National Center for Health Statistics (NCHS) of the Centers for Disease Control and Prevention (CDC).

“Our analysis found that dietary intake of magnesium from foods or from food plus supplements was associated with improvements in many diabetes-related health outcomes. These results further demonstrate the importance of meeting magnesium intake recommendations and illustrate the usefulness of dietary magnesium supplementation when these recommendations cannot be met with diet alone.” said Yanni Papanikolaou, Vice President of Nutrition Research at Nutritional Strategies, Inc. and co-lead researcher of the analysis.

Magnesium, an essential micronutrient, assists in more than 300 metabolic reactions, helping support bone health, as well as nerve and muscle function. It also helps convert food to cellular energy. Sources of dietary magnesium include fruits, green leafy vegetables, whole grains, nuts and dairy products. The estimated average requirement (EAR) for magnesium is 330-350 mg/day for men and 225-265 mg/day for women. The 2010 Dietary Guidelines, and

more recently the 2015 Dietary Guidelines Advisory Committee Report, indicate magnesium is commonly under-consumed relative to the estimated average requirements (EAR).

“Insufficiency of micronutrient intake is a global issue,” commented Dr. James Brooks, Vice President, Science, Technology and Quality, Pharmavite, and study author. “Dietary magnesium supplementation, coupled with appropriate food choices, offers an evidence-based option to meet the estimated average requirements.

The analysis funded by Pharmavite LLC, makers of Nature Made® brand dietary supplements, included data from more than 14,000 NHANES participants. Adults aged > 20 years with adequate intake (defined as meeting the EAR) of magnesium from food alone had significantly lower odds ratios for metabolic syndrome (0.88, p=0.0166), overweight or obesity (0.91, p=0.0305) elevated blood pressure (0.88, p=0.0205), elevated systolic blood pressure (0.87, p=0.0070) and reduced HDL (0.84, p=0.0039) compared to adults with inadequate intake of magnesium from food. Additionally, magnesium intake from food in combination with dietary supplements had significantly lower odds ratios for elevated glycohemoglobin (0.88, p=0.0046), obesity (0.92, p=0.85), overweight or obesity (0.86, p=0.0011), elevated waist circumference (0.88, p=0.0057) and reduced HDL (0.81, p=0.0034) compared to adults with inadequate intake of magnesium from food plus supplements.

Because this analysis is an examination of survey data, it does not indicate cause and effect, but rather demonstrates associations between dietary magnesium intake and health outcomes. Although results of this analysis may have been limited by errors in self-reported dietary intake and use of a 24-hour dietary recall, NHANES is recognized as a very credible source for dietary patterns and health outcomes data.

Access the full study, entitled “Dietary Magnesium Usual Intake is Associated with Favorable Diabetes-Related Physiological Outcomes and Reduced Risk of Metabolic Syndrome: An NHANES 2001-2010 Analysis,” at <http://www.jscimedcentral.com/Nutrition/nutrition-2-1038.pdf>. Study authors include Yanni Papanikolaou, Nutritional Strategies, Inc.; James Brooks, Pharmavite, LLC; Carroll Reider, Pharmavite, LLC; and Victor L. Fulgoni, III, Nutrition Impact, LLC.

### **About Pharmavite LLC:**

For more than 40 years, Pharmavite LLC has earned and maintained the trust of healthcare professionals, consumers, and retailers by manufacturing high-quality vitamins, minerals and other dietary supplements, and all-natural foods under its Nature Made® and SOYJOY® brand names. Based in Northridge, California, Pharmavite LLC operates as a subsidiary of Otsuka Pharmaceutical Co., Ltd. For more information, please visit [Pharmavite.com](http://Pharmavite.com).

<sup>i</sup> Papanikolaou Y, Brooks J, Reider C, Fulgoni VL (2014) Dietary Magnesium Usual Intake is Associated with Favorable Diabetes-Related Physiological Outcomes and Reduced Risk of Metabolic Syndrome: An NHANES 2001-2010 Analysis. *J Hum Nutr Food Sci* 2(4): 1044.