Beta-Glucan Improves Insulin Function in Those with High Blood Pressure

By Greg Arnold, DC, CSCS, December 22, 2006, abstracted from “Effects of consuming foods containing oat beta-glucan on blood pressure, carbohydrate metabolism and biomarkers of oxidative stress in men and women with elevated blood pressure” published online December 13, 2006 in the European Journal of Clinical Nutrition

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High blood pressure is a major risk factor for coronary heart disease and stroke and is considered a worldwide epidemic. It also contributes to metabolic syndrome, which is a cluster of risk factors for atherosclerosis and type 2 diabetes that affects an estimated 47 million Americans.

An important component of high blood pressure and metabolic syndrome is the decreased effectiveness of the use of insulin. This is the hormone that allows muscle to use glucose for energy and is the central feature of metabolic syndrome. It is estimated that half of all people with high blood pressure have high insulin levels and poor glucose uptake by muscle cells.

Now a new study has found that beta-glucan, a component of fiber recently found to help keep LDL cholesterol in normal range, may help improve insulin function in people with high blood pressure.

In the study, 97 men and women with blood pressure between 130/85 and 179/109 were randomly assigned to consume a diet containing 8 grams of oat beta-glucan per day or a control diet for 12 weeks. The researchers measured blood pressures, insulin and glucose values before and after standard breakfast meals. Four markers of oxidative stress were also measured before and at the end of the treatment period.

The researchers found that by the end of 12 weeks, insulin levels after eating decreased by as much as 10% in the beta-glucan group, and increased an average of 5% in the control group. And although improvements in blood pressure and oxidative stress were seen in the beta-glucan group, these results did not reach statistical significance compared to the control group.

For the researchers, “The results…suggest beneficial effects of foods containing beta-glucan from oats on carbohydrate metabolism, and on blood pressure in obese subjects.”

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Reference:


3 He K. Magnesium Intake and Incidence of Metabolic Syndrome Among Young Adults. Circulation 2006; 113(13): 1675-1682


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7 Maki KC. Effects of consuming foods containing oat beta-glucan on blood pressure, carbohydrate metabolism and biomarkers of oxidative stress in men and women with elevated blood pressure. *Eur J Clin Nutr* advance online publication, December 6, 2006; doi:10.1038/sj.ejcn.1602562