Whole Grains May Help Control Blood Pressure

Men hoping to ward off high blood pressure might want to boost their consumption of whole grains. A new analysis of data from the long-running Health Professionals Follow-up Study finds that men who ate the most whole grains were 19% less likely to develop hypertension than those eating the least.

Alan J. Flint, MD, DrPH, of the Harvard School of Public Health and colleagues looked at a subset of 31,684 healthy men, of whom 9,227 developed high blood pressure over 18 years. Those in the top one-fifth of whole-grain intake averaged 52 grams daily, while the lowest group got only 3 grams a day; current dietary guidelines call for at least 85 grams (3 ounces) of whole grains daily for adults.

The connection between whole-grain consumption and hypertension remained even after accounting for other lifestyle and diet factors, including fruit and vegetable intake, vitamin use, amount of physical activity and whether the men had undergone cholesterol screening. Dr. Flint commented, “When the associations persist despite these adjustments, as in the current analysis, it supports the conclusion that it is not due to these other factors.”

Although the new analysis focused only on men, Dr. Flint and colleagues
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Protecting Women’s Bones: Is the Secret Soy or the Asian Diet?

Could your hip bones use a little tofu? Scientists report that moderate intake of soy—at least the amount found in about 1.75 ounces of tofu—was associated with reduced risk of hip fractures among women in the Singapore Chinese Health Study. That’s an amount of soy “higher than the low levels of consumption in the West,” noted lead researcher Woon-Puay Koh, MD, of the National University of Singapore.

The findings represent a bright spot in the mostly disappointing recent research attempting to link soy consumption to better bone health. People in Asia generally have lower rates of osteoporosis than those in the West, and scientists have speculated that high levels of soy foods in Asian diets may be part of the reason. But proof of that notion has been elusive.

In this new study, published in the American Journal of Epidemiology, Dr. Koh and colleagues followed 63,257 Chinese men and women in Singapore, ages 45 to 74 at baseline, for an average 10.6 years. Each participant completed a food-frequency questionnaire to assess his or her dietary intake of soy foods and also answered questions on medical history and lifestyle factors.

During the span of the study, 276 of the men and 692 women suffered a hip fracture. Among women with at least moderate soy intake—2.7 grams or more daily—hip fracture risk was 21% to 36% lower than those consuming the least soy (levels similar to those in the US). A similar association was seen for women consuming at least 49.4 grams of tofu or tofu equivalents and those getting at least 5.8 milligrams per 1,000 daily calories of soy isoflavones.

Researchers suggested that soy isoflavones may help protect the bones of postmenopausal women. These naturally occurring plant hormones, chemically similar to human estrogen, could help replace the bone-protecting estrogen that declines with menopause.

Eating a lot more soy didn’t confer any additional benefits for the women in the study, however. Hip-fracture risk levels for all groups were similar except among the one-quarter of women at the bottom of soy intake.

Dr. Koh and colleagues were particularly interested in whether soy intake might also be associated with a reduced risk of hip fractures in men. But here the soy foods struck out: Consumption of soy, tofu and isoflavones wasn’t linked with any protective benefit among men. (Both genders concerned about bone health, however, can take away lifestyle advice from another
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daily of isoflavones from soy protein exerted a bone-sparing effect (except for a modest protective effect on femoral neck bone-mineral density at 120 mg). Similar research at the University of Miami School of Medicine testing 200 milligrams a day versus a placebo on 248 women also failed to find a benefit after two years. Most recently, University of Connecticut Health Center scientists tested the possibility that soy protein—rather than isoflavones—might benefit women’s bones; after one year comparing four different combinations of soy proteins and/or isoflavones, however, no difference was seen in bone mineral density.

So the jury is still out on soy and bone health. Dr. Koh and colleagues called for further study to confirm their findings and the possible mechanism at work. In the meantime, soy foods can certainly be part of a healthy diet—particularly soy foods such as tofu and edamame (green soybeans) typical of the Asian diet. Soy-protein bars, soy shakes and other Americanized concoctions may not be made from whole soybeans and can contain added sweeteners, so check the label.

TO LEARN MORE: American Journal of Clinical Nutrition, September 2009; abstract at <www.ajcn.org/cgi/content/abstract/90/3/493>. •

What’s an Isoflavone?
Most of the theorized health benefits from soy foods are attributed to isoflavones, a type of naturally occurring plant hormones. Isoflavones belong to a large group of antioxidants called polyphenols, and a subgroup labeled flavonoids. The chemical structure of isoflavones is similar to that of human estrogen, and isoflavones can both decrease excess estrogen in the body and increase estrogen activity. The two most common types of soy isoflavones are genistein and daidzein.

To keep your blood pressure under control, the American Heart Association advises eating a diet that’s rich in:
• Fruits
• Vegetables
• Whole-grain, high-fiber foods
• Fat-free and low-fat (1%) dairy products
• Beans
• Skinless poultry and lean meats
• Fish, especially fatty fish containing omega-3 fatty acids such as salmon, trout and herring

And low in:
• Sodium
You should also try to limit added sugars.

Daily fiber intake due to a greater feeling of “fullness” from eating whole grains.

The findings, researchers concluded, “have implications for future dietary guidelines and for the prevention of hypertension.”

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The researchers also looked at individual whole grains. Only bran showed an independent association with hypertension; those eating the most bran were at 15% lower risk compared to men with the least bran in their diets. The amount of bran in the men’s diets was relatively small, however, compared to overall whole-grain consumption. Why might whole grains help prevent

high blood pressure? The study wasn’t designed to explain the mechanism behind such a potential effect, but Dr. Flint and colleagues cited several possibilities. These include improved insulin sensitivity and lower blood sugar as well as reduced food intake due to a greater feeling of “fullness” from eating whole grains.

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