

Macadamia nuts can be included in heart healthy diet

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Macadamia nuts included in a heart healthy diet reduced low-density cholesterol (bad cholesterol) and should be included among nuts with qualified health claims, according to researchers.

"We looked at macadamia nuts because they are not currently included in the health claim for tree nuts, while other tree nuts are currently recommended as part of a heart healthy diet," says Dr. Amy E. Griel, a recent Penn State Ph.D. recipient in nutrition and now senior nutrition scientist at The Hershey Company. "Macadamia nuts have higher levels of monosaturated fats, like those found in olive oil compared with other tree nuts."

Along with Brazil nuts and cashews, macadamia nuts are not included in the U.S. Food and Drug Administration's list of nuts with qualified health claims because the cut-off point is 4 grams of saturated fat per 50 grams of nuts. Macadamia nuts have 6 grams of saturated fat per 50 grams, cashew nuts have 4.6 grams and Brazil nuts have 7.6 grams of saturated fat per 50 grams of nuts.

"Epidemiological studies showed that people who are frequent nut consumers have decreased risk of heart disease," says Penny Kris-Etherton, co-author and distinguished professor of nutritional sciences.

The researchers used a controlled feeding study to compare a heart-healthy diet with 1.5 ounces – a small handful – of macadamia nuts to a standard American diet. The participants had slightly elevated cholesterol levels, normal blood pressure and were not taking lipid-lowering drugs. Researchers randomly assigned participants to either the macadamia nut diet or the standard American diet and provided all meals for the participants for five weeks. The participants then switched diets and continued eating only food provided by the researchers for another five weeks.

The Healthy Heart diet with macadamia nuts did reduce total cholesterol, low-density lipoprotein cholesterol and triglyceride levels compared with the standard American diet. The researchers reported in the current issue of the *Journal of Nutrition*, that the macadamia nuts reduced total cholesterol by 9.4 percent and low-density lipoprotein by 8.9 percent.

Individual calorie levels were used for each participant so that they did not gain or lose weight during the study. Both diets were matched for total fat, containing 33 percent calories from total fat. The Heart Healthy diet with macadamia nuts had 7 percent saturated fat, 18 percent monosaturated fat and 5 percent polyunsaturated fat. The standard American diet had 13 percent saturated fat, 11 percent monosaturated fat and 5 percent saturated fat.

"We found that the reduction in LDL or bad cholesterol we observed was greater than would be predicted by just the healthy fats in the nuts alone," says Griel. "This indicates that there is something else in the nuts that helps lower cholesterol."

The macadamia nut diet included macadamia nuts as a snack, mixed into meals, as a salad topping and in cookies and muffins. The total fat was the same in both diets. Macadamia nuts were substituted for other sources of fat and protein in the diet. Switching skim milk for 2 percent milk and adding some macadamia nuts kept fat levels even.

"I think the bottom line is that Macadamia nuts probably should be included in the list of nuts to have a qualified health claim," says Kris-Etherton.

Source: Penn State

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