

A daily dose of pistachios offers potential heart health benefits

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Adding to a growing body of evidence, new research shows that a daily dose of pistachios may offer protective benefits against cardiovascular disease, according to a study published in the Volume 26, Number 2 issue of the *Journal of the American College of Nutrition*.

The study, conducted by James N. Cooper M.D., of George Mason University and Michael J. Sheridan, Sc.D., of Inova Fairfax Hospital, found that in people with moderately high cholesterol levels, a daily diet consisting of 15% of calories from pistachios (about two to three ounces or one to two handfuls of kernels) over a four-week period favorably improved some blood lipid levels.

"These results are exciting because the research indicates that adding pistachios to the daily diet can help protect the heart without a dramatic dietary lifestyle change," said Dr. James Cooper. "This research challenges the previously-held belief that a low-fat diet is best for heart health. Studies now show that a diet with a moderate amount of healthful monounsaturated fat, like the kind found in pistachios, is a more effective way to prevent heart disease than reducing overall fat intake. What's more, we noted very good compliance and a positive response from participants during the four-week period."

High levels of most blood lipids increase the risk of developing both heart disease and stroke while lowering blood lipid levels has been shown to reduce the risk. Lipids join with protein in the blood to form lipoproteins, known as cholesterol. There are three kinds of lipoproteins

in the blood including high-density cholesterol (HDL); low-density cholesterol (LDL); and very low-density (VLDL) cholesterol. A normal total cholesterol level is 200 mg/dL or less; a normal LDL level is 130 mg/dL or less.

In a randomized crossover trial, 15 free-living humans with moderately high blood cholesterol (greater than 210 mg/Hg) were given a diet where 15% of daily calories came from pistachios to see if it would have a significant impact on their blood lipid levels. All subjects consumed their normal diets during a five-day baseline period. Then, half the subjects were randomized to the pistachio diet for four weeks followed by four weeks on the regular diet; the other half followed the diets in reverse order. Subjects were instructed to substitute the pistachio nuts for normally consumed high-fat snacks. Subjects who did not normally consume high-fat snacks were asked to substitute pistachio nuts as fat calories. Otherwise, subjects consumed their normal diets.

On the pistachio diet, statistically significant reductions were seen in TC/HDL-C (mean difference, -0.38; 95% CI, -0.57 to -0.19; $p=0.001$), LDL-C/HDL-C (mean difference, -0.40; 95% CI, -0.66 to -0.15; $p=0.004$), B-100/A-1 (mean difference, -0.11; 95% CI, -0.19 to -0.03, $p=0.0009$) and a statistically significant increase in HDL-C (mean difference, 2.3; 95% CI, 0.48 to 4.0; $p=0.02$). Subjects consumed less saturated fat and more polyunsaturated fat and fiber. Statistically significant differences favoring the pistachio diet were observed for some blood lipid values, predictors of heart disease.

Subjects on the pistachio diet showed no changes in blood pressure, body mass index, or weight gain; further supporting previous studies which have also demonstrated no weight gain from the addition of pistachios to a daily diet. Nut consumption, in general, is associated with a lower body mass index and has not been shown to cause weight gain.

Most of the fat in pistachios -- almost 90% - is "good" or monounsaturated fat, which can lower blood cholesterol along with heart disease². Monounsaturated fat comprises 55% of the fat in pistachios; 32% is polyunsaturated. Both monounsaturated and polyunsaturated fat reduce blood cholesterol levels and lower the risk of heart disease when they replace saturated fats in the diet³. Of all snack nuts, pistachios offer the highest level of phytosterols, and are a powerful source of fiber, both of which reduce the absorption of cholesterol from the diet^{4,5}. Pistachios make a wise snack choice as they contain dense levels of eight nutrients including thiamin, vitamin B6, copper, manganese, potassium, fiber, phosphorus and magnesium.

Source: Paramount Farms

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