

Pistachios reduce inflammation, cardiovascular disease factors

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A Penn State-led study shows that snacking on pistachios has proved to have a positive impact on improving cardiovascular health by significantly reducing inflammation in the body, a prominent cardiovascular disease risk factor.

A study, led by researcher Penny Kris-Etherton, distinguished professor of nutritional sciences, looked at the effects of pistachios on multiple CVD risk factors, some of which include cholesterol, blood pressure and the genetic expression of various genes related to inflammation. The study positively supports other recent studies that show a diet rich in pistachios has nutritional benefits.

The study was a randomized, crossover, controlled study of 28 healthy men and women (ages 30-70) with slightly-elevated cholesterol levels (similar to cholesterol levels of the general population). It tested three cholesterol-lowering diets, one without pistachio consumption and two with varied levels of pistachios in relation to total caloric intake (on average, 1.5 ounces and 3.0 ounces). Results were presented this week at the annual meeting of the Experimental Biology Conference in San Diego.

All diets provided the same amount of saturated fat and cholesterol, but different amounts of unsaturated fat delivered by pistachios. Participants were fed the same diet for two weeks, which served as a baseline before the test diets began. Each subject tested all diets for a period of four weeks, and results were measured after each diet cycle was completed.

In addition to cholesterol measures (lipids and lipoproteins), blood pressure, heart rate, stroke volume, cardiac output and total resistance to blood flow through the vascular arteries were measured. At the end of each study period, cells were isolated from all subjects and genetic expression of inflammation markers was measured.

As indicated in previous research, compared to baseline, both the 1.5 and 3.0 ounce pistachio diets resulted in reduction of total cholesterol (TC) and low density lipoprotein cholesterol (LDL-C). In addition to the beneficial effects of pistachios on cholesterol, including pistachios as part of a heart-healthy diet also significantly reduced inflammation at the cellular level.

"Reducing inflammation at the cellular level is an important finding as it may be a more specific marker of inflammatory status than blood markers, which are general indicators of inflammation in the body," said Sarah Gebauer, a graduate student in integrative biosciences at Penn State University. "We are truly excited about these results and what they mean for those at risk for cardiovascular disease."

Source: Penn State

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