



MEDIA RELEASE, June 20, 2012

New Research: A Handful Of Pistachios A Day Keeps Stress At Bay

New US Research¹ has revealed eating a handful (~42g) of pistachios a day may help to lower blood pressure during stressful events.

The Pennsylvania State University study, published in the American Heart Association Journal *Hypertension*¹, is the first to show that including both salted and unsalted pistachios in a healthy diet helps reduce blood pressure and lessen the vascular work load on the heart.

Adults with elevated cholesterol were enrolled in the randomised, controlled clinical trial comparing diets containing pistachios to a low fat diet. The results show that a healthy diet supplemented with pistachios, one or two handfuls a day (42-84 grams), helps decrease systolic blood pressure, peripheral vascular resistance and heart rate during acute stress.

Participants' cardiovascular responses were measured while they sat a challenging mental maths test, and again as their feet were immersed in cold water.

The study's lead author, Associate Professor Sheila G. West is currently on sabbatical at The University of Sydney.

"Daily events, such as work stress, a tight deadline, or public speaking can increase blood pressure, and we know that we can't avoid all of the stressors in our lives," said Assoc Prof West.

"These results are significant because they show that physiological responses to stressful laboratory tasks are affected by the foods we eat.

"These changes in blood pressure occurred even though self-reported mood, anxiety, and tension were not changed."

The 28 people in the study were healthy, non-smoking men and women with elevated LDL cholesterol but normal blood pressure. All of the meals were provided and calorie levels were customized to maintain body weight. Pistachios were substituted for other foods in the diet to prevent weight gain.

Each participant was exposed to three different diets for four weeks each, with a break in between each. All food was provided. The diets included a low fat diet without pistachios; a healthy diet containing 42 grams of pistachio kernel or one handful a day; and a healthy diet containing 84 grams of pistachio kernels or two handfuls a day. Half the pistachios were salted and eaten as a snack and half were unsalted and used in recipes.

The pistachio diets contained higher amounts of potassium, healthy fats and protein. All diets were rich in fruit, vegetables, lean meats, and whole grains, consistent with current US dietary guidelines.

The weight of the participants was maintained. The largest drop in blood pressure, - 4.8 mm Hg, was associated with eating 42 grams of pistachios a day versus a -1.8 mm Hg on the low-fat diet (statistically significant). While the diet containing 84 grams of pistachios a day resulted in a statistically significant decrease in peripheral vascular resistance, a measure of artery stiffness, and heart rate.

There were small differences in sodium across the diets, but the diet containing the highest sodium level did not produce the highest blood pressure.

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Previous research suggests including pistachios in a healthy diet lowers LDL cholesterol in a dose-response fashion and increases antioxidants in the blood.^{2,3}

Pistachios are packed with a wide range of vitamins, minerals, antioxidants and phytochemicals beneficial to health. They provide potassium and magnesium, which are important in maintaining a healthy blood pressure. Pistachios are also a rich source of healthy fats, vitamin B6 and a source of fibre, iron, zinc, plant proteins and plant sterols.

For more information on nuts and health, as well as tips for adding pistachios to your diet, visit www.nutsforlife.com.au

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Issued on behalf of Nuts For Life

Nuts for Life is a nutrition communications initiative of the Australian Tree Nut Industry and Horticulture Australia to provide information about the nutrition and health benefits of tree nuts.

For more information and interviews with Assoc Prof Sheila West, please contact Bite Communications ph (02) 9977 8195 Sonya Rogers on 0435 110 670 or Andrea Brydges on 0418 443 886

Nutrient content of natural unsalted pistachio kernels in a 42g serve⁴

Nutrient	Natural unsalted kernels Amount per 42g (%RDI)*
Energy (kJ)	1003
Protein (g)	8.3
Fat total (g)	21.3
Saturated fat (g)	2.4 (11% of total fat)
Monounsaturated fat (g)	11.2
Polyunsaturated fat (g)	6.6
Carbohydrate (g)	2.9
Fibre (g)	3.8 (13% RDI)
Sodium (mg)	2.9
Potassium (mg)	399 (11% RDI)
Magnesium (mg)	42 (10% RDI)
Iron (mg)	1.6 (20% RDI)
Zinc (mg)	1.0 (7% RDI)
Vitamin B6 (mg)	0.7 (41% RDI)
Plant sterols (mg)	90
Total ORAC (umolTE)	3224

*%RDI calculated using NRVs for adult male

References

¹West SG, Gebauer SK, Kay CD, Bagshaw DM, Savastano DM, Diefenbach C, Kris-Etherton P. Diets Containing Pistachios Reduce Systolic Blood Pressure and Peripheral Vascular Responses to Stress in Adults with Dyslipidemia. *Hypertension*. 2012 Jun 4. [Epub ahead of print] doi:10.1161/HYPERTENSIONAHA.111.182147

²Gebauer SK, West SG, Kay CD, Alaupovic P, Bagshaw D, Kris-Etherton PM. "Effects of pistachios on cardiovascular disease risk factors and potential mechanisms of action: A dose-response study." *Am J Clin Nutr*. 2008;88:651-9.

³Kay CD, Gebauer SK, West SG, Kris-Etherton PM. "Pistachios increase serum antioxidants and lower serum oxidized-LDL in hypercholesterolemic adults." *J Nutr*. 2010;140:1093-98.

⁴ Nuts for Life 2011 Nutrient Composition of Tree nuts www.nutsforlife.com.au