



November 10, 2011

First Evidence: Nuts Boost Serotonin

New research has revealed the first evidence of a link between eating nuts and higher levels of serotonin — a substance that reduces feelings of hunger and improves heart health¹ – prompting researchers to recommend nuts to people fighting Metabolic Syndrome.

The scientists from University of Barcelona, in collaboration with the Human Nutrition Unit of the Rovira i Virgili University, found that as little as a handful of natural, raw nuts a day had positive health effects.

The findings, published in the *Journal of Proteome Research*¹, also revealed the first evidence in humans of the benefits of eating nuts in reducing levels of substances in the body associated with inflammation and other cardiovascular risk factors.

The new findings are particularly important for people with Metabolic Syndrome (Met S) - a cluster of health conditions including abdominal obesity, high blood pressure, high blood glucose, and high blood cholesterol. If left untreated it can increase the risk of heart disease and diabetes.

Researcher Cristina Andres-Lacueva said the rise in obesity around the world meant more and more patients had Met S.

“Dietary changes may help patients shed the excess weight and become healthier, among changes, the regular consumption of nuts — which are jam-packed with healthful nutrients, such as healthy fats (unsaturated fatty acids) and antioxidants (polyphenols) - have been recommended to fight the metabolic abnormalities associated to the Met S.”

The Spanish researchers put 22 Metabolic Syndrome patients on a nut-enriched diet (30g daily made up of 15g walnuts, 7.5g almonds and 7.5g hazelnuts) for 12 weeks and compared them to another group of 20 patients who were told to avoid nuts.

The scientists examined a broad spectrum of compounds excreted in the patients' urine and found those consuming 30 grams of mixed nuts a day had:

- Higher levels of serotonin - a substance that helps transmit nerve signals, decreases feelings of hunger, makes people feel happier and improves heart health².
- Higher levels of unsaturated fatty acids, which can improve blood cholesterol levels and reduce heart disease risk³.
- Higher levels of antioxidants and anti-inflammatories. In particular the digestion of walnuts resulted in higher levels of urolithins, a substance that plays a role in reducing inflammation and improving heart health.

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

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, please contact:
Bite Communications on Ph (02) 9977 8195 or 0435 110 670 (Sonya)**

¹ Tulipani S, Llorach R, Jáuregui O, López-Uriarte P, Garcia-Aloy M, Bullo M, Salas-Salvadó J, Andrés-Lacueva C. Metabolomics Unveils Urinary Changes in Subjects with Metabolic Syndrome following 12-Week Nut Consumption. *J Proteome Res.* 2011; 10:5047-58.

<http://pubs.acs.org/doi/abs/10.1021/pr200514h?prevSearch=%255BContrib%253A%2BAndr%25C3%25A9s-Lacueva%255D&searchHistoryKey=>

² http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_ARTICLEMAIN&node_id=223&content_id=CNBP_028592&use_sec=true&sec_url_var=region1&__uuid=e7620a55-0652-4e2f-886a-ec3c162c37af

³ Denke MA. Dietary fats, fatty acids, and their effects on lipoproteins. *Curr Atheroscler Rep.* 2006;8(6):466–471.