

Olive Oil's Heart-Healthy Secret

Phenolic Compounds in Olive Oil May Explain Mediterranean Diet's Benefits

By Jennifer Warner - WebMD Medical News

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Nov. 11, 2005 - An ingredient found in olive oil may be largely responsible for the heart-healthy benefits attributed to the Mediterranean diet, according to a new study.

Researchers tested the effects of eating a meal of olive oil and bread and found people's blood vessels appeared healthier after eating olive oil rich in phenolic compounds.

Phenolics are plant-based compounds that are believed to have antioxidant, anti-inflammatory, and anticlotting properties and are found in higher concentrations in less processed oils.

Researchers say their results suggest virgin olive oil may be better for the heart than seed oils because it is a natural juice that does not go through the processing needed to extract oil from seeds, such as sunflowers and soybeans. Therefore, the oil retains more of its original nutrients.

"It could be that the beneficial effect of the Mediterranean diet on cardiovascular disease and arteriosclerosis depends on the synergistic effects of the different nutrients that constitute complete foods and, as an example, virgin olive oil is more than fat because it is a real juice with other healthy micronutrients," says researcher Francisco Pérez Jiménez, MD, PhD, from the Reina Sofia University Hospital in Córdoba, Spain, in a news release.

Phenolics Behind Olive Oil's Benefits

In the study, which appears in the *Journal of the American College of Cardiology*, researchers compared the effects on blood vessel function of eating virgin olive oil high in phenolics and olive oil that had been stripped of most of its phenolics.

On different days, 21 otherwise healthy adults with high cholesterol ate a breakfast of white bread and 40 milliliters (a little more than 2.5 tablespoons) of each of the olive oils. During the next four hours, researchers took blood samples and monitored the participants' blood flow.

The results showed that the functioning of the inner lining of the small blood vessels of the fingers of the participants and the concentration of certain healthy components in the blood, such as nitric oxide, improved after the breakfast of high-phenolic olive oil. But no such changes were found after the low-phenolic meal.

Although more studies are needed to confirm these results, experts say the findings suggest that even a very small change in diet, like using olive oil rich in phenolic compounds, may have a significant effect in reducing the risk of atherosclerosis (hardening of the arteries) and heart disease.

"This study demonstrates one possible mechanism by which olive oil rich in phenolic substances improves the functioning of the circulation," says Robert F. Wilson, MD, of the University of Minnesota in Minneapolis, in a news release. "The authors found that after test subjects took olive oil spiked with phenolic compounds, their blood vessels could dilate better, which could improve blood flow. These findings are particularly interesting because similar studies after high-fat meals, like a burger and fries, showed impairment of normal blood vessel functions."