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*A new study from Spain discusses the heart health potential of hydroxytyrosol, an olive extract possibly effective at reducing levels of oxidized LDL cholesterol.*

## COMPOUND FROM OLIVE FRUIT SHOWS HEART HEALTH POTENTIAL

**I**n a recent study, supplementing with hydroxytyrosol – a polyphenolic compound extracted from olives – correlated with higher activity levels of the enzyme arylesterase, an antioxidant biomarker, and lower levels of oxidized LDL cholesterol. Oxidized LDL is believed to be a major player in promoting atherosclerosis (the build-up of fatty plaques in arteries) and general cardiovascular disease.

Hydroxytyrosol is thought to be the main antioxidant compound in olive fruit, and it is believed to play a significant role in many of the health benefits attributed to olive oil. Previous research has linked the compound to cardiovascular benefits, typically reductions in LDL or “bad” cholesterol. Data has also suggested the compound may boost eye health and reduce the risk of macular degeneration.

Spanish researchers reported these most recent results in the *British Journal of Nutrition*. Twenty-two healthy volunteers between 20 and 45 years of age and with a BMI between 18 and 33 kg/m<sup>2</sup> were recruited. Volunteers were randomly assigned to receive 10 to 15 grams per day of hydroxytyrosol-enriched sunflower oil or non-enriched sunflower oil for three weeks. The former provided a daily hydroxytyrosol dose of between 45 and 50 mg. After the initial three week period, volunteers had two weeks of no intervention before crossing over to receive the other intervention.

Results showed no changes in total, LDL, or HDL-cholesterol between the groups. However, consumption of the hydroxytyrosol-enriched sunflower oil produced significant reductions in oxidised LDL from 79.8 units per liter at the start of the study to 64.1 U/l after three weeks, compared to an increase from 72.7 to 86.4 U/l during the control phase. Furthermore, the activity of arylesterase increased from 235.2 to 448.9 U/l during the hydroxytyrosol phase, compared with an increase from 204.1 to 310.3 U/l during the control phase.

The researchers reported that although hydroxytyrosol-enriched sunflower oil did not significantly reduce LDL-cholesterol or increase HDL-cholesterol, it acted as a functional food by increasing arylesterase activity and reducing oxidized LDL. Based on these results, dietary sources of hydroxytyrosol appear to be capable of reducing certain risk factors associated with coronary artery disease.

*Vazquez-Velasco M, et al. Effects of hydroxytyrosol-enriched sunflower oil consumption on CVD risk factors. 2010. Br J Nutr, ePub ahead of print. doi: 10.1017/S0007114510005015*