

Source of major health benefits in olive oil revealed

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Scientists have pinned down the constituent of olive oil that gives greatest protection from heart attack and stroke. In a study of the major antioxidants in olive oil, Portuguese researchers showed that one, DHPEA-EDA, protects red blood cells from damage more than any other part of olive oil.

"These findings provide the scientific basis for the clear health benefits that have been seen in people who have [olive oil](#) in their diet," says lead researcher Fatima Paiva-Martins, who works at the University of Porto.

Heart disease is caused partly by reactive oxygen, including [free radicals](#), acting on LDL or "bad" [cholesterol](#) and resulting in hardening of the arteries. [Red blood cells](#) are particularly susceptible to oxidative damage because they are the body's oxygen carriers.

In the study, published in *Molecular Nutrition & Food Research*, Paiva-Martins and colleagues compared the effects of four related polyphenolic compounds on red blood cells subjected to oxidative stress by a known free radical generating chemical.

DHPEA-EDA was the most effective and protected red blood cells even at low concentrations. The researchers say the study provides the first evidence that this compound is the major source of the health benefit associated with virgin olive oils, which contain increased levels of DHPEA-EDA compared to other oils. In virgin olive oils, DHPEA-EDA may make up as much as half the total antioxidant component of the oil.

Paiva-Martins says the findings could lead to the production of "functional" olive oils specifically designed to reduce the risk of heart disease. "Now we have identified the importance of these compounds, producers can start to care more about the polyphenolic composition of their oils," she says.

Source: Wiley ([news](#) : [web](#))

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