



## Olive oil's heart effect located

Scientists say they have pinpointed the micronutrients in olive oil that make it a good heart protector.

Mediterranean diets have long been hailed as cutting heart attack risk.



A team of Spanish researchers believes this is partly down to compounds called phenols that have anti-inflammatory, antioxidant and clot-preventing powers.

The phenol content of olive oil appears to be important for protecting the heart

Virgin or extra virgin olive oils are best because they have the highest phenol content, the Journal of the American College of Cardiology reports.

In their study, Dr Juan Ruano and colleagues compared the effect of consuming phenol-rich olive oil, against olive oil with most of its phenol content removed.

**“ A very small change in diet, like using olive oil with a high phenolic content, may have a significant impact ”**

They tested it on a group of 21 volunteers with high cholesterol - a known heart disease risk factor.

Dr Juan Badimon, from the Mount Sinai School of Medicine, the US

To look at the effect of the diet on the cardiovascular system, the researchers measured the ability of the volunteers' blood vessels to respond to sudden changes in blood flow in the fingers, by inflating and then deflating a blood pressure cuff.

Poor responsiveness to this type of test is considered an early warning sign of cardiovascular disease and can also occur immediately after eating a very high fat meal.

### Heart protector

Blood vessel response and function was improved for the first few hours after the high-phenol olive oil meal.

This improvement was associated with increased levels of a molecule called nitric oxide, which has the job of dilating blood vessels, and reduced levels of oxidative stress - a process whereby the metabolic balance of a cell is disrupted by exposure to substances that result in the accumulation of free-radicals, which can damage the cell.

**“ Virgin olive oil is more than fat because it is a real juice with other healthy micronutrients ”**

Researcher Dr Francisco Perez Jimenez

In comparison, there was no improvement after the low-phenol oil meal.

Co-researcher Dr Francisco Perez Jimenez, of the Hospital Universitario Reina Sofia in Cordoba, said: "We think, looking at our results, that the reduction in oxidative stress and the increase in the nitric oxide bioavailability are behind the observed improvement."

"This is the first study that shows a direct benefit of an olive oil with high content in phenolic compounds on endothelial function in vivo.

"Virgin olive oil is more than fat because it is a real juice with other healthy micronutrients.

"The intake of food high in phenols compounds could improve cardiovascular health and protect the heart."

Brigid McKeivith, senior nutrition scientist at the British Nutrition Foundation, said: "It's an interesting study as it may help explain some of the benefits associated with olive oil other than its effect on blood cholesterol levels.

"However, the study used a small number of people and longer term studies with more people are needed to see if the benefit on endothelial function translates into a reduction in risk of cardiovascular disease."

Dr Juan Badimon, from the Mount Sinai School of Medicine in New York, the US, said: "These results indicate that a very small change in diet, like using olive oil with a high phenolic content, may have a significant impact in the progression of atherosclerosis."