

## How olive oil could reverse heart failure

Scientists at the University of Illinois, in Chicago, have found that the fat in olive oil kick-starts failing hearts



The fat in olive oil is beneficial for failing hearts Photo: Alamy



By **Sarah Knapton**, Science Correspondent

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Olive oil may reverse heart failure, scientists believe, after finding it helped diseased muscle to pump blood more effectively.

The health-boosting properties of a Mediterranean Diet are well known, but until now, it has been unclear what was driving the benefits.

Now researchers at the University of Illinois have discovered that oleate, the common fat in olive oil, helps failing hearts to use body fat as fuel.

A healthy heart absorbs fat to keep pumping. But when the heart is damaged it can no longer process or store fat and so it becomes starved of energy.

Not only does the heart no longer have the fuel it needs to work properly, but the toxic fat is left in the body where it can clog up arteries.

Oleate appears to kick-start genes which produce enzymes which can break down fat so it can be absorbed by the heart.

"These genes are often suppressed in failing hearts," said Douglas Lewandowski of the University of Illinois in Chicago.

"So the fact that we can restore beneficial gene expression, as well as more balanced fat metabolism, plus reduce toxic fat, just by supplying hearts with oleate is a very exciting finding.

"This gives more proof to the idea that consuming healthy fats can have a significantly positive effect on cardiac health."

Around 750,000 people are living with heart failure in Britain, with 27,000 new cases each year.

Symptoms include extreme breathlessness; fatigue; swollen ankles and weight loss.

Researchers looked at how the beating hearts of rats responded to oleate or palmitate, the fat found in animal fats and dairy.

When oleate was pumped through the failing heart muscle, it suddenly began to work more efficiently.

"We saw an immediate improvement in how the hearts contracted and pumped blood," added Dr Lewandowski.

However when animal fat was used the diseased hearts worsened and more toxic fat was produced.

Previous studies have suggested that sticking to a diet high in olive oil can be as effective as statins at reducing the risk of a heart attack.

Researchers in Barcelona found that volunteers assigned to a Mediterranean-type diet had a 30 per cent lower risk of having a heart attack or stroke over five years, compared with those randomly selected for the low fat diet.

A review of 50 academic studies in 2011 found that diets high in olive oil lowered the risk of developing conditions such as diabetes, obesity and high blood pressure.

The research was published in the journal *Circulation*.