

Extra-virgin olive oil mimics painkiller

Oil may help stave off cancer, as long as you stick to the good stuff.

[Michael Hopkin](#)

The active ingredient, oleocanthal, is responsible for the throat-stinging sensation of a good extra-virgin oil. © Punchstock

Good news for lovers of extra-virgin olive oil: besides being delicious on salads, it also contains a compound that mimics the effects of ibuprofen. So a Mediterranean-style diet might give you the supposed long-term benefits of that drug, such as a reduced cancer risk.

A daily dose of 50 g or 4 tablespoons of olive oil confers the equivalent of around 10% of the recommended ibuprofen dose for adult pain relief, say researchers led by Paul Breslin of the Monell Chemical Senses Center in Philadelphia, who discovered the effect. So although it won't cure a headache, it may give you some of the long-term benefits of repeated ibuprofen use, including helping to ward off Alzheimer's.

The compound, called oleocanthal, acts in the same way as ibuprofen to stifle components of a pain pathway called the prostaglandin system. This is in spite of the two chemicals' very different structures, the team reports in *Nature*¹.

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The compound should be present in any extra-virgin oil, Breslin says. But concentrations will vary depending on a range of factors, such as the variety of olive, and the age of the olives at pressing.

So how do you know which olive oil will give you the biggest dose? Simple, just go for the authentic Mediterranean taste, says Breslin. "Most supermarket-style extra-virgin olive oils will be relatively low in this compound," he explains. "But there are inexpensive olive oils available that have high levels. I buy mine at a local Greek store that imports oils directly from Crete and other Greek locales."

Sting in the tale

If it's a long way to your nearest Greek deli, never fear. There's a simple rule of thumb to help you out: oleocanthal is also responsible for the throat-stinging sensation of a good extra-virgin oil. "The way to check is to sip the oil neat and see how strongly it stings the throat," Breslin recommends. "The greater the sting the greater the oleocanthal level."

Does the discovery help to explain the folklore that a Mediterranean diet is good for a healthy, long life? Probably, says Breslin. The long-term benefits of ibuprofen have only been demonstrated for doses that are much larger than the amount of oleocanthal provided by 4 tablespoons of oil a day. But Breslin suspects that smaller daily doses might have the same effect.

The long-term side-effects of ibuprofen can also include damage to the kidneys and digestive system. But as oleocanthal has a different chemical structure, it is unclear whether these effects would also occur with a diet rich in olive oil.

Of course, other dietary factors, such as overall calorie intake, are important too, Breslin points out. After all, there's no point dousing your healthy salad in healthy olive oil if you chase it down with a bottle of wine and a cheesecake.

"Weight gain is a factor that needs to be held in check," says Breslin. "But the traditional Mediterranean diet, such as on Crete, involves lots of fresh vegetables and is not a high-calorie diet overall."

It seems Greece might be just the place for a healthy holiday - so long as one goes easy on the retina.

Monell Chemical Senses Center