-Oils and fats

Too much of this ‘healthy fat’ could be adding to your waistline

Olive oil is known as a ‘superfood’, but new research on mice suggests it could promote weight gain more than other fats

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ew research suggests that the fats in olive oil may lead to greater weight gain than those from other sources. The study, published in Cell Reports, found that the main fatty component in olive oil, known as oleic acid, may promote the growth of new fat cells.



Oleic acid is a type of monounsaturated fat, sometimes called omega-9. A major source of oleic acid is olive oil, but the fatty acid is also found in other oils – including rapeseed (canola) oil and sunflower oil – as well as foods such as nuts, meats, cheese, eggs and avocado.

N“You can think of the fat cells as an army,” said study co-author Dr Michael Rudolph, assistant professor of biochemistry and physiology at the University of Oklahoma, in the US. “When you give [a person] oleic acid, it initially increases the number of ‘fat cell soldiers’ in the army, which creates a larger capacity to store excess dietary nutrients.”

“Over time, if the excess nutrients overtake the number of fat cells, obesity can occur, which can then lead to cardiovascular disease or diabetes if not controlled.”

The scientists, from the universities of Oklahoma, Yale and New York, fed a variety of high-fat diets to mice, including olive oil, coconut oil, peanut oil, milk, lard and soybean oil.

They found that high levels of oleic acid changed the activity of two proteins – called AKT2 and LXR – which led to faster growth of precursor cells, which form new fat cells. The other fats didn’t have the same effect.

But Rudolph said the solution wasn’t to abandon olive oil altogether. “I think the take-home message is moderation, and to consume fats from a variety of different sources,” he said. “Relatively balanced levels of oleic acid seem to be beneficial, but higher and prolonged levels may be detrimental. If someone is at risk for heart disease, high levels of oleic acid may not be a good idea.”

However, previous research has linked oleic acid, often via olive oil, with longevity, healthy ageing, lower levels of inflammation and lower risk of obesity and heart disease. Also, given the new study was only carried out on mice, its findings may not directly translate to the effect of oleic acid on humans.

“Because people are being friendly and using ‘please’ and ‘thank you’, the LLMs are generating more extensive answers”