



Would you like brain damage with that? America's favorite cooking oil causes neurological changes, says animal study

Description

Peter Andrews is an Irish science journalist and writer, based in London. He has a background in the life sciences, and graduated from the University of Glasgow with a degree in Genetics.

New research has shown that despite being marketed as a healthy alternative, soybean oil, America's most popular oil, causes neurological changes in the brains of mice, and may contribute to autism and dementia in humans.

Extracted from the seeds of soybeans and used in everything from fast food to animal feed and even baby formula, soybean oil is easily the most widely consumed oil in the US, ubiquitous in the national cuisine.

It's in McDonald's fries, Pizza Hut crust, and the "healthy" 9-grain bread used for your Subway sandwich.

A research team from University of California, Riverside has been studying the impact of soybean oil for several years. They [previously](#) found that it induces diabetes and obesity in mice, hardly surprising given that vegetable oils are high in saturated and unsaturated fatty acids. By now, most people know that eating too much fried food is bad for your ticker.

But what is really shocking about their latest findings is the effect soybean oil seems to have on the brain.

From Alzheimer's to autism

The [study](#) is published in Endocrinology, a scientific journal, and it shows that when soybean oil is fed to mice it has major impact on their hypothalamus, an area of the brain crucial for regulating mood and behaviour.

More worryingly, it even affected over 100 of the mice's genes, including one for controlling oxytocin, the love and bonding hormone. Soybean-fed mice showed lower levels of oxytocin in the hypothalamus. Other genes affected had to do with metabolic and hormone pathways, including the insulin pathway, synonymous with diabetes. There was also upregulation of genes associated with anxiety, depression, and schizophrenia.

Considering the evidence, the authors believe that soybean oil could increase the risk of Parkinson's disease, Alzheimer's disease, and autism. However, there is no concrete proof yet that soybean oil causes these conditions, since this research was conducted on male mice only. But mice are used as a model organism for human health for a reason, as a mammal species they have similar tissues and genetics to us, and it is reasonable to provisionally project some of the authors' health warnings onto humans.

Lead author Poonamjot Deol said: *"If there's one message I want people to take away, it's this: reduce consumption of soybean oil."*

Is the GM version better?

There is a genetically engineered form of soybean oil that has a lower linoleic acid (LA) content, and this form is healthier for the heart. The authors also fed mice this form to see whether the results would be any better, but the low-LA form had a similarly detrimental effect on the mice's brains.

It is produced from what are [called](#) Roundup Ready soybeans, designed for use with the signature product of bought-out agrochemical firm Monsanto, which is embroiled in a controversy of its own.

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