

Adding sugar to a high-fat Western diet could be worse than a high-fat diet alone

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A high-fructose, high-fat diet can cause harmful effects to the livers of adult rats, according to new research published today [27 June] in *Experimental Physiology*, providing new insight into the effects of adding fructose to a Western diet high in fat.

The study showed that short-term consumption of a Western diet, rich in saturated fats and [fructose](#), is more damaging for healthy liver development than following a [high fat diet](#) alone.

Dr Susanna Iossa, who led the study at the University of Naples, Italy, said:

"This result points to the harmful effect of adding fructose to the usual western, high-fat diet and, together with other related findings, should stimulate the discussion on the use of fructose and fructose-containing sweeteners in beverages and packaged foods.

"We performed the research by using an animal model of adult sedentary humans, consisting of [adult rats](#), that were fed for two weeks with either a low-fat diet, a high-fat diet or a diet rich in fat and fructose. This latter diet is very similar in composition to the diet consumed by the large majority of the Western population. After the diet period, we evaluated liver function and we found that the presence of fructose in the high-fat diet exacerbated the impairment of this important metabolic organ, by increasing the build-up of fat in the liver, and decreasing liver insulin sensitivity.

"Much more research should be undertaken in the future, especially regarding the impact of the high-fat high-fructose diet on other metabolically important organs, in order to establish the real impact of this unhealthy dietary habit on health and well-being."

More information: Crescenzo R, Bianco F, Coppola P, Mazzoli A, Tussellino M, Carotenuto R, Liverini G, Iossa S. (2014) "Fructose supplementation worsens the deleterious effects of short-term high-fat feeding on hepatic steatosis and lipid metabolism in adult rats." *Experimental Physiology*. DOI: 10.1113/expphysiol.2014.079632

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