

# Restricting fructose in obese Latino and African American children may reduce fat accumulation in their livers

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In obese Latino and African American children, restricting dietary fructose, but not calories, may decrease liver fat and the conversion of sugar to fat in the liver, a new study finds. The results will be presented in a poster Thursday, March 5, at ENDO 2015, the annual meeting of the Endocrine Society in San Diego.

Previous studies have shown that consuming high [sugar](#)—specifically [fructose](#)—is associated with [liver fat](#) accumulation and/or hypertriglyceridemia, which may increase the risk for Type 2 diabetes and cardiovascular disease.

"These results suggest that the detrimental effects of fructose can be reversed by reducing fructose consumption," said lead study author Jean-Marc Schwarz, PhD, Professor of Biochemistry at Touro University California in Vallejo and Associate Research Endocrinologist at the University of California, San Francisco. "The conversion of sugar to fat in the liver, known as hepatic de novo lipogenesis (DNL), may be an important pathogenic mechanism leading to liver fat accumulation in children that can be reversed by fructose restriction."

Dr. Schwarz and his colleagues studied obese Latino and African American children 9 through 18 years of age who habitually ate high-sugar foods. For 10 days, the researchers provided all the children's meals, which had the same caloric and macronutrient composition as

their standard diet, but they substituted sugar with other carbohydrates.

The children were weighed daily and their diets were adjusted to maintain their baseline weight. The conversion of sugar to fat in their liver was measured, by means of Gas Chromatography/Mass Spectrometry (GC/MS) using stable isotope tracers and the liver fat percentage was determined by Magnetic Resonance Spectroscopy (MRS).

After 10 days of fructose restriction, the children's conversion of sugar to fat declined by more than 40 percent and their [liver](#) fat decreased by more than 20 percent.

The authors support public health efforts to reduce sugar consumption.

"I did not expect to see such a dramatic effect," said Schwarz. "Even though fructose and high fructose corn syrup (HFCS) consumption are high in the US population, dietary fructose restriction is an achievable goal with clear health benefits."

Provided by The Endocrine Society

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