

# Unsaturated fat associated with fatty liver disease

June 14 2017

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As the obesity epidemic continues, new data shed light on which nutrients and what quantity of those nutrients promote health or disease. In the American Gastroenterological Association journal, *Cellular and Molecular Gastroenterology and Hepatology*, scientists report on the role of macronutrients in the development of metabolically unhealthy obesity—cases where patients have diseases with obesity as the root cause, specifically nonalcoholic fatty liver disease (NAFLD).

Researchers from the University of California, San Francisco (UCSF), studied two groups of mice fed diets supplemented with either [saturated fat](#) or unsaturated fat. Surprisingly, they found that ingestion of starch and the monounsaturated fatty acid oleate led to [fatty liver disease](#), mimicking the effects of a high-fat "western diet."

"Although purported to have many health benefits, including a favorable lipid profile, too much unsaturated fat can have significant adverse effects on metabolism," said lead author Caroline C. Duwaerts, PhD, of the department of medicine and The Liver Center at UCSF. "Our research adds new information to the understanding of metabolically unhealthy [obesity](#) and should lead to additional studies focusing on saturated vs. unsaturated fats and macronutrient concentration."

Writing in an accompanying editorial ("In NAFLD, You Are What You Eat, Not Simply How Much You Eat"<sup>2</sup>), Rotonya Carr, MD, of the University of Pennsylvania notes that "this study demonstrates clearly that nutrient composition (not simply total caloric intake) matters in the

pathogenesis of NAFLD and supports the findings of other groups who have demonstrated similarly that the combination of high carbohydrate/high fat diet promotes [liver](#) injury."

Monounsaturated fats are a type of unsaturated fat that are thought to help lower cholesterol levels when used in place of saturated fats in a person's [diet](#). Monounsaturated fats include oils, such as olive, peanut and canola, as well as avocados and some nuts and seeds. Saturated fats, which are found in animal-based foods, such as meat, cheese and butter, are thought to raise bad cholesterol and lead to increased risk of heart disease.

**More information:** Caroline C. Duwaerts et al, Specific Macronutrients Exert Unique Influences on the Adipose-Liver Axis to Promote Hepatic Steatosis in Mice, *Cellular and Molecular Gastroenterology and Hepatology* (2017). [DOI: 10.1016/j.jcmgh.2017.04.004](#)

Provided by American Gastroenterological Association

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