

Weight gain study suggests polyunsaturated oil healthier option

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Short-term modest weight gains in healthy, normal weight young adults was associated with more bad cholesterol levels in those who ate muffins cooked using saturated oil. However, individuals in the same study who ate muffins made with polyunsaturated oils had improved blood cholesterol profiles, according to a new study published in the *Journal of the American Heart Association*.

Swedish researchers conducted a seven-week study in 39 adults (average age 27) who added three muffins each day made with either unsaturated sunflower or saturated palm oil. The study was designed so that participants would gain about 3 percent of their body weight during the study. One more muffin was added or subtracted depending on how much weight each individual gained, while all of the participants continued their normal diet and physical activity levels. The muffins were fairly high in carbohydrates and sugar, but only those made using saturated oils raised [cholesterol](#) concerns; although both groups showed increased insulin resistance, an early warning sign of adult-onset diabetes later in life.

Despite comparable [weight gain](#) in both groups, those who ate the unsaturated fat muffins tended to have lower low-density lipoproteins (LDL-bad cholesterol) levels, a lower the ratio between total cholesterol and high-density lipoproteins (HDL-good cholesterol), and other positive indicators of cardiovascular health.. While the average weight gain for both groups was just 2.2 percent, LDL levels differed by 9 percent and the overall cholesterol/HDL cholesterol ratio differed as much as 18 percent between the two groups..

"Even in early adulthood, it is important to avoid high-calorie foods and weight gain, but also it is important to consume sufficient amounts of polyunsaturated fats from non-hydrogenated vegetable oils," said Ulf Risérus, M.D., Ph.D., principal investigator and associate professor of

Clinical Nutrition and Metabolism at Uppsala University, in Uppsala, Sweden. . "The lowering of the cholesterol/HDL cholesterol ratio by [polyunsaturated fat](#) is of special interest because recent large studies have shown this ratio seems to predict heart disease risk even better than LDL levels alone."

That the effects were seen in less than two months on a high-calorie diet that was high in fat and some sugars is also important, he said. These short-term metabolic adverse changes might help explain why some overweight people are at higher risk of developing type 2 diabetes and cardiovascular disease in the long-term.

Researchers said their findings may have implications for many populations, in which individuals gain weight due to excess calorie intake from both sugars and fats and lack of physical activity. The term "fit and fat" has been used for obese individuals who are physically fit; they may be at lower disease risk than a lean but sedentary person. In this context it is clear that gaining weight on a high-calorie diet higher in polyunsaturated fat produces a slightly more metabolically favorable weight gain, than if the excess calories come mainly from saturated fats.

Risérus believes the effects of a high-[saturated fat](#) diet are fully reversible. The research team hopes to gain scientific evidence of this belief with results from a new trial that follows participants for a month after weight gain.

"Studies using these oils in weight-stable participants have demonstrated that the adverse effects on LDL seems to disappear shortly after they stop consuming foods with saturated fats, and this may also be the case here," he said. "Such data would be important to encourage people who gained weight to lose their weight and lower their metabolic risk."

The American Heart Association recommends that adults who would benefit from lowering LDL cholesterol reduce their intake of trans fat and limit their consumption of saturated fat to 5 to 6 percent of total calories.

Provided by American Heart Association

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