

Study shows how fatty foods curb hunger

October 7 2008

Fatty foods may not be the healthiest diet choice, but those rich in unsaturated fats – such as avocados, nuts and olive oil – have been found to play a pivotal role in sending this important message to your brain: stop eating, you're full.

A new study by UC Irvine pharmacologists shows that these fats trigger production of a compound in the small intestine that curbs hunger pangs. This discovery, the researchers say, points toward new approaches to treating obesity and other eating disorders.

Daniele Piomelli, the Louise Turner Arnold Chair in Neurosciences, and his colleagues have studied how a fat-derived compound called oleoylethanolamide regulates hunger and body weight. In their current work, which appears in the Oct. 8 issue of *Cell Metabolism*, they found that an unsaturated fatty acid called oleic acid stimulates production of OEA, which in turn decreases appetite.

Oleic acid is transformed into OEA by cells in the upper region of the small intestine. OEA then finds its way to nerve endings that carry the hunger-curbing message to the brain. There, it activates a brain circuit that increases feelings of fullness. In previous studies, Piomelli found that increasing OEA levels can reduce appetite, produce weight loss and lower blood cholesterol and triglyceride levels.

Piomelli believes OEA could be used in a variety of drugs because it is a key to the way the body naturally handles fatty foods and regulates eating and body weight.

"We are excited to find that OEA activates cell receptors that already have been the focus of successful drug development," he said. "This gives us hope for a new class of anti-obesity drugs based on the savvy use of natural appetite-controlling mechanisms."

Nearly 30 percent of Americans are obese, according to the Centers for Disease Control and Prevention, which has declared obesity an epidemic disease. The occurrence of obesity has risen by almost 60 percent since 1991, and it greatly increases the risk of premature death, diabetes, heart disease, stroke and some cancers.

Source: University of California - Irvine

Citation: Study shows how fatty foods curb hunger (2008, October 7) retrieved 21 May 2024 from <https://phys.org/news/2008-10-fatty-foods-curb-hunger.html>

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