MedicalXpress

Hot sauce ingredient reduces 'beer belly' fat as a weight-loss surgery alternative

May 9 2012

According to research from Brigham and Women's Hospital (BWH), the ingredient that gives hot sauce its heat could play a role in the future of weight loss.

Ali Tavakkoli, MD, BWH Department of Surgery, and his team have published a study investigating whether two surgeries called vagal de-afferentation—which uses capsaicin, the component responsible for the chili pepper's burning sensation—and vagatomy can achieve weight loss and reduce the risk of obesity-related diseases with fewer side effects when compared to today's bariatric surgical options.

The study is published in the May issue of *Digestive Diseases and Sciences*. The study is accompanied by an editorial by Edward A. Fox, PhD, Purdue University.

After testing the two surgeries in the lab, the researchers found that vagotomy significantly reduced total body fat, as well as visceral abdominal fat—the "beer belly" fat that pads the spaces between abdominal organs. Vagal de-afferentation also reduced these fats, but to a lesser degree.

However, according to the researchers, the reduction is still remarkable.

"The reduction in visceral fat is particularly important," said Tavakkoli. "High visceral fat volume is a marker of obesity and obesity-related diseases, such as diabetes. Preferentially lost visceral fat after vagal de-

afferentation highlights the potential for this procedure."

Vagotomy involves removing the vagus nerve, which sends information between the gut and the brain. Vagal de-afferentation also involves the vagus nerve. But rather than removing the nerve completely, surgeons use capsaicin to destroy only certain nerve fibers.

Capsaicin destroys the nerve fibers that take signals from the gut to the brain, leaving intact the nerve fibers that send signals in the opposite direction, from the brain to the gut.

Between the two surgeries, vagal de-afferentation is associated with fewer side effects.

The researchers note that more work needs to be done on whether these surgeries can be used on humans, and whether capsaicin could be applied directly to human vagal fibers. The study results, however, provide promise of what the future can hold.

"As demand for surgeries that reduce weight and obesity-related diseases increases, procedures that can achieve success in a less invasive fashion will become increasingly important," said Tavakkoli. "This is an important and developing surgical discipline, especially as diabetes rates soar worldwide, and people try to find effective therapies to fight this epidemic."

Provided by Brigham and Women's Hospital

Citation: Hot sauce ingredient reduces 'beer belly' fat as a weight-loss surgery alternative (2012, May 9) retrieved 17 April 2024 from https://medicalxpress.com/news/2012-05-hot-sauce-ingredient-beer-belly.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.