

Researchers find link between methane productions and obesity

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New Cedars-Sinai research shows obese patients who test positive for methane on their breath have a significantly higher body mass index (BMI) than their peers.

The study, which was presented at Digestive Disease Week in New Orleans, La., is the first in humans to show a link between the presence of methane-producing [bacteria](#) in the gut and elevated BMI, indicating that bacteria may play a role in obesity.

"Obesity is a major health issue and is reaching pandemic levels," said Ruchi Mathur, M.D., a physician in the Division of Endocrinology, Diabetes and Metabolism and one of the study's authors. "It is our hope that by better understanding all the factors that contribute to obesity, we can develop more effective ways of fighting it."

The research was a joint effort of the Center for Weight Loss and the GI Motility Program. The study was led by Mark Pimentel, M.D., director of the GI Motility Program at Cedars-Sinai.

"Currently we are learning new ways to treat methane-producing bacteria. Future studies addressing these and other bacteria could be part of a number of techniques to improve the chances for weight loss in obese subjects." Pimentel said.

In the study, 58 patients age 18 to 65 with BMIs between 30 and 60 were given a breath test to determine if methane was present. About 20

percent of those patients tested methane positive. The methane-positive patients had a BMI of up to 7 points higher than those patients who did not show methane on their breath test. The [body mass index](#) is used as a measurement that correlates with obesity. A methane-positive test indicates the patient has certain bacteria in the gut that produce this gas.

Previous research by the Cedars-Sinai GI Motility Program has shown that methane from methane-producing bacteria can slow the gut down. Mathur said this could play a role in explaining why [obese patients](#) with these methane type of bacteria have a higher BMI. Methane, by slowing the gut, could increase calorie harvest.

"Our strategies for treating this complex medical problem are limited. This finding is a helpful step in better understanding the growing problem of obesity and potentially providing more effective medical treatments," said Adrienne Youdim, M.D., director of medical weight loss at the Cedars-Sinai Center for [Weight Loss](#).

According to the Centers for Disease Control, 67 percent of adults ages 20 or older are overweight or obese. About 34 percent are obese. Obesity is generally defined as having a BMI of 30 or above. Obesity is associated with many serious health concerns, including diabetes, heart disease, high blood pressure, some cancers, sleep apnea and other medical problems.

Provided by Cedars-Sinai Medical Center

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