

First randomized controlled trial of FMT for obesity shows potential progress

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Using capsules filled with fecal matter from a lean donor, researchers successfully changed some of the composition of the gut microbiota of patients with obesity, a possible step toward a new treatment for weight loss. In the first randomized controlled trial of fecal microbiota transplantation (FMT) in metabolically healthy people with obesity, researchers presenting at Digestive Disease Week (DDW) 2019 said they were encouraged they could induce changes among the trillions of microorganisms and their genetic material within the intestinal tract.

"In our clinic, we see patients who really don't have any other medical problems, but just cannot lose weight. It is a very important patient population that we really wanted to give focus to and try to help understand," said Jessica Allegretti, MD, lead author of the study and director of the Fecal Microbiota Transplant Program at Brigham and Women's Hospital in Boston.

The pilot study included 22 patients with [obesity](#) but did not have any other health issues commonly associated with obesity, such as diabetes or liver disease. During the 12-week study, half the patients took capsules containing fecal matter from a lean donor and the rest took identical-looking placebo capsules. Researchers then looked for changes in a gut hormone, glucagon-like peptide 1 (GLP1), which is linked to the satiety reflex, the feeling that you've eaten enough, and is associated with weight gain and loss. Potential [weight loss](#) was a secondary focus of the study.

While initial trial results did not show differences in the GLP1 hormone or weight loss, researchers said they were very pleased to detect other changes in the microbiota of FMT recipients, including a decrease in a specific bile acid and alterations in stool samples that showed increased similarity to those of the lean donor.

"Our study adds an encouraging first step in trying to understand the role the gut microbiome is playing in metabolically [healthy people](#) with obesity," Dr. Allegretti said. "This will hopefully lend itself to more targeted therapies in the future."

Researchers said they plan to seek more sensitive measures of GLP1 and, with additional research, look at varied dosages of fecal material and other mechanisms to better understand the role of the microbiome in obesity. Animal models have previously shown that obese mice can be made lean and lean mice made obese by changing their gut microbiota. Previous human trials of FMT transplant have shown improvement in [insulin resistance](#) in the liver in [patients](#) with [metabolic syndrome](#).

"The bile acid data is certainly intriguing and suggests that maybe there are one or more different pathways at play," Dr. Allegretti added. "Obesity is a very complex disorder, and a multifactorial process is probably at the heart of its development."

Finch Therapeutics, of Somerville, Massachusetts, provided funding for the research.

More information: Dr. Allegretti will present data from the study, "Fecal microbiota transplantation for the treatment of obesity: a randomized, placebo-controlled pilot Trial," abstract 620, on Monday, May 20, at 10 a.m. PDT.

Provided by Digestive Disease Week

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