

# Gut Microbes Could Help Us Lose Weight

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Microbes in the gut may be a key to helping people lose weight, according to two tantalizing new studies.

One study in mice found that gastric bypass surgery may aid weight loss not just by reducing the size of the stomach but also by changing the composition of the microbial population. The second study found that people with more methane-producing microbes were more likely to be heavy and have a high percentage of body fat.

The findings might ultimately lead to new, microbe-centered approaches to weight loss, an area in which drug development has been notoriously difficult.

The studies aren't the first to tie gut microbes to obesity. Several years ago, when the study of the microbiome was first unfolding, researchers found that both people and mice that are overweight tend to have a population of gut microbes different in composition from that of lean individuals (see "[Our Microbial Menagerie](#) [1]"). When they lost weight, the microbes changed accordingly. And when microbes from overweight people were transplanted into microbe-free mice, the animals gained more weight than when they were treated with microbes from lean people.

[Lee Kaplan](#) [2] and collaborators at Harvard now have more proof that microbes can help control weight, and that they may play a role in the one of the most successful weight loss treatments available. Scientists already had hints that the benefits of gastric bypass surgery don't derive simply from a reduction in calories consumed. (The surgery dramatically reduces the size of the stomach, and hence the amount of food people can eat.) Patients show changes in blood sugar, as well as changes in hunger-regulating hormones, even before they lose weight.

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<http://www.mdtmag.com/news/2013/03/gut-microbes-could-help-us-lose-weight>

**Links:**

[1] <http://www.technologyreview.com/featuredstory/408065/our-microbial-menagerie/>

[2] <http://www.massgeneral.org/doctors/doctor.aspx?id=16686>