

Q&A: Probiotics, gut bacteria and weight—what's the connection?

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My friend insists that taking a probiotic supplement has helped her lose 50 pounds by keeping her gut bacteria in check. Will taking a probiotic in conjunction with a balanced diet and exercise help me lose weight?

ANSWER: It is true that the gut bacterial population in people who are obese differs from the population in people who are lean. Whether this difference contributes to obesity or is a consequence of obesity is unknown.

So far, research hasn't yielded clear answers. Although taking a [probiotic](#) is unlikely to cause harm, it may not help fight obesity.

First and foremost, it is important to understand that [weight gain](#) is essentially a function of energy imbalance. You gain weight when you take in more calories than your body burns. And there is some evidence that bacteria in the gut play a role in how efficiently the body extracts energy from the food that reaches the small intestine.

Your [digestive tract](#), also called the gut, contains trillions of bacteria. Many of those bacteria play useful roles in the body, including metabolizing nutrients from food. While much of the bacteria in the gut are valuable, some are not. Studies have been performed about how an imbalance between good and bad [gut bacteria](#) could contribute to certain medical disorders.

Eating foods such as yogurt and sauerkraut that contain probiotics—a type of "good" bacteria—or taking a probiotic supplement have been credited with health benefits. Although more research is needed, there is some evidence that probiotics might improve gut health.

To date, however, the only studies that have shown convincing results that changing the composition of gut bacteria—sometimes called the [gut microbiome](#)—affects weight have been performed using germ-free mice. In humans, on the other hand, data are murky when it comes to the role of probiotics in helping with [weight loss](#).

An analysis of the results of published research studies that have

investigated probiotics and weight loss revealed no clear answers. That is partly because research methods varied widely among those studies, and a range of different probiotics were included.

What is clear is that the most important factor determining the makeup of the gut microbiome is diet. But, again, that calls into question which comes first. Does obesity lead to a certain type of microbiome? Or does a certain type of microbiome lead to obesity? At this point, this is unknown.

What is known is that you can take steps to maintain a healthier gut microbiome, and these steps also should help with your weight-loss journey. For example, eating plenty of fruits and vegetables appears to help good bacteria in your gut thrive. It also can be beneficial in filling you up and limiting overeating of snack foods and other unnecessary calories. Also, limiting fat, sugar and animal sources of protein can help maintain a healthier gut microbiome, too, because research shows that diets high in those foods correlate with a more unfavorable bacteria makeup in the gut.

Taking a probiotic supplement also may improve the health of your gut microbiome, but it is unclear what role those supplements play in weight loss. The most reliable way to lose weight is to eat a [healthy diet](#) and exercise regularly, so you're burning more calories than you're consuming. I always recommend that you direct specific questions about diet and exercise to your primary health care team.

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