

# Diet Hit A Snag? Your Gut Bacteria May Be Partly To Blame

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A small new study shows that successful dieters had an abundance of a bacteria called [Phascolarctobacterium](#), whereas another bacteria, *Dialister*, was associated with a failure to lose weight.

Have you ever been on a diet but didn't hit your goal weight? Your gut bacteria may be part of the explanation.

New research suggests the mix of microbes in our guts can either help — or hinder — weight-loss efforts.

"We started with the premise that people have different microbial makeups, and this could influence how well they do with dieting," explains [Purna Kashyap](#), a gastroenterologist at the Mayo Clinic in Rochester, Minn.

As part of the study, Kashyap and his collaborators tracked the progress of people who were enrolled in a lifestyle-intervention program for weight loss. The participants were advised to follow a low-calorie diet, and they were tracked closely for about three months.

"We found that people who lost at least 5 percent of their body weight had a different gut bacteria as compared to those who did not lose 5 percent of their body weight," Kashyap explains. Their findings are [published](#) in the journal *Mayo Clinic Proceedings*.



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The successful dieters had an increased abundance of a bacteria called [Phascolarctobacterium](#), whereas another bacteria, *Dialister*, was associated with a failure to lose the weight. And, Kashyap says it's likely that there are other types of bacteria that might influence dieting as well.

So, how might bacteria influence weight loss? It turns out we can get a significant number of calories from our microbes.

Here's how it works: Consider what happens when you eat an apple. You digest most of it.

"But there's a certain part of the apple we can't absorb," explains [Martin Blaser](#), a professor in the Department of Microbiology at NYU Langone Medical Center. "We don't have the right enzymes to digest every bit of [the apple], but our bacteria can."

Think of it this way: The bacteria eat what we can't.

And, in the process, they produce byproducts that we can digest. So these byproducts become another source of calories for us.

The new study suggests that certain bacteria — or mix of bacteria — may be more efficient at creating "extra" calories for us to digest.

"Somewhere between 5 to 15 percent of all our calories come from that kind of digestion, where the microbes are providing energy for us, that we couldn't [otherwise] get," Blaser explains.

This calorie boost could be beneficial if food were scarce. "If times were bad, if we were starving, we'd really welcome it," Blaser says.



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But at a time when many people want to lose weight, these extra calories may be an unwanted gift.

But the study was small — just 26 participants. Now, researchers want to conduct a larger, follow-up study, including dieters from different geographic regions, to see if they can reproduce the results.

"If two studies show the same thing, then we're on more solid ground," Blaser says. He was not involved in the research, but agreed to review the findings for NPR. For now, he says these findings are intriguing, but preliminary.

Down the road, if the results hold up in a larger group, it could lead to more tailored dieting approaches. "What we would hope to do is to be able to individualize care for people," Kashyap says. "And we'd also try to develop new probiotics, which we could use to change the microbial makeup."

Probiotics that are currently on the market would not be effective. The idea is to develop a new product that includes the specific types of bacteria linked to successful dieting.

But it's not so simple to manipulate the mix of microbes in our guts. Identifying the organism — or organisms — that are thought to be beneficial is just the first step.

Next, the organisms would need to be cultivated and mass-produced in order to create a new probiotic. "Some bacteria are difficult to work with," so it could be challenging, says Blaser.

So, if it's possible to produce a probiotic for dieters based on this research, "it's at least some years off," Blaser says.