

Gut bacteria may impact body weight, fat and good cholesterol levels

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For better cardiovascular health, check your gut. Bacteria living in your gut may impact your weight, fat and good cholesterol levels, factors necessary to help maintain a healthy heart, according to new research in *Circulation Research*, an American Heart Association journal.

"Our study provides new evidence that microbes in the gut are strongly linked to the blood level of HDL (good cholesterol) and triglycerides and may be added as a new risk factor for abnormal blood lipids, in addition to age, gender, BMI and genetics," said Jingyuan Fu, Ph.D., study lead author and associate professor of genetics at University Medical Center Groningen in the Netherlands.

Using state-of-the-art deep sequencing technology, researchers studied the association between [gut microbes](#) and [blood lipid levels](#) in 893 people in the Netherlands. They identified:

- 34 different types of bacteria contributed to differences in body fat (BMI) and blood lipids such as triglycerides and the [good cholesterol](#) known as high-density lipoprotein or HDL. Most were new associations.
- Bacteria in the gut contributed to 4.6 percent of the difference in body fat, 6 percent in triglycerides and 4 percent in HDL.
- Surprisingly, gut bacteria had little relationship with bad cholesterol (low-density lipoproteins or LDL) or total [cholesterol levels](#).

Microbes and humans have a symbiotic relationship. The human body contains trillions of microorganisms, 10 times the number of human cells. These microbes help us to digest food and train our immune systems. The bacterial community in the human gut has been referred to as an extra organ because of its important role in an individuals' health, researchers said.

"As less than 30 percent of bacteria in the [human gut](#) have been cultured, we know very little about who they are and what they do. With state-of-art deep sequencing technology, we are now able to identify them," Fu said.

While additional studies are needed in a larger and diverse population to test their hypotheses, researchers believe these findings may someday open the door to new therapies to alter the [gut bacteria](#) types that contribute to body weight, fat and cholesterol levels to help aid in the prevention of heart disease.

"We also hope our findings inspire microbiologists to continue to research the function of these bacteria and their specific role in the regulation of lipid metabolism," Fu said.

Provided by American Heart Association

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