

Study in pregnant women suggests probiotics may help ward off obesity

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One year after giving birth, women were less likely to have the most dangerous kind of obesity if they had been given probiotics from the first trimester of pregnancy, found new research that suggests manipulating the balance of bacteria in the gut may help fight obesity.

Probiotics are bacteria that help maintain a healthy bacterial balance in the digestive tract by reducing the growth of harmful bacteria. They are part of the normal digestive system and play a role in controlling inflammation. Researchers have for many years been studying the potential of using probiotic supplementation to address a number of intestinal diseases. More recently, [obesity](#) researchers have started to investigate whether the balance of bacteria in the gut might play a role in making people fat and whether adjusting that balance could help.

"The results of our study, the first to demonstrate the impact of probiotics-supplemented dietary counselling on adiposity, were encouraging," said Kirsi Laitinen, a nutritionist and senior lecturer at the University of Turku in Finland who presented her findings on Thursday at the European Congress on [Obesity](#). "The women who got the probiotics fared best. One year after childbirth, they had the lowest levels of central obesity as well as the lowest body fat percentage."

"Central obesity, where overall obesity is combined with a particularly fat belly, is considered especially unhealthy," Laitinen said. "We found it in 25% of the women who had received the probiotics along with dietary counselling, compared with 43% in the women who received diet advice

alone."

In the study, 256 women were randomly divided into three groups during the first trimester of [pregnancy](#). Two of the groups received dietary counselling consistent with what's recommended during pregnancy for healthy weight gain and optimal foetal development. They were also given food such as spreads and [salad dressings](#) with monounsaturated and polyunsaturated fatty acids, as well as fibre-enriched pasta and breakfast cereal to take home. One of those groups also received daily capsules of probiotics containing Lactobacillus and Bifidobacterium, which are the most commonly used probiotics. The other group received dummy capsules. A third group received dummy capsules and no dietary counselling. The capsules were continued until the women stopped exclusive breastfeeding, up to 6 months.

The researchers weighed the women at the start of the study. At the end of the study they weighed them again and measured their waist circumference and skin fold thickness. The results were adjusted for weight at the start of the study.

Central obesity - defined as a body mass index (BMI) of 30 or more or a waist circumference over 80 centimetres - was found in 25% of the women who had been given the probiotics as well as diet advice. That compared with 43% of the women who got dietary counselling alone and 40% of the women who got neither diet advice nor probiotics. The average body fat percentage in the probiotics group was 28%, compared with 29% in the diet advice only group and 30% in the third group.

Laitinen said further research is needed to confirm the potential role of probiotics in fighting obesity. One of the limitations of the study was that it did not control for the mothers' weight before pregnancy, which may influence how fat they later become.

She said she and her colleagues will continue to follow the women and their babies to see whether giving probiotics during pregnancy has any influence on health outcomes in the children.

"The advantage of studying pregnant women to investigate the potential link between probiotics and obesity is that it allows us to see the effects not only in the women, but also in their children," she said. "Particularly during pregnancy, the impacts of obesity can be immense, with the effects seen both in the mother and the child. Bacteria are passed from mother to child through the birth canal, as well as through breast milk and research indicates that early nutrition may influence the risk of obesity later in life. There is growing evidence that this approach might open a new angle on the fight against obesity, either through prevention or treatment."

Latinen's study was funded by the Social Insurance Institution of Finland, the Academy of Finland and the Sigrid Juselius Foundation, a Finnish medical research charity.

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