

Gut health linked to excessive weight gain during pregnancy

By Stephen Daniells, 10-Mar-2010

Related topics: Probiotics and prebiotics, Gut health, Maternal & infant health, Weight management

The link between gut microflora populations and weight may also extend to pregnancy, with a new study revealing that women who gain excessive weight during pregnancy have different microfloral profiles.

A study with 50 pregnant women revealed that women who experienced excessive weight gain during pregnancy had more *Escherichia coli* bacteria in their gut, and fewer *Bifidobacteria* than women with normal weight gain during pregnancy, according to findings published in the *British Journal of Nutrition*.

"Therefore, gut microbiota composition is related to body weight, weight gain and metabolic biomarkers during pregnancy, which might be of relevance to the management of the health of women and infants," wrote the researchers, led by Yolanda Sanz from the Spanish National Research Council (CSIC) in Valencia.

The study builds on earlier studies that have linked gut microflora and obesity. A breakthrough paper published in *Nature* in December 2006 reported that microbial populations in the gut are different between obese and lean people, and that when the obese people lost weight their microflora reverted back to that observed in a lean person, suggesting that obesity may have a microbial component.

New findings

The new study looked at gut microbiota populations in 34 normal weight and 16 overweight women at the 24th week of their pregnancies. Data showed that overweight women had fewer *Bifidobacterium* and *Bacteroides* and more *Staphylococcus*, *Enterobacteriaceae* and *E. coli* than normal-weight women.

Increased *Bacteroides* levels were seen as beneficial as they were associated with higher levels of HDL-cholesterol and improved folic acid levels, while higher *Bifidobacterium* levels were also associated with increased levels of the B vitamin.

Furthermore, women with excessive weight gain had higher levels of *E.coli* and lower levels of *Bifidobacterium* and *Akkermansia muciniphila* than women with normal weight gain, said the researchers.

It is too soon to consider a potential role for probiotics and/or prebiotics in overweight women during pregnancy, but the new research points to a potential use in the future.

Indeed, a recent study by scientists at the University of Turku found that probiotic supplements during pregnancy may reduce the risk of obesity later in a baby's life, with fewer births of larger babies (*British Journal of Nutrition*, doi: 10.1017/S0007114509993898)

Helping mum regain her figure

Finnish scientists reported last year at the European Congress on Obesity that probiotic supplements during the first trimester of pregnancy may help women lose weight after the infant's birth.

Supplements containing *Lactobacillus* LGG (provided by Valio) and *Bifidobacterium lactis* (provided by Chr Hansen) were associated with less central obesity, defined as a body mass index (BMI) of 30 or more or a waist circumference over 80 centimetres.

"The results of our study, the first to demonstrate the impact of probiotics-supplemented dietary counselling on adiposity, were encouraging," said researcher Kirsi Laitinen from the University of Turku in Finland. "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."


Source: *British Journal of Nutrition*

Published online ahead of print, *First View* article, doi:10.1017/S0007114510000176

"Gut microbiota composition is associated with body weight, weight gain and biochemical parameters in pregnant women"

Authors: A. Santacruz, M. C. Collado, L. García-Valdés, M. T. Segura, J. A. Martín-Lagos, T. Anjos, M. Martí-Romero, R. M. Lopez, J. Florido, C. Campoy, Y. Sanz

Copyright - Unless otherwise stated all contents of this web site are © 2000/2010 - Decision News Media SAS - All Rights Reserved - For permission to reproduce any contents of this web site, please email our Syndication department: [Administration & Finance](#) - Full details for the use of materials on this site can be found in the Terms & Conditions

© 2000/2010 - Decision News Media SAS - All right reserved. 

<http://www.nutraingredients-usa.com/content/view/print/281261>