

# Pre-pregnancy BMI important indicator of offspring obesity

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(HealthDay) -- Maternal gestational weight gain (GWG) during the first 20 weeks of pregnancy correlates with body mass index (BMI)-based overweight/obesity and abdominal obesity at age 16, but maternal pre-pregnancy BMI is a stronger indicator of offspring obesity, according to a study published in the May issue of *BJOG: An International Journal of Obstetrics and Gynaecology*.

To investigate the correlation between maternal GWG and offspring obesity at age 16, Jaana Laitinen, M.D., from the Finnish Institute of Occupational Health in Oulu, and colleagues conducted a [prospective cohort study](#) of mothers and their adolescent offspring (3,265 boys and 3,372 girls) born from singleton pregnancies in the Northern Finland Birth Cohort 1986. Maternal GWG was assessed at 20 weeks of

gestation in municipal maternity clinics. Study nurses measured offspring weight, height, and waist circumference during a clinical examination.

The researchers found that the highest quartile of maternal weight gain in the first 20 weeks of pregnancy (more than 7.0 kg) correlated independently with BMI-based overweight/obesity and abdominal obesity (odds ratio [OR], 1.46 and 1.37, respectively) in children at age 16. Of all the covariates, the highest odds of both measures of obesity were seen with maternal pre-pregnancy obesity (OR, 4.57 and 4.43, respectively).

"Maternal overnutrition during the first half of gestation predicts offspring overweight/obesity and abdominal obesity in adolescence, yet a high pregravid BMI appears to be a more important determinant of both outcomes," the authors write.

**More information:** [Abstract](#)  
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