

Excessive pregnancy weight gain raises the risk of having a fat baby

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Women who gain too much weight during pregnancy tend to have newborns with a high amount of body fat, regardless of the mother's weight before pregnancy, a new study finds. The results will be presented Tuesday at The Endocrine Society's 93rd Annual Meeting in Boston.

High fat at birth is a possible risk factor for [childhood obesity](#), said the study's principal investigator, Jami Josefson, MD, a pediatric endocrinologist at Chicago's Children's Memorial Hospital and assistant professor at Northwestern University Feinberg School of Medicine.

"Previous studies have shown that children of mothers who gain too much [weight](#) during pregnancy are more likely to be overweight for their age," Josefson said. "However, not all these studies accounted for the mother's diabetes status during pregnancy, which is a known risk factor for offspring obesity."

The new study evaluated only pregnant women without [gestational diabetes](#), therefore ruling out the chance that this disorder could account for their findings.

Josefson and her colleagues wanted to learn whether [pregnant women](#) who gain more than the recommended amount of weight have fat infants. Doctors, however, do not typically measure a newborn's [body fat](#), she said. Many past studies that measured newborn body fat used an imprecise method, such as skin fold thickness, according to the authors'

abstract.

This study used a new infant [body composition](#) system (Pea Pod) that employs an air-displacement technique, which Josefson said accurately and safely measures newborn body fat. This technique requires the infant to simply lie in a machine for two minutes, she said. Newborns in the study underwent measurements of length, weight and fat within 48 hours of birth.

Of the 56 mothers the researchers studied, 31 women were within guidelines for pregnancy weight gain, and 25 exceeded the guidelines. The Institute of Medicine recommends that women at a healthy weight before pregnancy gain 25 to 35 pounds while expecting a single baby; overweight women, 15 to 25 pounds; and obese women, 11 to 20 pounds.

Study subjects who were obese before pregnancy were more likely than healthy-weight women to exceed the weight-gain guidelines (70 percent versus 31 percent, respectively), the authors reported. Yet regardless of pre-pregnancy weight, women who put on more than the recommended weight gave birth to significantly fatter babies. Their newborns had 490 grams, or 17.5 ounces, of body fat, whereas [newborns](#) of women who stayed within the guidelines had 390 grams (13.9 ounces) of fat. This higher obesity risk existed even when birth weight was normal.

"Excessive weight gain during pregnancy, regardless of pre-pregnancy weight, is an important risk factor for newborn obesity," Josefson said. "More research is needed to determine if high amounts of fat at birth are associated with high amounts of fat in childhood."

Provided by The Endocrine Society

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