

# Women who gain too much or too little weight during pregnancy at risk for having an overweight child

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Gaining both too much or too little weight during pregnancy appears to increase the risk of having an overweight or obese child, according to a Kaiser Permanente study published today in the *American Journal of Obstetrics and Gynecology*.

In one of the largest studies to examine current Institute of Medicine recommendations regarding pregnancy [weight gain](#) in relation to childhood obesity, researchers reviewed the [electronic health records](#) of 4,145 racially diverse female members of Kaiser Permanente in Northern California who had completed a health survey between 2007 and 2009 and subsequently had a baby. Researchers reviewed the medical records of those children between ages 2 and 5 years old and found that:

- Among all women who gained more than the recommended weight during pregnancy, 20.4 percent of their children were [overweight](#) or obese, compared with 19.5 percent in women who gained less than recommended weight and 14.5 percent in women who gained weight within

the guidelines.

- Women with a normal Body Mass Index measurement before pregnancy who gained less than the recommended amount were 63 percent more likely to have a child who became overweight or obese.
- Women with a normal BMI before pregnancy with weight gain above recommendations were 80 percent more likely to have an overweight or obese child.

"The stronger association we found among normal weight women who gained too much or too little weight during pregnancy suggests that perhaps weight gain in pregnancy may have an impact on the child that is independent of genetic factors," said senior investigator Monique M. Hedderson, PhD, Kaiser Permanente Division of Research in Oakland, Calif.

"Gaining either too little or too much weight in pregnancy may permanently affect mechanisms that manage energy balance and metabolism in the offspring, such as appetite control and energy expenditure," said the study's lead author Sneha Sridhar, MPH, Kaiser Permanente Division of Research. "This could potentially have long-term effects on the child's subsequent growth and weight."

Starting BMI guidelines and weight gain recommendations used in the study are from the Institute of Medicine. For obese women (BMI of 30 or greater), the recommended weight gain during [pregnancy](#) is 11 to 20 pounds; for [overweight women](#) (BMI between 25 and 29), it is 15 to 25 pounds; for normal weight women (BMI between 18.5 and 25), it is 25 to 35 pounds; and for underweight [women](#) (BMI less than 18.5), it is 28 to 40 pounds.

For their children, overweight/obesity was defined as a BMI between ages 2 and 5 that was greater than or equal to the 85th percentile of the Centers for Disease Control and Prevention child growth standards.

Provided by Kaiser Permanente

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