Women with obesity do not need to gain weight during pregnancy, new study suggests

March 28 2024

Credit: CC0 Public Domain

The guidelines for weight gain during pregnancy in obese women have long been questioned. New research from Karolinska Institutet supports the idea of lowering or removing the current recommendation of a weight gain of at least 5 kg. The results are published in *The Lancet*. 
International guidelines from the U.S. Institute of Medicine (IOM) state that women with obesity should gain a total of 5 to 9 kg during pregnancy, compared to 11.5 to 16 kg for normal-weight women. The guidelines have long been questioned, but there has been no evidence to warrant a re-examination.

A new study from Karolinska Institutet in Sweden now shows that there are no increased health risks for either the mother or the child with weight gain below current guidelines for women with obesity class 1 and 2 (BMI of 30–34.9 and 35–39.9 respectively). On the contrary, for women with obesity class 3 (BMI over 40), weight gain below current guidelines might even be beneficial for those with class 3 obesity.

The study supports previous calls to either lower or remove the current recommended lower limit of a weight gain of at least 5 kg, according to Kari Johansson, docent at the Department of Medicine, Solna.

"We hope that our research can inform a re-examination of national and international guidelines on weight gain during pregnancy," she says.

The study is based on electronic medical records and registry data for 15,760 women with obesity in Stockholm and Gotland (the so-called Stockholm Gotland Perinatal Cohort). Of the women in the study, 11,667 had obesity class 1; 3,160 had obesity class 2; and 933 had obesity class 3. The study included singleton pregnancies that delivered between 2008 and 2015. The women were followed for a median of eight years after delivery.

Ten known adverse outcomes associated with weight gain during pregnancy were studied: pre-eclampsia, gestational diabetes, excess postpartum weight retention, maternal cardiometabolic disease, unplanned cesarean delivery, preterm birth, large for gestational age and small for gestational age at birth, stillbirth and infant death. These
adverse outcomes were assigned weights according to their severity and combined into an adverse composite outcome.

Overall, the study shows no increased risks of the adverse composite outcome with weight gain below current IOM guidelines in women with obesity classes 1 and 2. For women with obesity class 3, on the contrary, weight gain values below the guidelines or weight loss were associated with reduced risk of the adverse composite outcome. For example, an absence of weight gain (i.e., 0kg) was associated with a risk reduction of about 20%.

"Based on this, we have concluded that weight gain below current recommendations is likely safe in pregnancies with obesity, and might even be beneficial for those with class 3 obesity," says Kari Johansson.

The results also indicate that there is a need for specific recommendations for women with class 3 obesity.

"Unlike today, this group could receive separate recommendations," says Kari Johansson.

The researchers will now proceed with similar studies on overweight, normal weight and underweight women.


Provided by Karolinska Institutet