

Are there perinatal benefits to pregnant patients after bariatric surgery?

Yes. Authors of a large population-based cohort study found many perinatal benefits associated with bariatric surgery, including risk reduction for macrosomia (adjusted odds ratio [aOR], 0.24), preeclampsia (aOR, 0.53), gestational diabetes (aOR, 0.60), and cesarean delivery (aOR, 0.65). In addition, these findings were independent of the time interval between the bariatric surgery and pregnancy, whether patients had comorbidities, and for the 2 most common types of bariatric surgery performed.

FAST TRACK

Patients who had bariatric surgery ($n = 1,886$) had a reduced risk of macrosomia, preeclampsia, gestational diabetes, and cesarean delivery compared with patients who did not have bariatric surgery ($n = 18,327$)

Getahun D, Fassett MJ, Jacobsen SJ, et al. Perinatal outcomes after bariatric surgery. *Am J Obstet Gynecol*. 2021;S0002-9378(21)00771-7. doi: 10.1016/j.ajog.2021.06.087.

EXPERT COMMENTARY

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Prepregnancy obesity continues to rise in the United States, with a prevalence of 29% among reproductive-age women in 2019, an 11% increase from 2016.¹ Pregnant patients with obesity are at increased risk for multiple adverse perinatal outcomes, including gestational diabetes and preeclampsia. Bariatric surgery is effective for weight loss and has been shown to improve comorbidities associated with

obesity,² and it may have potential benefits for pregnancy outcomes, such as reducing rates of gestational diabetes and preeclampsia.³⁻⁵ However, little was known about other outcomes as well as other potential factors before a recent study in which investigators examined perinatal outcomes after bariatric surgery.

Details of the study

Getahun and colleagues conducted a population-based, retrospective study of pregnant patients who were eligible for bariatric surgery (body mass index [BMI] ≥ 40 kg/m² with no comorbidities or a BMI between 35 and 40 kg/m² with obesity-related comorbidities, such as diabetes). They aimed to evaluate the association of bariatric surgery with adverse perinatal outcomes.

Results. In a large sample of pregnant patients eligible for bariatric surgery ($N = 20,213$), the authors found that patients who had bariatric surgery ($n = 1,886$) had a reduced risk of macrosomia (aOR, 0.24), preeclampsia (aOR, 0.53), gestational diabetes (aOR, 0.60), and cesarean delivery (aOR, 0.65) compared with those who did not

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have bariatric surgery (n = 18,327). They also found that patients who had bariatric surgery had an increased risk of small-for-gestational age neonates (aOR, 2.46) and postpartum hemorrhage (aOR, 1.79).

These results remained after adjusting for other potential confounders. The authors evaluated the outcomes based on the timing of surgery and the patients' pregnancy (<1 year, 1–1.5 years, 1.5–2 years, >2 years). The outcomes were more favorable among the patients who had the bariatric surgery regardless of the time interval of surgery to pregnancy than those who did not have the surgery. In addition, the benefits of bariatric surgery did not differ between the 2 most common types of bariatric surgery (Roux-en-Y gastric bypass and vertical sleeve gastrectomy) performed in this study, and both had better outcomes than those who did not have the surgery. Finally, patients with chronic hypertension and pregestational diabetes who had bariatric surgery also had lower risks of adverse outcomes than those without bariatric surgery.

Study strengths and limitations

Given the study's retrospective design, uncertainties and important confounders could not be addressed, such as why certain eligible patients had the surgery and others did not. However, with its large sample size and an appropriate comparison group, the study findings further support the perinatal benefits of bariatric surgery in obese patients. Of note, this study also had a large sample of Black and Hispanic patients, populations known to have higher rates of obesity¹ and pregnancy complications. Subgroup analyses within each racial/ethnic group revealed that those who had the surgery had lower

WHAT THIS EVIDENCE MEANS FOR PRACTICE

An important, modifiable risk factor for adverse perinatal outcomes is the patient's prepregnancy BMI at the time of pregnancy. Bariatric surgery is an effective procedure for weight loss. There are many perinatal benefits for eligible patients who have bariatric surgery before pregnancy. Clinicians should counsel their obese patients who are considering or planning pregnancy about the benefits of bariatric surgery.

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risks of adverse perinatal outcomes than those who did not.

Patients who had the bariatric surgery had an increased risk of postpartum hemorrhage; however, there is no physiologic basis or theory to explain this finding, so further studies are needed. Lastly, although patients who had bariatric surgery had an increased risk of small-for-gestational-age babies and the study was not powered for the risk of stillbirth, the patients who had the surgery had a reduced risk of neonates admitted to the neonatal intensive care unit. More data would have been beneficial to assess if these small-for-gestational-age babies were healthy. In general, obese patients tend to have larger and unhealthy babies; thus, healthier babies, even if small for gestational age, would not be an adverse outcome.

Benefits of bariatric surgery extend to perinatal outcomes

This study reinforces current practice that includes eligible patients being counseled about the health-related benefits of bariatric surgery, which now includes more perinatal outcomes. The finding of the increased risk of small-for-gestational-age fetuses supports the practice of a screening growth ultrasound exam in patients who had bariatric surgery. ●

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