

Are there long-term benefits to infants born to patients after bariatric surgery?

Yes. Investigators found lower risks of: birth injuries (odds ratio [OR], 0.27), convulsions (OR, 0.43), newborn carbohydrate metabolism disorders (OR, 0.54), and viral intestinal infections (OR, 0.56) for newborns and infants born to patients after bariatric surgery. However, these infants also had an increased risk of respiratory failure from bronchiolitis (OR, 2.42), which remained significant after adjusting for prematurity, small for gestational age, and other confounders (OR, 1.37).

FAST TRACK

Compared with pregnancies before bariatric surgery, pregnancies after bariatric surgery had lower rates of several adverse pregnancy outcomes, including preeclampsia, gestational hypertension, and gestational diabetes

Rives-Lange C, Poghosyan T, Phan A, et al. Risk-benefit balance associated with obstetric, neonatal, and child outcomes after metabolic and bariatric surgery. *JAMA Surg.* 2023;158:36-44. doi:10.1001/jamasurg.2022.5450.

EXPERT COMMENTARY

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Pre-pregnancy obesity continues to rise, with approximately 40% of reproductive-aged patients having a body mass index greater than 30 kg/m².¹ Several adverse perinatal outcomes are more common in pregnant patients with obesity.² In addition, their infants have a higher risk of obesity, insulin resistance, hypertension, and neurodevelopmental disorders in the long term.^{3,4}

Bariatric surgery is an effective procedure for weight loss and has been shown to

lower adverse pregnancy outcomes, such as hypertensive disorders of pregnancy and gestational diabetes.^{5,6} Benefits to newborns, however, have been debated.⁵ In addition, long-term benefits to infants were unknown until a recent study evaluated neonatal and child outcomes up to 2 years after pregnancy among patients who had undergone bariatric surgery.

Details of the study

Using the French nationwide database, Rives-Lange and colleagues performed a population-based study that included patients who had at least 1 pregnancy before and 1 pregnancy after bariatric surgery. Their objective was to compare pregnancy, neonatal, and child outcomes between pregnancies pre- and post-bariatric surgery.

Results. Among 3,686 patients who had at least 1 pregnancy before and after bariatric surgery, the authors found that pregnancies after bariatric surgery had lower rates of several adverse pregnancy outcomes, including preeclampsia (OR, 0.19), gestational hypertension (OR, 0.16), and gestational diabetes (OR, 0.39), compared with pregnancies before

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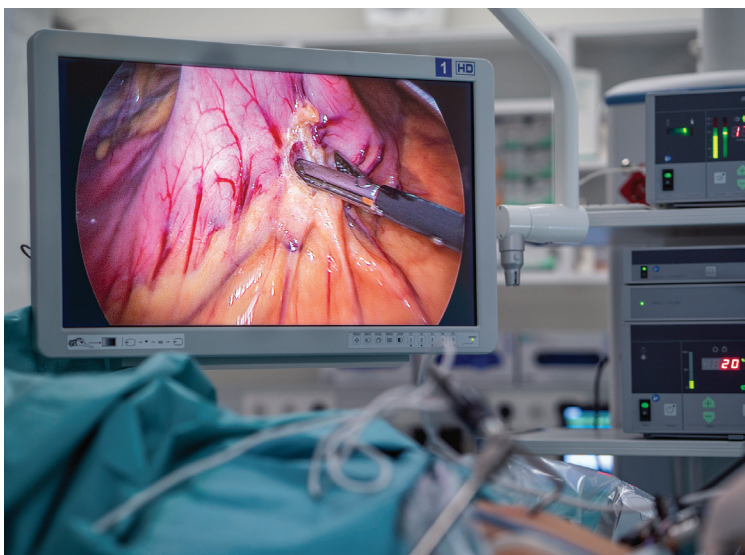
bariatric surgery. Regarding neonatal and child outcomes up to 2 years after pregnancy, there were lower rates of birth injuries (OR, 0.27), convulsions (OR, 0.43), newborn carbohydrate metabolism disorders (OR, 0.54), and viral intestinal infections (OR, 0.56) in pregnancies after bariatric surgery compared with those before surgery.

Notably, respiratory failure rates associated with bronchiolitis increased in pregnancies after bariatric surgery (OR, 2.42). This finding remained associated after adjusting for prematurity and small for gestational age as well as including 2 successive pregnancies before bariatric surgery (OR, 1.37).

Study strengths and limitations

A limitation of this study is the use of an administrative database, which may be biased and missing relevant variables. However, the study's major strength was the large sample of patients serving as their own control to compare outcomes from pre-bariatric surgery with those of post-bariatric surgery. In addition, to account for confounders such as age and parity, the authors also evaluated for associations between 2 consecutive pregnancies among patients before bariatric surgery. They did not consider diagnoses found to be associated with bariatric surgery if they were also significant in the analysis between 2 consecutive pregnancies before bariatric surgery.

The finding of increased risk of respiratory failure from bronchiolitis after bariatric surgery is surprising given that obesity is a risk factor for the severity of bronchiolitis.⁷ Although this risk remained significant after including the analysis that used 2 consecu-



tive pregnancies pre-bariatric surgery, the risk was lower (from an OR of 2.42 to an OR of 1.37). Thus, more data are required to confirm this potential risk. Despite this concerning finding, the overwhelming pregnancy, neonatal, and child benefits found and confirmed in this large, well-designed study support the continued practice of counseling on the benefits of bariatric surgery to our obese patients. ●

WHAT THIS EVIDENCE MEANS FOR PRACTICE

Bariatric surgery remains an effective procedure for weight loss, and it lowers the risks of several important perinatal, neonatal, and child outcomes, including hypertensive disorders, birth injuries, convulsions, and viral intestinal infections. Clinicians should include the benefits of neonatal and child outcomes in their counseling of bariatric surgery for their obese patients who are planning pregnancy.

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