

Women who have undergone weight-loss surgery may be at greater risk of pregnancy and birth complications

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Women who have undergone weight-loss surgery appear to be at higher risk of developing complications during pregnancy, and their babies seem more likely to be born prematurely, small for gestational age, have congenital anomalies and be admitted to intensive care, according to the most comprehensive assessment of how bariatric surgery affects pregnancy outcomes, being presented at this year's European Congress on Obesity (ECO) in Glasgow, UK (28 April-1 May).

The [systematic review](#) and meta-analysis, synthesising all the available evidence from the scientific literature, compared over 14,800 pregnancies in women who had previously undergone [weight-loss surgery](#) with almost 4 million pregnancies in mothers who had not.

The authors say that [pregnant women](#) with a history of weight-loss [surgery](#) should be considered as high-risk, be provided additional support throughout [pregnancy](#), and mother and baby should be monitored closely.

"Our findings indicate that women with a history of bariatric surgery, and in particular gastric bypass surgery, are at much greater risk of several adverse perinatal outcomes", says Zainab Akhter, a Ph.D. student from Newcastle University, UK who led the research. "These women require specific preconception and pregnancy nutritional support. This highlights the importance of dietary supplements, and extra monitoring

of fetal growth and development. Health professionals also need training and guidance to be able to provide the right advice."

Pregnant women with obesity are at higher risk of developing complications such as gestational diabetes and hypertension. Weight-loss surgery before pregnancy improves these outcomes, but some bariatric procedures, such as gastric bypass, affect the absorption of micronutrients and may impair fetal development. In the UK, 3 out of every 4 bariatric surgery patients are women, and the majority of them are of childbearing age.

In this study, the researchers conducted a systematic review and meta-analysis of observational studies comparing adverse perinatal outcomes after bariatric surgery to pregnancies without prior weight-loss surgery up to December 2018. Data from 33 articles were analysed, comparing 14,880 pregnancies after bariatric surgery with almost 4 million pregnancies in women who had not undergone surgery.

The meta-analyses were dependent on the quality of the included studies, sample sizes, and whether they adjusted for factors which can affect perinatal outcomes such as age, smoking status, and diabetes.

Results showed that babies born after weight-loss surgery were 57% more likely to be born premature, 29% more likely to have congenital anomalies, and 41% more likely to be admitted to a neonatal [intensive care](#) unit compared to the control group. Moreover, babies born after obesity surgery were also at a 38% greater risk of perinatal death, defined as being stillborn or dying within 7 days of birth.

Additionally, babies born after bariatric surgery were on average over 200g lighter than those born to mothers without a history of weight-loss surgery. However, the pregnancies of women with a history of weight-loss surgery were of shorter duration.

Further analyses showed that women who had a gastric bypass were 2.7 times more likely to have babies that were small for gestational age, and but had a quarter of the risk (or a 76% reduced risk) of giving birth to large for [gestational age](#) babies.

"It is not clear how weight-loss surgery may influence fetal development, but we know that people who have bariatric surgery are more likely to have micronutrient deficiencies", says Zainab. "More work needs to be done to better understand the causes of these differences, so that steps can be taken to support [women](#) to achieve the best possible pregnancy outcomes for themselves and their [babies](#)."

The authors acknowledge that their findings show observational differences, so no firm conclusions can be drawn about cause and effect, and they point to several limitations, including that unmeasured confounding (ie, differences in unmeasured factors which may have affected the health outcomes of the study) may have influenced the results.

Provided by European Association for the Study of Obesity

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