

Obesity in Pregnancy (2021)

About the Guideline

- Obesity has been identified as the most common medical condition for women of reproductive age, and obstetrician-gynecologists are seen as the leading professionals in women's health care. This guideline makes recommendations for the management of the unique integrated health care needs of women with obesity who are pregnant or planning to become pregnant.
- This practice bulletin is based on the Committee on Practice Bulletins for the American College of Obstetricians and Gynecologists (ACOG), with input from Patrick Catalano, MD, and Gayle Koutrouvelis, MD.
- This practice bulletin is an update to the ACOG opinion number 828. It provides additional information on cell-free DNA screening and makes recommendations for pregnant patients with a body mass index of 50 or greater.

Key Clinical Considerations

Become familiar with the recommendations and best-practice statements provided in this guideline, especially if you work in either an outpatient or an acute care setting.

Effects on Pregnancy

- Obesity increases the risk of pregnancy loss and anomalies in the fetus and stillbirth.
- Antepartum complications are increased in women with obesity for diagnoses such as cardiac dysfunction, proteinuria, sleep apnea, gestational diabetes, fatty liver disease, and preeclampsia.
- Patients who have undergone bariatric surgery may have nutritional deficiencies and require special dietary needs/supplements.
- Intrapartum complications of obesity include preterm birth, increased risk of cesarean delivery, failed trial of labor, endometritis, wound rupture and dehiscence, and venous thrombosis. Vaginal birth after cesarean has increased maternal and newborn morbidity twofold to fivefold in patients with obesity compared to patients with a normal weight.
- Postpartum patients with obesity often present with metabolic dysfunction, which can affect future health and pregnancies as well as early termination of breastfeeding, anemia, and depression.
- Fetal development may present with macrosomia and impaired growth. Studies have also shown evidence of further risk of the newborn developing diabetes, asthma, autism spectrum disorders, and other developmental disorders.
- Special equipment is needed for patients with obesity who are pregnant, such as weight-accommodating beds, operating room tables, and blood pressure cuffs, and in many cases equipment must be adjustable.

Recommendations

- Management of obesity should optimally occur before pregnancy and include dietary control, exercise, and behavior modification.
- The recommended weight gain during pregnancy for the patient diagnosed as obese is 11 to 20 pounds.

- Antepartum care, such as ultrasonography, should be altered for patients with obesity to detect congenital anomalies.
- Metabolic disorders of pregnancy are increased with obesity because insulin resistance makes the patient more susceptible to preeclampsia, gestational diabetes, and obstructive sleep apnea.
- Fetal surveillance is recommended as early as 34 0/7 weeks because of the increased risk of stillbirth. Testing may include fetal monitoring, nonstress testing, amniotic fluid index measurements, and a biophysical profile.
- Intrapartum management of patients with obesity who are pregnant should take into consideration the increased risk for prolonged pregnancy, which increases the rate of induction of labor. The median length of labor is also longer in these patients. More complications after cesarean delivery are seen, including an increased risk of atonic uterine hemorrhage.
- Anesthesia is also a challenge, and an early consultation is needed to plan for potential complications for airway management, hypoxemia, hypercapnia, and sudden death. Epidural insertion may be more problematic as finding landmarks for placement can be difficult. In addition, more maternal hypotension and fetal decelerations are seen. Respiratory function can be impacted for up to 2 hours after spinal or epidural placement. General anesthesia is also more difficult, and fiber-optic equipment and preoxygenation should be available for intubation.
- Newborn outcomes may be impacted negatively by large-for-gestational-age size that may cause problems such as shoulder dystocia, birth injuries due to forceps and vacuum extractors, and broken clavicles. Congenital anomalies may also be present, requiring long-term immediate care for the newborn. These may include cardiac anomalies, unstable blood glucose levels, respiratory distress, and other conditions warranting a higher level of care, such as admission to the neonatal intensive care unit and neonatology/pediatrician management.
- Broad-spectrum antibiotics are recommended for all cesarean deliveries. Higher dosing of preoperative antibiotics is also recommended.
- A vertical abdominal incision is preferred over a lateral incision, and prepping with chlorhexidine and vaginal cleansing have both shown reduction in wound infections and morbidity.
- Compression devices should be used on all patients undergoing cesarean delivery to prevent thromboembolism. Prophylactic heparin has been shown to reduce the risk of thromboembolism in patients with obesity.
- Weight loss between pregnancies can help reduce the risk of a large-for-gestational-age infant in the next pregnancy. Weight gain between pregnancies increases the risk of a large-for-gestational-age infant.

Reference

American College of Obstetricians and Gynecologists' Committee on Practice Bulletins—Obstetrics (2021). Obesity in Pregnancy: ACOG Practice Bulletin, Number 230. *Obstetrics and gynecology*, 137(6), e128–e144. <https://doi.org/10.1097/AOG.0000000000004395>