

Providing bias-informed and evidence-based care for pregnant persons with obesity

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The rate of obesity in the United States continues to rise annually, and over one million pregnant individuals live with obesity. Obesity in pregnancy is associated with increased complications for both the pregnant person and the fetus. In addition to a higher risk of complications, pregnant patients with obesity are at risk for bias and discrimination from their community and healthcare providers. This article addresses the incidence and impact of obesity on the pregnant person and fetus, while also addressing ways to reduce bias in caring for this patient population.

KEY WORDS: pregnancy, overweight, obesity, complications, intervention, bias, discrimination



Obesity in pregnancy is common in the United States, with over one million pregnant individuals living with obesity and the rates continuing to rise.¹⁻³ The incidence of obesity in pregnancy in the US is estimated to be as high as 1 in 2 pregnancies, with the definition of obesity (a body mass index [BMI] > 30 kg/m²) being the same for both nonpregnant and pregnant individuals.⁴ The most noticeable recent increase in obesity has been in the most severe class, defined as a BMI greater than 40 kg/m².^{4,5} This increase in obesity is important for providers to grasp because of the increased rate of specific poor outcomes during pregnancy (*Table 1*). On top of these medical risks, pregnant patients with obesity are subject to stigma and bias from society and healthcare providers, which also can be damaging to maternal health and wellbeing.^{6,7}

According to the Pregnancy Risk Assessment Monitoring System, 25.3% of US females have obesity prior to conception.⁸ Differences are seen across racial groups in the rate of obesity both before and during pregnancy, and populations of color have a higher incidence of obesity

Table 1. Complications and potential risks for pregnant patients of size^{13,33–41}

Obstetric complication	Potential risk
Gestational diabetes	Risk for diabetes increases as BMI increases and is related to insulin resistance during pregnancy. ^{13,33}
Gestational hypertension and preeclampsia	Elevated BMI is risk factor for developing gestational hypertension and preeclampsia. Hypertension in pregnancy may be related to insulin resistance, hyperlipidemia, hormonal changes, and subclinical inflammation. ^{13,34,35}
Preterm birth	Those with increased BMI have higher risks of medically indicated preterm birth, largely due to complications such as hypertension, preeclampsia, and diabetes. It is unclear if those affected by obesity are more likely to experience spontaneous preterm birth. ^{13,34,36}
Obstructive sleep apnea (OSA)	OSA occurs when the muscles of the throat intermittently relax and block the airway during sleep. It is another complication of an elevated BMI that affects some individuals during pregnancy. ^{13,37}
Birth defects	The risk of fetal cardiac, genitourinary, craniofacial, and neural tube anomalies increases as BMI increases. ^{13,38}
Stillbirth	The risk of stillbirth at full-term (> 39 weeks estimated gestational age) is increased in pregnant people with a BMI over 30.0, with risk rising as BMI increases. ^{13,39}
Postpartum hemorrhage	The risk of postpartum hemorrhage is increased in pregnant people of size. This is believed due to an increased risk of uterine atony from an over distended uterus. ⁴⁰
Difficulty breastfeeding	Breastfeeding can present challenges for pregnant people of size, including shorter breastfeeding duration in those with higher BMI. Additional breastfeeding barriers include infants with low blood sugar requiring supplementation, decreased confidence about the breastfeeding experience, and difficulty locating supplies for larger bodies, including pillows, and pumping supplies. ⁴¹
Postpartum depression/anxiety	Pregnant people with obesity have an increased risk of postpartum depression and anxiety. Providers should be aware of this increased risk and offer screenings routinely to this patient population. ³²

BMI, body mass index.

than their White counterparts.⁴ For example, pregnant persons of Latinx/Hispanic heritage have the highest rate of obesity in pregnancy and Black women are more likely to have severe obesity in pregnancy.^{3,4} Other factors that affect the risk of a pregnant person having obesity are a rural living location and working at sedentary jobs.^{3,4}

Pregnancy complicated by obe-

sity has been seen as inherently high risk and therefore necessitating high-risk physician care. A growing body of research, however, supports nurse practitioners and certified nurse-midwives caring for this population independently or in partnership with physicians.^{9,10} Whereas traditional obstetric care centers around treating pregnancy as an illness and using medical tests to

discover potential complications, research indicates that care under this model is often not evidence driven and does not necessarily improve outcomes.¹¹ For example, past recommendations for fetal surveillance were to monitor those with obesity in pregnancy with regular fetal non-stress tests and ultrasounds in the third trimester.

The recommended gestational age to begin this surveillance varied greatly, and in their 2015 Practice Bulletin on obesity in pregnancy, the American College of Obstetricians and Gynecologists (ACOG) acknowledged that antenatal surveillance does not necessarily lead to better outcomes. The bulletin notes that “there is no evidence showing a clear improvement in pregnancy outcomes with antepartum surveillance, and a recommendation cannot be made for or against routine antenatal fetal surveillance in obese pregnant women.”¹² In 2021 ACOG replaced these guidelines, offering slightly more concrete suggestions for antenatal testing (*Table 2*). Clinicians, however, still struggle with conflicting recommendations and information for this patient population.^{13,14} Currently, no consistent recommendations exist as to when to begin this fetal testing, and a common practice is to begin any time between 28 and 37 weeks, which can lead to confusion with the plan of care for both clinician and patient.¹⁵ This conflict can be resolved by following evidence-based practice and involving the patient in shared decision making with an unbiased approach.

Reducing size bias and providing evidence-based care

Ideally, anyone planning pregnancy should have a preconception discussion with a provider well

Table 2. Counseling, laboratory evaluation, imaging, and other considerations for those with BMI 30 and above^{13, 14, 36–38, 42–45}

	Counseling	Laboratory evaluation	Imaging	Other considerations
BMI 30.0–34.9	<p>Daily prenatal vitamin with at least 400 µg folic acid and offer additional folic acid supplementation for total of 1 mg folic acid daily⁴²</p> <p>Consider low-dose aspirin (81 mg) daily starting at 12 weeks^{43*}</p> <p>Weight gain goal: 11–20 pounds⁴⁴</p> <p>Provide supportive education about diet and exercise¹³</p> <p>Consider maternal fetal medicine consultation¹³</p>	<p>Glucose screening in first trimester if any additional risk factors⁴⁵</p> <p>Glucose screening at 24–28 weeks⁴⁵</p>	<p>Level 1 (screening) or level 2 (targeted) ultrasound around 20 weeks^{13, 38}</p> <p>Growth ultrasounds as indicated^{13, 36}</p> <p>Consider fetal echocardiogram¹³</p>	<p>Screen for obstructive sleep apnea early in pregnancy^{13, 37}</p> <p>Discuss optional screening tests available for birth defects (nuchal translucency and noninvasive prenatal testing)^{13, 38}</p>
BMI 35.0–39.9	<p>Daily prenatal vitamin with at least 400 µg folic acid and offer additional folic acid supplementation for total of 1 mg folic acid daily⁴²</p> <p>Consider low-dose aspirin (81 mg) daily starting at 12 weeks^{43*}</p> <p>Weight gain goal: 11–20 pounds⁴⁴</p> <p>Provide supportive education about diet and exercise¹³</p> <p>Nutritionist consultation¹³</p> <p>Consider maternal fetal medicine consultation¹³</p>	<p>Glucose screening in first trimester if any additional risk factors⁴⁵</p> <p>Glucose screening at 24–28 weeks⁴⁵</p>	<p>Level 1 (screening) or level 2 (targeted) ultrasound around 20 weeks^{13, 38}</p> <p>Growth ultrasounds as indicated^{13, 36}</p> <p>Fetal echocardiogram¹³</p> <p>Consider antenatal fetal surveillance (NST/BPP) weekly starting at 37 weeks¹⁴</p>	<p>Screen for obstructive sleep apnea early in pregnancy^{13, 37}</p> <p>Discuss optional screening tests available for birth defects (nuchal translucency and noninvasive prenatal testing)^{13, 38}</p>
BMI ≥ 40.0	<p>Daily prenatal vitamin with at least 400 µg folic acid and offer additional folic acid supplementation for total of 1 mg folic acid daily⁴²</p> <p>Consider low-dose aspirin (81 mg) daily starting at 12 weeks^{43*}</p> <p>Weight gain goal: 11–20 pounds⁴⁴</p> <p>Provide supportive education about diet and exercise¹³</p> <p>Nutritionist consultation¹³</p> <p>Consider maternal fetal medicine consultation¹³</p>	<p>Glucose screening in first trimester⁴⁵</p> <p>Glucose screening at 24–28 weeks⁴⁵</p>	<p>Level 2 (targeted) ultrasound around 20 weeks^{13, 38}</p> <p>Fetal echocardiogram¹³</p> <p>Serial growth ultrasounds beginning at 28 weeks and continuing every 3–4 weeks until delivery^{13, 36}</p> <p>Antenatal fetal surveillance (NST/BPP) weekly starting at 34 weeks¹⁴</p>	<p>Screen for obstructive sleep apnea early in pregnancy^{13, 37}</p> <p>Discuss optional screening tests available for birth defects (nuchal translucency and noninvasive prenatal testing)^{13, 38}</p>

BMI, body mass index; NST/BPP, nonstress test/biophysical profile.

*Obesity is considered a moderate risk factor for pre-eclampsia. Individuals should be screened for additional risk factors for preeclampsia and counseled to begin low-dose aspirin prophylaxis if more than one moderate risk factor is present.⁴³

before pregnancy. Although this visit does not always occur as a formal preconception visit, if the provider can counsel the patient on

healthy choices before pregnancy is achieved, complications could potentially be minimized or avoided. Given that a formal preconception

visit is uncommon, the initial prenatal visit provides an opportunity for the provider to establish rapport and convey important information

on healthy lifestyle choices, nutrition, and exercise. For individuals with obesity, this can include compassionate counseling on healthy choices.

By providing specific advice on healthy food choices and exercise in an inclusive manner, the provider and patient can focus on health promotion and shared decision making—which has been shown to improve outcomes.¹⁶ *Table 1* discusses potential complications for those with a BMI of 30 kg/m² and above, and *Table 2* provides appropriate counseling, laboratory evaluation, and imaging for these individuals. The recommendations in the tables are categorized by BMI ranges and can serve as an easy reference point for counseling patients.

Clinicians must also recognize that in addition to having a higher risk of some physical complications, pregnant patients with obesity are at risk for bias and discrimination.¹⁷ Indeed, negative bias toward pregnant individuals with obesity may contribute to the poor outcomes that are increased in this patient population.¹⁷ The stigma surrounding the diagnosis of obesity can be seen in past recommendations in which pregnancy care was heavily focused on intervention for patients with a BMI over 30 kg/m².^{12,18} The current recommendations focus on collaboration between low- and high-risk providers, and the result of this trend toward collaborative practices has improved patient outcomes.^{9,19}

In support of this, a growing body of research shows improved outcomes when the pregnant person has access to the Midwifery Model of Care—a model very familiar to women’s health nurse practitioners.^{1,9,20} The midwifery model emphasizes relationship-focused and nonjudgmental care.²¹ It offers

an alternative to traditional obstetric care that is patient led, and in which translation and discussion of evidence is highly valued. Because of the relationship-based care provided in the midwifery model, a trusting relationship is formed with the patient, which promotes wellness and positive birth outcomes across patient populations.^{20,21} This improvement in birth outcomes can have a significant impact on the overall health of the pregnant person, the fetus, and the family. It is crucial for clinicians to grasp patient-centered prenatal care, have a concrete understanding of the evidence-based recommendations, and to actively employ strategies to reduce the bias and discrimination often aimed at these patients.

Effective bias interventions must increase awareness about implicit biases, build motivation to reduce that bias, and give providers evidence-based strategies for countering their own biases.²² Additionally, beliefs and stereotypes about obesity are most likely to change when individuals can change their attributions about the causes and controllability of weight.²³ One key tactic here is decoupling weight and health in healthcare education.²⁴ As one author argues, better training for clinicians must “confront the framing of fat bodies as dreaded

and despised,” which requires a shift toward humanizing and embracing obesity.²⁵ A weight-inclusive approach emphasizes viewing health and wellbeing as multifaceted and not linking weight and weight loss in defining health and wellbeing (a weight-normative approach).²⁶ In contrast to a weight-normative approach, which stigmatizes weight and is not effective for sustainable improved health, a weight-inclusive framework has been demonstrated to improve physical, behavioral, and psychological indicators of health. A paradigm shift from weight-normative to weight-inclusive will centralize health across the weight continuum and redress weight bias in providers.²⁶

A health-based approach will focus on health promotion through shared decision making and patient education without centering weight.²⁷ Healthcare providers must “learn and adopt less stigmatizing ways of interacting with the fat body and with fat people.”⁷ Providers can start by being aware of the biases that exist and actively work to care for pregnant persons in ways that are not rooted in shame and blame.²⁸ A critical step in reducing stigmatizing communication and weight bias in pregnancy is to center the voices of women who are overweight or obese. This includes the importance of sensitive communi-

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cation, individualized care regarding weight, and reduced focus on body weight by focusing on comorbidities and other health indicators.⁶ For example, gestational weight gain is a key topic of conversation. Because weight bias is so pervasive, patients are likely to enter clinical encounters expecting their providers to be biased, making these patients particularly sensitive to the words and actions of their care providers.²⁹

Thus, in discussing weight gain during pregnancy, providers can emphasize vital health information, communicate understanding and respect, and be particularly sensitive in conversations about weighing the patient, bringing up the subject of body weight, providing weight-related advice, and managing patients' emotions.²⁹ Messages regarding nutrition and exercise during pregnancy should be consistent, unambiguous, and avoid misconceptions and myths.³⁰

Finally, to truly address the damaging effects of weight bias on women's experiences, we must think intersectionally, understanding the merging identities and social structures that affect women's lived experiences during prenatal care. We must acknowledge that weight bias does not exist independently of sexism, racism, ableism, homophobia, classism, etc., and will certainly affect pregnant individual's clinical encounters and physical/emotional outcomes during and after pregnancy.^{31,32}

Conclusion and implications for practice

The potential risks of pregnancy complicated by obesity are well documented, but management of these pregnancies has changed significantly in recent years. Historically, a diagnosis of obesity would have meant a pregnant person risked out of prenatal care by nurse practitioners. This is not always the case presently, and the choice of

care model is often patient driven. Additionally, there has been a significant rise in the number of nurse practitioners in the US who will encounter pregnant patients with obesity within their practices, so it is vital for these clinicians to know the latest recommendations for pregnant patients with obesity. It is important that all prenatal providers acknowledge biases held toward this patient population both by society and healthcare professionals and to be ready to employ strategies to reduce bias toward patients with obesity. This helps to build trust and establishes a positive relationship with a patient, which in turn can enhance the pregnant person's ability to make healthy choices throughout pregnancy. ■

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