



## Obesity and Pregnancy

**O***besity is a major health problem in the United States. One third of women aged 20–39 years are obese. During pregnancy, obesity can have serious effects on a woman's health and the health of her baby. For women who are already pregnant, regular prenatal care, healthy eating, and exercise can help decrease these health risks. But the best way to prevent problems caused by obesity is to lose weight before becoming pregnant.*

*This pamphlet explains*

- *the definition of obesity*
- *risks of obesity during pregnancy*
- *managing obesity during pregnancy*
- *labor and delivery*
- *managing your weight after the baby is born*
- *preparing for pregnancy*

### Defining Obesity

Being overweight is defined as having a **body mass index (BMI)** of 25–29.9 (see Table 1). Obesity is defined as having a BMI of 30 or greater. Within the general category of obesity, there are three levels that reflect the increasing health risks that go along with increasing BMI:

- Lowest risk is a BMI of 30–34.9.
- Medium risk is a BMI of 35.0–39.9.
- Highest risk is a BMI of 40 or greater.

For example, if you are 5 foot 6 inches tall and weigh 190 pounds, you have a BMI of 30.7 and are considered

obese. You have health risks because you are obese, but these risks are the lowest within the general category of obesity. You can find out your BMI by using an online BMI calculator on a web site such as [http://www.nhlbi.nih.gov/health/educational/lose\\_wt/BMI/bmicalc.htm](http://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm).

### Health Risks

Obesity during pregnancy puts you at risk of several serious health problems:

- **Gestational diabetes**—Diabetes is having a high level of **glucose** in your blood. When it is first diagnosed

**Table 1. Body Mass Index Categories**

Category	BMI*
Underweight	Less than 18.5
Normal weight	18.5–24.9
Overweight	25.0–29.9
Obese	30.0 or greater

Abbreviation: BMI, body mass index.

\*Weight in kilograms divided by height in meters squared (kg/m<sup>2</sup>).

Modified from World Health Organization. Obesity: preventing and managing the global epidemic. Report of a WHO consultation. Geneva: WHO; 2000. Available at: [http://www.who.int/nutrition/publications/obesity/WHO\\_TRS\\_894/en](http://www.who.int/nutrition/publications/obesity/WHO_TRS_894/en). Retrieved December 10, 2015.

during pregnancy, it is called gestational diabetes. This condition can increase the risk of having a large baby and a **cesarean delivery**. Women who have had gestational diabetes also have a higher risk of having diabetes in the future, as do their children. Obese women are screened for gestational diabetes early in pregnancy and also may be screened later in pregnancy as well.

- **Preeclampsia**—Preeclampsia is a high blood pressure disorder that can occur during pregnancy or after pregnancy. It is a serious illness that affects a woman's entire body. The kidneys and liver may fail. Preeclampsia can lead to seizures, a condition called **eclampsia**. In rare cases, **stroke** can occur. Severe cases need emergency treatment to avoid these complications. The baby may need to be delivered early.
- **Sleep apnea**—People with sleep apnea stop breathing for short periods during sleep. Sleep apnea is associated with obesity. It is caused by the airway collapsing in deep sleep as the muscles relax. During pregnancy, sleep apnea not only can cause fatigue but also increases the risk of high blood pressure, preeclampsia, eclampsia, and heart and lung disorders.

### Pregnancy Risks

Obesity increases the risk of the following problems during pregnancy:

- **Pregnancy loss**—Obese women have an increased risk of pregnancy loss (miscarriage) compared with women of normal weight.
- **Birth defects**—Babies born to obese mothers have an increased risk of having birth defects, such as heart defects and **neural tube defects**.
- **Problems with diagnostic tests**—Having too much body fat can make it difficult to see certain problems with the baby's anatomy on an **ultrasound exam**. Checking the baby's heart rate during labor also may be more difficult if you are obese.

- **Macrosomia**—In this condition, the baby is larger than normal. This can increase the risk of the baby being injured during birth. For example, the baby's shoulder can become stuck during delivery. Macrosomia also increases the risk of cesarean delivery. Infants born with too much body fat have a greater chance of being obese later in life.
- **Preterm birth**—Problems associated with a mother's obesity, such as preeclampsia, may lead to a medically indicated preterm birth. This means that the baby is delivered early for a medical reason. Preterm babies are not as fully developed as babies who are born after 39 weeks of pregnancy. As a result, they have an increased risk of short-term and long-term health problems.
- **Stillbirth**—The higher the mother's BMI, the greater the risk of stillbirth.

### Managing Obesity During Pregnancy

Despite the risks, you can have a healthy pregnancy if you are obese. It takes careful management of your weight, attention to diet and exercise, regular prenatal care to monitor for complications, and special considerations for your labor and delivery.

At your first prenatal visit, your BMI will be calculated and a recommendation will be made about the amount of weight you should gain throughout pregnancy. Table 2 shows the weight gain ranges that are associated with the best possible outcomes for pregnant women and their babies.

#### Nutrition and Exercise

Good nutrition and regular exercise are key to a healthy pregnancy. Eating well and getting regular exercise during pregnancy also can start you on the right track for a healthier lifestyle after pregnancy.

While you are pregnant, the food you eat fuels your body and also helps your baby grow. Finding a balance between eating healthy foods and staying at a healthy weight is important for your health as well as your baby's health. In the second and third **trimesters**, a pregnant woman needs an average of 300 extra **calories** a day—about the amount of calories in a glass of skim milk and half of a sandwich.

**Table 2. Recommended Weight Gain During Pregnancy**

Weight Before Pregnancy	BMI*	Total Weight Gain Range (pounds)
Normal Weight	18.5–24.9	25–35
Overweight	25–29.9	15–25
Obese (includes all subclasses)	30 or greater	11–20

Abbreviation: BMI, body mass index.

\*Weight in kilograms divided by height in meters squared (kg/m<sup>2</sup>).

Modified from Institute of Medicine. Weight gain during pregnancy: reexamining the guidelines. Washington, DC: The National Academies Press; 2009. Copyright 2009 National Academies of Science.

If you need help planning a healthy diet, nutrition counseling may be recommended. You also can find help online. The Choose My Plate web site has a special section for women who are pregnant or breastfeeding ([www.choosemyplate.gov/moms-pregnancy-breastfeeding](http://www.choosemyplate.gov/moms-pregnancy-breastfeeding)). The site lets you create a profile and then gives you a detailed daily food plan.

If you have never exercised before, pregnancy is a great time to start. Discuss your exercise plan with your obstetrician to make sure it is safe. Begin with as little as 5 minutes of exercise a day and add 5 minutes each week. Your goal is to stay active for 30 minutes on most—preferably all—days of the week. Walking is a good choice if you are new to exercise. A brisk, 10-minute walk after every meal is a great way to get your 30 minutes of exercise. Swimming is another good exercise for pregnant women. The water supports your weight so you can avoid injury and muscle strain. It also helps you stay cool.

### Monitoring Your Weight

Your weight will be tracked at each prenatal visit. The growth of your baby also will be checked. If you are gaining less than the recommended guidelines, and if your baby is growing well, you do not have to increase your weight gain to catch up to the guidelines. Some information suggests that for extremely obese women (those at highest risk of health problems), not gaining any weight—or even losing a small amount of weight—lowers the risks of cesarean delivery and having a larger-than-average baby. But if your baby is not growing well, changes may need to be made to your diet and exercise plan.

### Labor and Delivery

Pain relief during labor and delivery may take special planning if you are obese. Before you have your baby, you may meet with a health care professional to discuss your pain relief options.

Vaginal delivery is the ideal way to have your baby, but it is not always possible. Being obese can make it even less likely. Overweight and obese women have longer labors than women of normal weight. It can be harder to monitor the baby during labor. For these reasons, obesity during pregnancy increases the likelihood of having a cesarean delivery.

If a cesarean delivery is needed, risks are greater for an obese woman than for a woman of normal weight. The operation may take longer to do, increasing the risks of bleeding and other complications. For obese women, the risk of infection after cesarean delivery is much higher. Other risks of cesarean delivery include the following:

- Problems with anesthesia
- **Deep vein thrombosis** (blood clots that form in deep veins of the body)
- Poor wound healing

Steps can be taken to reduce your risk of these complications. For example, you may need to wear special devices on your legs before, during, and after surgery to help prevent blood clots.

## Managing Your Weight After Your Baby Is Born

Once you are home with your new baby, stick to your healthy eating and exercise habits to reach a normal weight. Breastfeeding is recommended for the first year of a baby's life. Not only is breastfeeding the best way to feed your baby, it also may help with postpartum weight loss. Overall, women who breastfeed their babies for at least a few months tend to lose pregnancy weight faster than women who do not breastfeed.

If you had gestational diabetes, you have an increased risk of developing diabetes after pregnancy. You will need to have a follow-up test of your glucose level between 6 weeks and 12 weeks after you give birth. If your test result is normal, you should be retested for diabetes every 3 years. Maintaining a healthy weight, eating a balanced diet, and staying active may decrease your risk of getting diabetes in the future. If you had preeclampsia, you have an increased risk of **cardiovascular disease**. You may need to have your blood pressure measured more frequently and pay close attention to your risk factors for cardiovascular disease.

### Preparing for Pregnancy

Losing weight before you become pregnant is the best way to decrease the risk of problems caused by obesity. If you are overweight or obese and planning to become pregnant in the future, talk to your obstetrician or other health care professional about weight loss beforehand. Losing even a small amount of weight (5–7% of your current weight, or about 10–20 pounds) can improve your overall health and pave the way for a healthier pregnancy.

Many women find it hard to lose the weight they gained during pregnancy. Weight can add up with each pregnancy. To give yourself enough time to lose excess weight before you become pregnant again, choose a birth control option and start using it before you and your partner have sex for the first time after the baby is born.

### How to Lose Weight Safely

To lose weight, you need to use up more calories than you take in. You can do this by getting regular exercise and eating healthy foods. An added benefit of these changes is that you will reduce your risk of serious medical problems, such as diabetes and high blood pressure. Your obstetrician may refer you to a nutritionist to help you plan a healthy diet. You also can use the Choose My Plate web site.

Exercise should be a key part of your weight-loss plan. To start, aim to be moderately active for 60 minutes or vigorously active for 30 minutes on most days of the week. Pick something you like to do. Moderate-intensity activities include biking, brisk walking, and general gardening. Vigorous-intensity activities include jogging, swimming laps, or heavy yard work. You do not have to do this amount all at once. For instance, you can exercise for 20 minutes three times a day.

### Medications

If you have tried to lose weight through diet changes and exercise and you still have a BMI of 30 or greater or a BMI

of at least 27 with certain medical conditions, such as diabetes or heart disease, weight-loss medications may be suggested. These medications should not be taken if you are trying to become pregnant or are already pregnant.

### **Surgery**

**Bariatric surgery** may be an option for people who are very obese (a BMI of 40 or greater or a BMI between 35 and 39 with major health problems caused by obesity). If you have weight loss surgery, you should delay getting pregnant for 12–24 months after surgery, when you will have the most rapid weight loss. If you have had fertility problems, they may resolve on their own as you rapidly lose the excess weight. It is important to be aware of this because the increase in fertility can lead to an unplanned pregnancy. Some types of bariatric surgery may affect how the body absorbs medications taken by mouth, including birth control pills. You may need to switch to another form of birth control.

Most women who have had bariatric surgery do well during pregnancy. When you do become pregnant after the surgery, your obstetrician may monitor you for vitamin deficiencies. It also may be suggested that you work with a nutritionist to learn how to meet your nutritional needs during pregnancy.

### **Finally...**

Obesity is a serious issue in the United States, and it can lead to many health problems. Being obese during pregnancy can put you at increased risk of complications and harm your baby. Taking steps to lose the extra pounds to reach a healthier weight before you become pregnant is a good way to prevent these problems. If you are obese and already pregnant, there still is a lot you can do to stay as healthy as possible.

### **Glossary**

**Bariatric Surgery:** Surgical procedures that cause weight loss for the treatment of obesity.

**Body Mass Index (BMI):** A number calculated from height and weight that is used to determine whether a person is underweight, normal weight, overweight, or obese.

**Calories:** Units of heat used to express the fuel or energy value of food.

**Cardiovascular Disease:** Disease of the heart and blood vessels.

**Cesarean Delivery:** Delivery of a baby through surgical incisions made in the mother's abdomen and uterus.

**Deep Vein Thrombosis:** A condition in which a blood clot forms in veins in the leg or other areas of the body.

**Eclampsia:** Seizures occurring in pregnancy or after pregnancy and linked to high blood pressure.

**Gestational Diabetes:** Diabetes that arises during pregnancy.

**Glucose:** A sugar that is present in the blood and is the body's main source of fuel.

**Macrosomia:** A condition in which a fetus has an estimated weight of 4,500 grams (9 pounds 15 ounces) or greater.

**Neural Tube Defects:** Birth defects that result from incomplete development of the brain, spinal cord, or their coverings.

**Obesity:** A condition characterized by excessive body fat.

**Preeclampsia:** A disorder that can occur during pregnancy or after childbirth in which there is high blood pressure and other signs of organ injury, such as an abnormal amount of protein in the urine, a low number of platelets, abnormal kidney or liver function, pain over the upper abdomen, fluid in the lungs, or a severe headache or changes in vision.

**Preterm:** Born before 37 weeks of pregnancy.

**Sleep Apnea:** A disorder characterized by interruptions of breathing during sleep that can lead to other health problems.

**Stillbirth:** Delivery of a dead baby.

**Stroke:** A sudden interruption of blood flow to all or part of the brain, caused by blockage or bursting of a blood vessel in the brain and often resulting in loss of consciousness and temporary or permanent paralysis.

**Trimesters:** The three 3-month periods into which pregnancy is divided.

**Ultrasound Exam:** A test in which sound waves are used to examine internal structures. During pregnancy, it can be used to examine the fetus.

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