

# Gestational Diabetes

## Your Guide to a Healthy Pregnancy

### Managing Gestational Diabetes

Learn how to manage your gestational diabetes through meal planning, checking your blood glucose, exercising, and other tips and tools to avoid complications and have a healthy pregnancy!

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## What is Gestational Diabetes?

Gestational Diabetes is a type of diabetes that develops during some pregnancies around the 24<sup>th</sup> week. Gestational diabetes is different than other types of diabetes since it only occurs during pregnancy and usually disappears after childbirth. This diagnosis does not mean you had diabetes before becoming pregnant, or that you will have diabetes after giving birth. Some women may develop type 2 diabetes later in life, but are less likely if they are able to achieve and maintain a healthy weight after delivery. This guide will walk you through diagnosis to delivery and beyond.

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What do you want to know about gestational diabetes?

## Causes of Gestational Diabetes

Carbohydrates are found in foods and are turned into glucose (sugar) by the body. Foods that contain carbohydrates are sweet foods like sugar, honey, jams, and soda as well as starchy foods like bread, cereal, potatoes, pasta, fruit, and milk.

When you eat or drink, your body breaks down carbohydrates into glucose during digestion and then glucose enters your bloodstream. The pancreas (a large gland behind your stomach) detects how much glucose is in the blood and delivers a specific amount of insulin to lower blood glucose. Insulin is a hormone your body makes to move glucose from the bloodstream into your cells to use for energy. Your body uses this glucose for energy in your brain and in your muscles.

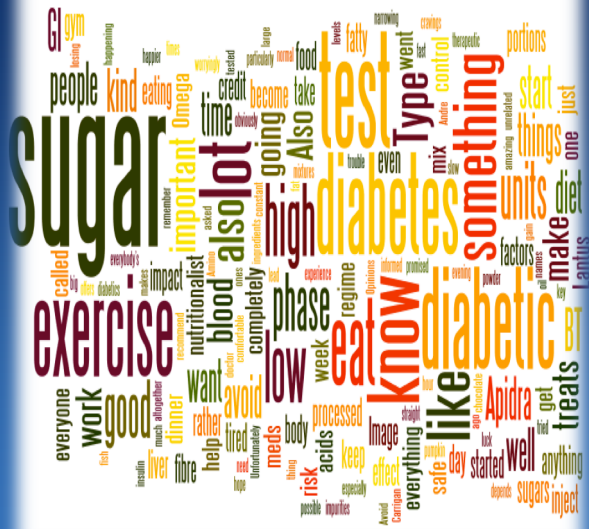
The placenta is an organ that develops in your uterus during pregnancy to connect your baby to your blood supply and provide oxygen and nutrients to support the baby's growth during pregnancy. Hormones from the placenta help the baby develop, but they also block the action of insulin in the mother's body. This block is called **insulin resistance**.



### Risk Factors of Gestational Diabetes:

Remember that any woman can develop gestational diabetes and you are not alone. Women who are at an increased risk include:

- Women over the age of 25
- Family history of diabetes
- Personal history of GD
- Previously delivered a baby weighing 9 pounds or more
- History of an unexplained stillbirth
- Women with a BMI more than 30
- Women of Hispanic/African-American/American Indian/Asian descent
- Polycystic ovarian syndrome



## Other Types of Diabetes:

### Type 1 Diabetes:

- Symptoms usually start in childhood or young adulthood but can be diagnosed at any age
- Episodes of low blood sugar (hypoglycemia) are common
- Insulin-dependent diabetes because the body does not make enough or any insulin

## Type 2 Diabetes:

- Usually discovered in adulthood but more and more cases have been seen in children
- Can be prevented with a healthy lifestyle
- The body does not use insulin the right way, and type 2 diabetics are insulin resistant

# Complications of Gestational Diabetes

Most women with gestational diabetes deliver happy and healthy babies. If gestational diabetes is poorly managed it can lead to uncontrolled blood glucose levels and cause problems for you and your baby.



## Complications for Baby:

### **Large baby (macrosomia):**

Eating and drinking raises your blood glucose and glucose is used for energy. When your blood sugar is too high the extra glucose crosses over the placenta to your baby, which triggers the baby's pancreas to make more insulin. This extra insulin results in the baby growing faster and larger than they normally would because the extra energy is stored as fat. This causes very large babies that are over 9 pounds at childbirth. Because these babies are so large they can become wedged in the birth canal and can sustain damage to their shoulders and nerve damage to their face and arms can occur. Due to these complications, large babies may have to be delivered by cesarean section (c-section). A c-section is a surgical birth.

### **Low blood sugar (hypoglycemia):**

After childbirth, your baby's pancreas continues to make insulin to make up for your body's lack of insulin. Due to this increase in insulin, it can cause a sudden drop in your baby's blood glucose. As a precaution, your baby's glucose level will be checked at birth as well as several times after. Feeding the baby right away and sometimes a glucose solution may be given to the baby to allow blood glucose levels to return to normal.



### **Early birth and difficulty breathing:**

Another complication of high blood glucose is the increased risk of early delivery. Babies born early can experience difficulty breathing and may even need help breathing until their lungs mature and grow stronger.

## Complications for Mom:

**High blood pressure**  
**Stress**  
**Depression**





# Managing Your Gestational Diabetes

Your doctor may have you visit with a Registered Dietitian/Registered Dietitian Nutritionist (RD/RDN) and/or a Certified Diabetes Educator to help you understand how to use these tools to manage your gestational diabetes and have a healthy pregnancy.

## Check your blood glucose:

Your blood glucose will change throughout the day depending on what you eat, your activity level, and the hormones in your body. A small drop of blood from the side of your fingertip is needed to test your blood glucose. You will also need a meter, a lancet, and blood glucose test strips. Lancets are small needles you will use to get a sample of blood, a strip is a small piece of hard plastic that you put the blood on, and a meter is a machine used to test your blood glucose levels and will give you a blood glucose number.

To make sure your blood glucose stays within a healthy range, you may have to check your blood glucose 4-5 times a day. Most doctors recommend testing before you eat breakfast, and one to two hours after the start of each meal.

Your blood glucose should be 90 mg/dl or less before a meal, and 120 mg/dl or less 2 hours after a meal. Using a logbook to record the date, time of test, and result of blood glucose reading will help you and your healthcare teams monitor your blood glucose over time. Most meters also have computer software available to download blood glucose results. Your healthcare team will look for patterns in your blood glucose records over time to see if they are higher at any time of day, are high or low related to timing of meals, or if you require more insulin at any particular time of day.

Sample Log Book:

	Breakfast	Lunch	Dinner	Bedtime
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				



## Exercise!

Daily exercise helps keep blood glucose under control. Exercise helps to lower blood glucose without medication. The best time to exercise is after a meal or snack when your blood glucose level is at its highest. This could include brisk walking, swimming, or actively playing with children. Always check with your doctor before beginning any exercise program.



What's your favorite type of exercise?

(Continued)

### Meal Planning:

What you eat and how much you eat will affect your blood glucose. Remember your body uses carbohydrates from foods as glucose to use for energy. Gestational diabetes allows glucose to build up in the bloodstream and results in a high blood glucose that is unhealthy for you and your baby. Eating healthy foods from a meal plan made for a person with diabetes can help control your gestational diabetes and blood glucose. The RDN on your healthcare team can help you create a healthy meal plan that fits your individual needs and teach you how to control your blood sugar while you are pregnant.

Your meal plan will include 3 meals and 3 small snacks a day. Small meals and snacks are advised because eating too much at one time can make your blood glucose go too high. It is very important that you do not skip meals because your blood glucose may go too low. Small meals and snacks can also help prevent heartburn. Breakfast is a special meal to pay attention to because your blood glucose is normally much higher when you wake up in the morning. Because of this, you may need to eat fewer carbohydrates for breakfast to limit your blood glucose from rising any higher.

- Eat 3 small meals a day, with breakfast being your smallest meal
- Bake, broil, grill, and stir-fry instead of frying foods
- Eliminate fruit juices completely
- Drink skim or 1% milk and dairy products
- Drink water every day, for most women that is about 64 oz each day
- Eat whole wheat, whole grains as much as possible

### Medications (if necessary):

Some women still have high blood glucose even with exercise and following a healthy meal plan. This is not their fault. Some women cannot make enough insulin to cover their needs during pregnancy. If this is the case for you, your doctor will start you on a medication or insulin injections and your certified diabetes educator may teach you how, when, and where to give yourself the shots. When done correctly insulin injections do not hurt and they will not hurt your baby. As we talked about before, using insulin may result in low blood glucose readings. This is why it is very important to not skip meals and always check your blood glucose.

Common signs and symptoms of low blood glucose (hypoglycemia) are:

Sudden hunger	Fast heartbeat
Sweating	Fatigue
Shaking	Irritability
Headache	Dizziness

Treatment of low blood glucose includes:

- If your blood glucose is less than 60 mg/dl, treat with 15 grams of carbohydrate (such as ½ cup of juice) and retest after 15 minutes.
- You can take glucose tablets, ½ cup of juice, or 6 oz of regular soda.
- Always follow-up low blood glucose with a meal or snack within 30-60 minutes of an episode after the initial treatment
- Report all episodes of low blood glucose to your doctor and noted in your logbook.

### Stress Management:

It is normal to have worries during your pregnancy. Stress can be physical and result from injury or illness, and it can be mental and range from money, job, or health worries. Stress can result in poor decisions and can even directly raise your blood glucose. Learning you have gestational diabetes can add to that stress.

Thankfully, gestational diabetes can be managed with the help of you and your healthcare team. If you find yourself stressing through your pregnancy, try to relax with the following tips:

- ❖ Go for a walk!
- ❖ Listen to your favorite music
- ❖ Try deep breathing exercises
- ❖ Start a new hobby or a new craft
- ❖ Read a book
- ❖ Talk to friends and family
- ❖ Watch your favorite TV program

Have you ever experienced any of these symptoms?

# Delivery and Beyond

Do you have a birth plan? If so, you will most likely be able to stick with it without complications if you are able to manage your gestational diabetes throughout your pregnancy. Women with uncontrolled blood glucose often have to have a c-section due to a larger than normal baby (discussed on page 3). While most women with gestational diabetes blood glucose goes back to normal after delivery, some go on to develop type 2 diabetes. You will need to visit your doctor 6-12 weeks after your baby is born to have your blood glucose checked to be tested for type 2 diabetes. If the test is normal, get tested every 1-2 years.

Take steps to lower your chances of developing type 2 diabetes such as being more active and making healthy food choices to get back to a healthy weight after delivery. Speak with your doctor about your test results and what you can do to stay healthy. If you plan to have another baby get tested early in the pregnancy for gestational diabetes.



## Breastfeeding Benefits

Breastfeeding is recommended by the American Academy of Pediatrics for the first 6 months of your baby's life. Continue breastfeeding in addition to adding solid foods until your baby is at least one year old.

Benefits for your baby:

- ❖ Forms a special bond between you and your baby
- ❖ Cells, hormones, and antibodies protect babies from illness
- ❖ Breastfed babies have a lower chance of developing conditions like asthma, childhood obesity, and type 2 diabetes
- ❖ It's easier for your baby to digest than formula

Breastfeeding not only benefits your baby, but you too! Benefits for mothers include:

- ❖ Helps with healing following childbirth
- ❖ Lower risk of type 2 diabetes, breast cancer, and ovarian cancer
- ❖ It may help you lose weight faster when paired with a healthy diet and regular exercise
- ❖ It's free!!

If you are a first time mom or new to breastfeeding ask your doctor to connect you with a certified lactation consultant who can help take you step by step through a breastfeeding plan that will work for you and answer any questions you may have. Talking with friends and family who have been successful breastfeeding or joining a support group can also help!

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## Gestational Diabetes Self-Management Resources

### **General Diabetes Information:**

[www.diabetes.org](http://www.diabetes.org)

[www.cdc.gov/diabetes](http://www.cdc.gov/diabetes)

[www.nghs.com/diabetes-services](http://www.nghs.com/diabetes-services)

NGMC offers a class for expectant mothers who have been diagnosed with gestational diabetes. A group or individual class is available to teach the women and their families effective meal planning, blood glucose monitoring, and how to control blood glucose during their pregnancies.

Call (770) 219-0966 or e-mail [diabetes.website@nghs.com](mailto:diabetes.website@nghs.com) to schedule a class today!

[www.nghs.com/gestational-diabetes-class](http://www.nghs.com/gestational-diabetes-class)

### **Nutrition and Food:**

[www.choosemyplate.gov](http://www.choosemyplate.gov) (USDA's website for healthy eating)

[www.smart-mouth.org](http://www.smart-mouth.org) (healthy eating website for kids)

### **Exercise/Active Living:**

CDC Physical Activity

<http://www.cdc.gov/physicalactivity/index.html>

### **Breastfeeding Resources:**

The lactation center at NGMC offers support and supplies for purchase such as breast pumps, nursing bras, stools, pillows, and collection and storage pumps. Breastfeeding mothers can also rent breast pumps and infant scales.

Call (770) 219-7574 to speak to the lactation center today!

[www.nghs.com/lactation-center](http://www.nghs.com/lactation-center)

NGMC offers a breastfeeding class the fourth Monday of the month from 6:30 to 8:00 pm. The cost is \$30. (Dads are welcome to come!)

There is also an online breastfeeding class available for free online.

[www.nghs.com/childbirth-education-classes](http://www.nghs.com/childbirth-education-classes)

American Academy of Pediatrics:

[www2.aap.org/breastfeeding/familiesLanding.html](http://www2.aap.org/breastfeeding/familiesLanding.html)

La Leche League International:

[www.lalecheleague.org/nb.html](http://www.lalecheleague.org/nb.html)

CDC Breastfeeding:

[www.cdc.gov/breastfeeding/](http://www.cdc.gov/breastfeeding/)

### **Supplemental Nutrition Resources:**

Georgia Mountain Food Bank

-Services Dawson, Forsyth, Hall, Lumpkin, and Union Counties

(770) 534-4111

[www.gamountainfoodbank.org](http://www.gamountainfoodbank.org)

Women, Infants and Children (WIC)

[www.fns.usda.gov/wic/wic-how-apply](http://www.fns.usda.gov/wic/wic-how-apply)