

Gestational Diabetes

A Guide for Pregnant Women



fast facts



- Gestational diabetes is a kind of diabetes that can happen during pregnancy. It usually goes away after delivery.
- Gestational diabetes is treated by controlling blood sugar. Some women can do this with a special diet for diabetes and staying active. Other women will need insulin shots or diabetes pills.
- Insulin and two kinds of diabetes pills can lower blood sugar for women with gestational diabetes.
- Many women who have gestational diabetes get type 2 diabetes later in life. Controlling your weight gain during pregnancy may prevent type 2 diabetes later on.
- It is important to keep being tested for type 2 diabetes regularly after pregnancy.

Gestational (jes-TAY-shun-ul) **diabetes** is a type of diabetes that can happen during pregnancy. It means you have never had diabetes before. Having gestational diabetes means you have a problem with high blood sugar while you are pregnant. The treatment is to control blood sugar. This can help prevent a difficult birth. It also helps keep your baby healthy.



What Does This Guide Cover?

This guide can help you talk with your doctor or midwife about gestational diabetes. It helps answer these questions.

- What is gestational diabetes?
- How is it treated?
- How do I follow up after pregnancy?

This guide is based on a government-funded review of research about gestational diabetes.

What Is Not Covered in This Guide?

This guide does not cover treatment of type 1 or type 2 diabetes during pregnancy. Type 1 and type 2 diabetes are different from gestational diabetes.

Learning About Gestational Diabetes

What is diabetes?

Diabetes means the body has a problem with insulin. Insulin is a hormone. It helps the body use sugar from the blood for energy.

When you have diabetes, your body either does not make enough insulin or does not use insulin as well as it should. Glucose (sugar) builds up in the blood because the body cannot use sugar without the help of insulin. This causes blood sugar to stay high.

There are different types of diabetes.

- Type 1 diabetes—Most people are diagnosed when they are children or in their teens. Treatment is always insulin shots.
- Type 2 diabetes—Most people are diagnosed when they are adults. Sometimes it can be treated just with diet. Diabetes pills or insulin may also be needed.
- Gestational diabetes—This diabetes happens during pregnancy. It usually goes away after pregnancy.

What is gestational diabetes?

Gestational diabetes means that the body has a problem with insulin during pregnancy. When women are pregnant, the body needs more insulin to keep blood sugar at the right level. Women's bodies make more insulin during pregnancy. When the extra insulin is not enough to keep blood sugar normal, women get high blood sugar. This is called gestational diabetes. Blood sugar usually returns to normal after delivery.

Who gets gestational diabetes?

About 7 out of 100 pregnant women get gestational diabetes.

Gestational diabetes is more likely for:

- Women who are overweight.
- Women with family members who have had gestational diabetes.
- Women with family members who have type 2 diabetes.
- African American, American Indian, and Hispanic/Latina American women.

How do I know if I have gestational diabetes?

Gestational diabetes starts during the second trimester. Most of the time, doctors and midwives test for it in the 5th or 6th month of pregnancy. Women are tested by drinking a special sugary drink and having their blood sugar checked soon after.



Why Treat Gestational Diabetes?

High blood sugar can cause the baby to get too big — 9 pounds or more. This is the most common problem with gestational diabetes. It is called macrosomia (mak-ruh-SO-me-uh). A baby that is too big can cause problems during delivery. At birth, the baby can also have breathing problems or blood sugar that is too low.



Women with gestational diabetes can give birth to healthy babies.

Keeping blood sugar under control may help prevent problems.



Delivery Options

If you have gestational diabetes, your doctor or midwife may discuss different delivery options. The goal is to have a safe delivery and a healthy baby.

Many times doctors or midwives induce (or start) a woman's labor before her due date if she has gestational diabetes. Sometimes this is done so the baby does not get so big. Research can't tell us if inducing labor early is better for the mom and baby than waiting for labor to start on its own.

Sometimes doctors or midwives suggest cesarean section, or c-section. It is another option to prevent problems with delivery from a big baby. A c-section is an operation done to deliver the baby from the mom's belly. Research also can't tell us if a c-section is better for the mom and baby than inducing labor or waiting for labor to start on its own.

How Can I Treat Gestational Diabetes?

Eating healthy and staying active

Eating healthy and staying active are two of the most important ways to control blood sugar and treat gestational diabetes. Activities like walking and swimming are helpful. The activity does not have to be hard. The goal is to get up and move. Talk with your doctor or midwife about creating an exercise plan that works for you.

All women with gestational diabetes need to follow a special diabetes meal plan. Your doctor or midwife may ask you to meet with a diabetes educator or dietitian. Diabetes educators or dietitians can help create a plan just for you.



The diabetes meal plan follows simple guidelines like:

- Watching portion size.
- Eating a variety of foods, including fresh fruits, vegetables, and whole grains.
- Limiting fat calories to 30 percent or less each day.

Being careful about weight gain during pregnancy is also very important to control gestational diabetes. Ask your doctor or midwife how much weight gain is right for you.

To learn more about the diabetes meal plan, visit the National Diabetes Information Clearinghouse Web site:
www.diabetes.niddk.nih.gov/dm/pubs/eating_ez

Medicine

Most women can control their gestational diabetes by following a diabetes meal plan and being more active. Some will also need insulin or diabetes pills to control their blood sugar. Insulin and two kinds of diabetes pills are used to treat gestational diabetes. They all work to lower blood sugar. So far, research shows that they all seem safe to use while pregnant.

Insulin

Insulin needs to be injected (given by a shot). The insulin you inject is like the insulin your body makes, but it is made in a lab. There are many kinds of insulin.

Diabetes pills

Two kinds of diabetes pills have been used to treat gestational diabetes. Glyburide (Diabeta®, Glynase PresTab®, Micronase®) is a pill that helps raise the amount of insulin in the body. Metformin (Glucophage®) blocks the liver from making glucose (sugar).



The two pills used to treat gestational diabetes are also used for type 2 diabetes. If your doctor prescribes pills for your gestational diabetes, you may want to look at another guide. It is called *Pills for Type 2 Diabetes: A Guide for Adults* (2007) and is available at the Web site: www.effectivehealthcare.ahrq.gov.

Learning About Blood Sugar

How is blood sugar tested?

Blood sugar is tested by a finger stick done at home. This test uses a glucose meter that shows your blood sugar level. Your doctor or midwife can show you how to use the meter. They will probably want you to check your blood sugar at different times of the day.

The chart below shows what blood sugar usually should be during different times of the day. Ask your doctor or midwife what targets are right for you.

Time of blood sugar test	Target blood sugar level
Before eating	Less than 95
One hour after eating	Less than 130
Two hours after eating	Less than 120

It is important to keep track of your blood sugar test results. Your doctor or midwife will use the results at your checkup to decide if you need to start medicine for blood sugar control. If you are already taking insulin or pills, it helps them decide if your medicine needs to be adjusted.

Watch for blood sugar that drops too low

Blood sugar that is too low is called hypoglycemia (high-po-gly-SEE-mee-ah). It can make you feel dizzy, sweaty, confused, shaky, hungry, and weak.

Both insulin and pills for gestational diabetes can cause blood sugar to drop too low. More women using insulin develop very low blood sugar than women taking metformin (Glucophage®).



Warning

If you think you may have low blood sugar, eat or drink something with sugar in it right away. Your doctor or midwife may suggest something like hard candy, juice, or glucose tablets.

Watching for Type 2 Diabetes After Delivery

After you give birth, gestational diabetes usually goes away. Blood sugar returns to normal after delivery. You probably won't need to keep checking your blood sugar at home with the finger sticks. But there are important things to keep in mind.

Women who have had gestational diabetes are more likely to get type 2 diabetes later in life. They have a higher chance than women who have not had gestational diabetes. Women who gain more weight than normal during pregnancy also have a higher chance of getting type 2 diabetes later.

There are ways to help lower your risk of getting diabetes later on. Staying at a healthy weight, following a healthy diet, and being active can help. These small steps are important *during* and *after* your pregnancy.

Be sure to tell all your doctors and nurses that you had gestational diabetes while you were pregnant. It is very important to have your blood sugar checked at your doctor's office from time to time. The test will make sure that you have not developed type 2 diabetes. Your doctor or nurse can tell you how often you should have your blood sugar tested.



About 60 out of 100 women who have gestational diabetes will have type 2 diabetes by 10 years after their pregnancy.

The good news is you can reduce your risk. Stay at a healthy weight, eat a healthy diet, get active, and be tested regularly.

Questions You Might Have

Can I control my gestational diabetes by eating a healthy diet and staying active?

Yes, most women with gestational diabetes can control their blood sugar with the diabetes meal plan and exercise. It is also important to be careful about your weight gain during pregnancy. Work with your doctor or midwife to come up with a plan that works for you.

If I need medicine, can I take a pill or do I need a shot?

For many women, a pill might be all that is needed to control blood sugar. Some women will need to start insulin. Talk to your doctor or midwife about a treatment plan for you.

How often do I need to check my blood sugar?

Some women will need to check their blood sugar several times a day. This is usually done in the morning before breakfast and after each meal. Talk to your doctor or midwife about when you need to check yours.

How soon do I need to be tested for type 2 diabetes after my delivery? How often do I need to be tested?

Research can't tell us exactly when and how often you need to be tested. The important thing is that you test regularly. Having gestational diabetes means that you are at high risk of getting type 2 diabetes later on.

What Is the Source of This Guide?

The information in this guide comes from a detailed review of 45 research reports. The review is called *Therapeutic Management, Delivery, and Postpartum Risk Assessment and Screening in Gestational Diabetes* (2008) and was written by the Johns Hopkins University Evidence-based Practice Center. The review was updated in the journal *Obstetrics & Gynecology* in 2009.

The Agency for Healthcare Research and Quality (AHRQ) created the Eisenberg Center at Oregon Health & Science University to make research helpful for consumers. This guide was written by Erin Davis, B.A., Martha Schechtel, R.N., Bruin Rugge, M.D., Valerie King, M.D., and David Hickam, M.D., of the Eisenberg Center. Women with gestational diabetes helped the Eisenberg Center develop this guide.

Where Can I Get More Information?

For an electronic copy of this guide and materials about choosing treatments and medications for other conditions, visit this Web site: www.effectivehealthcare.ahrq.gov

For a free print copy, call:

The AHRQ Publications Clearinghouse
(800) 358-9295

Ask for AHRQ Publication Number 09-EHC014-A

For more information about gestational diabetes, visit the MedlinePlus Web site:

www.nlm.nih.gov/medlineplus/diabetesandpregnancy.html

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The photos used in this guide are of models and are used for illustrative purposes only.