

**What is gestational diabetes?**

Gestational diabetes mellitus is a condition in which hormones made by the placenta prevent the body from using insulin effectively. Insulin, from the pancreas, is needed to allow blood sugar to enter the body's cells to be used for energy. In gestational diabetes, the body may not be able to use the insulin effectively, and/or the body may not be able to make enough insulin. The result is increased blood sugar. About 2%-10% of pregnant women develop gestational diabetes. Testing for gestational diabetes is done between weeks 24-28 of pregnancy.

If blood sugar levels are kept in the normal range during pregnancy, women can have a healthy pregnancy. If your blood sugar levels are not well-controlled, there may be risks to you, your unborn baby, your labor and delivery, or your newborn baby.

The good news is that 70-85% of women with gestational diabetes can control it with lifestyle changes alone. Some women may need to take insulin during pregnancy to keep blood sugar in the healthy range,

Gestational diabetes usually goes away after your baby is delivered. Current guidelines from the American Diabetes Association recommend that women with gestational diabetes have blood sugar testing done 4-12 weeks after the baby is born to be sure the diabetes has gone away. Women who had gestational diabetes have a 3 to 7 times higher risk of developing type 2 diabetes in 5 to 10 years. You can reduce the risk for you and your baby of developing type 2 diabetes in the future by breastfeeding.

All women with a history of gestational diabetes should exercise, eat a healthy diet and work towards a normal body weight to prevent diabetes type 2. Women who had gestational diabetes should continue to have blood sugar labs checked every 1 to 3 years depending their risk factors for developing type 2 diabetes.

 **How to check blood glucose levels?**

To check your blood sugar you will use a glucose meter. Put a glucose strip into the meter following the directions in the owner's booklet. You will prick your finger using a lancet to obtain a drop of blood. You will apply a drop of blood to the glucose strip. The meter will display your blood sugar on its screen. Your hospital doctor will send prescriptions to your pharmacy for the meter, the glucose strips and lancets if you do not already have these supplies at home. Most meters store 90 days or more of your

blood sugar results with the date and time that you checked your blood sugar. It is still a good idea to write your blood sugar results down. Always take your meter or your blood sugar log with you to follow up appointments with your doctor. Read the instruction booklet that comes with your meter so that you are sure you are using it correctly.



How often you check your blood sugar depends on whether you are taking insulin. Women who have gestational diabetes are usually instructed to check their blood sugar first thing in the morning and after meals. Some women may need to check their blood sugar before meals too. Your doctor will instruct you how often you need to check and how often to check will be included in your discharge paperwork.

 **What are the usual blood sugar goals?**

The American Diabetes Association blood glucose goals during pregnancy are:

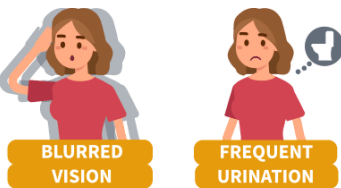
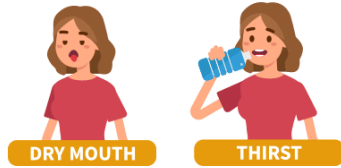
Fasting blood sugar and before meals	70- 95 mg/dl
One hour after meals	100- 140 mg/dl
Two hours after meals	Less than 120 mg/dl
Hemoglobin A1c* (3-month average of blood sugar)	Less than 6% (guided by your doctor's recommendations)

\*An A1c is a lab drawn in a doctor's office or lab. The result is an estimate of your average blood sugar during the previous 3 months

### High Blood Sugar—Hyperglycemia

High blood sugar may occur within hours or develop over several days. You may have one or more of the following symptoms:

#### Hyperglycemia Symptoms



- High blood sugars levels (more than 140 mg/dl)
  - Extreme thirst
  - Fatigue / sleepiness
  - Urinating often /waking to urinate during the night
  - Grouchiness
  - Blurry vision and/or headache
  - Pain in the abdomen (belly) with or without vomiting
- Causes of high blood sugar**
- Too much food or eating the wrong type of food
  - Not enough diabetes medicine or insulin
  - Not enough exercise (Do not exercise if your blood sugar is more than 240 mg/dl.)
  - Illness or infection
  - Stress

#### What to do to prevent hyperglycemia

- Always take your diabetes medications unless your

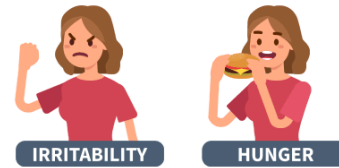
doctor has told you not to

- Follow the recommended meal and snack plan
- Test your blood sugar more often (every 4 hours) if it is getting high

### Low Blood Sugar—Hypoglycemia

Low blood sugar (hypoglycemia) is a blood sugar less than 70 mg/dl and usually happens quickly and may require that someone helps you get treatment. Symptoms may include:

#### Hypoglycemia Symptoms



- Sweating
- Shaking or feeling jittery
- Fast and /or pounding heart beat
- Hunger
- Irritability / confusion
- Blurry vision and/or headache
- Light headedness, dizziness or fainting

### Steps for treating a blood sugar less than 70 mg/dl (The Rule of 15s)

1. Make sure you are safe. for example, if you are driving pull over.
2. If you are too shaky to check your blood sugar

or you are afraid you are going to pass out, take 15 grams of fast-acting sugar such as 4 ounces of fruit juice or regular soda, 4 glucose tablets or 1 packet glucose gel, or 8 sweet tart candies.

3. If you can safely check your blood sugar, check your blood sugar. If it is less than 70 mg/dl, take 15 grams of fast-acting sugar such as 4 ounces of fruit juice or regular soda, 4 glucose tablets or 1 packet glucose gel, or 8 sweet tart candies.
4. Wait 15 minutes after taking the 15 grams of fast-acting sugar and then recheck your blood sugar
5. If your blood sugar is still less than 70 mg/dl, repeat the 15 grams of fast-acting sugar, wait 15 minutes and recheck your blood sugar.
6. When your blood sugar is 70mg/dl or more and you feel okay, you may resume your day, but if your next meal is more than 1 hour away, have a small snack that contains protein such as ½ of a peanut butter or meat sandwich, 3 peanut butter and cracker sandwiches or 3 cheese and crackers sandwiches.
7. If you pass out or faint, someone should call 911 immediately. You should not be given anything by mouth if you are unconscious. If you have glucagon nasal powder or a glucagon injection pen, someone should administer it if you are unconscious.
8. Talk with your provider and diabetes care team about any low blood sugar readings so they can help stop future low blood sugars.

You should buy and wear a bracelet or necklace that says you have diabetes in case you ever need help in an emergency.

Glucose tablets can be bought in drug stores in the diabetes aisle without a prescription.

### When you should call your doctor or go to the emergency room

Go to the emergency room if you have a low blood sugar that causes you to faint or pass out.

Call the doctor who prescribes your medicine for diabetes if your blood sugar is less than 70 mg/dl when you check it first thing in the morning or if you wake during the night and your blood sugar is less than 70 mg/dl. or your blood sugar is less than 70 mg/dl several times in a week.

Call the doctor if your blood sugar is more than 140 mg/dl consistently before meals.

Call the doctor if your blood sugar is gradually increasing for several days or if your blood sugar is suddenly higher than is usual.

Go to the ER if you have any combination of these symptoms: high blood sugar, extreme thirst, frequent urination, nausea and vomiting, shortness of breath, and abdominal pain.

### Healthy Food Choices

Your doctor may refer you to a registered dietician for an individualized nutrition plan for you during pregnancy. Here are some basic rules for healthy eating.

- Eat every 2.5 to 3 hours to total three meals and three snacks per day
- Remove foods from your diet that are high in sugar, especially corn syrup.
- Avoid adding white/brown sugar and/or honey to foods.
- Avoid regular soda pop, sweet tea, lemonade and sweetened yogurt.
- Remove fruit juices, but instead use whole pieces of fruit. Limit serving size. – Eating fruit before lunch and at bedtime snack may raise blood sugars.
- Spread carbohydrates throughout the day. – Include protein at every meal and each snack including breakfast.
- Choose foods high in fiber and high in protein. – Whole grain cereal, whole wheat pasta, whole fruits and vegetables, beans, lentils and legumes or oatmeal. Try to find a bread with the words WHOLE wheat/grain appearing as the first ingredient.
- Choose foods low in fat and limit extra fat, such as gravy, sauces, vegetable oil, margarine, or butter. Choose low-fat meats, such as lean cuts of beef and pork. Choose more fish and poultry (chicken/turkey) without the skin.
  - Baked, broiled, or roasted instead of fried chicken or fish.
  - Eat light yogurt instead of regular yogurt. Greek yogurt usually has double the protein.
  - Try garlic, onions and spices to season vegetables.
- Limit cream or butter sauces, salad dressing and mayonnaise.
  - Try low-fat versions of salad dressing and mayonnaise to reduce calories if needed.
  - Drink low fat milk unless you are underweight. Avoid milk at breakfast and as a bedtime snack; it can

cause high blood sugar.

- Limit food from fast food restaurants. Ask for nutritional information on menu selections and choose foods that are low in fat. For many women, a burger and French fries, large portions of white rice, ribs, or more than 2 pieces of pizza may cause high blood sugars.

- The recommended weight gain is as follows: – If you were underweight pre-pregnancy, 28-40 lbs. – Normal weight 25-35 lbs. – Overweight 15-25 lbs. – Obese 11-20 lbs. – Discuss your weight goals with your doctor or dietitian.

- Avoid alcohol, cigarettes and street drugs for the safety of you and your baby. • Discuss with your doctor before taking any herbal supplements or medications, including over-the-counter medications.

- Eat a variety of foods from all major food groups. Pregnant women need approximately an additional 340 calories in the second trimester and an additional 450 calories in the third trimester to support baby's growth.

- Caffeine is a stimulant – limit to less than 200 mg/day while pregnant. Examples include coffee, tea, soft drinks, energy drinks, some medications and chocolate.

- Tell your healthcare provider if you crave unusual or nonfood items, for example, dirt, clay, etc. Eating nonfood items may be harmful to you and your baby.

- Fish is nutritious but during pregnancy limit to 12 ounces/week maximum. • Avoid high mercury fish during pregnancy: swordfish, shark, tile fish, king mackerel and orange rough

### Glucose Lowering Medicines

Usually changes in diet and exercise are enough to control blood sugar in women who develop diabetes during pregnancy (gestational diabetes). Insulin is the preferred medication, if medication is needed to manage gestational diabetes. Oral diabetes medications may be unsafe during pregnancy. Insulin needs to be adjusted frequently during pregnancy because of changes in your hormones and body. Insulin **injections** replace insulin of which your body is not making enough,

Insulin can cause a low blood sugar if the dose is too high, the amount of insulin does not match the amount of carbohydrate eaten, or after hard exercise.

Sometimes insulin comes in a vial (small bottle) and is

given using a syringe.

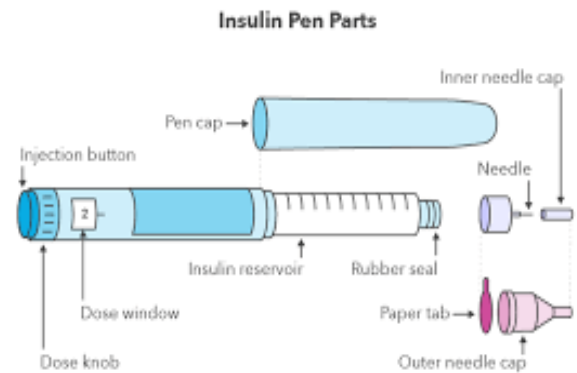


Insulin may be injected once a day or several times a day.

Insulin also comes in pens,

### How to Give Yourself an Insulin Shot using an Insulin Pen

- Wash your hands
- Read the label on the insulin pen to be sure you are taking the right insulin at the right time
- Remove the cap from the insulin pen.

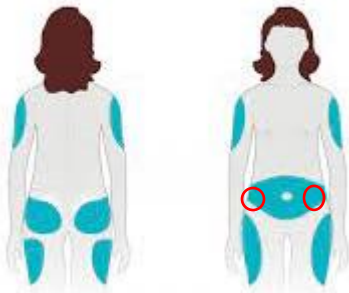


- Look at your insulin to make sure it is clear and there are no particles in it. Do not use cloudy insulin or insulin with particles floating in it (Exception: NPH insulin is supposed to be cloudy).
- If you are prescribed a cloudy insulin such as NPH, the next step is to roll the pen between your hands 10 times and invert the pen 10 times to mix the insulin suspension. Do not shake the pen.
- Clean the end of the insulin pen where the pen needle attaches with an alcohol pad.
- Always use a new needle for each injection.
- Remove the paper wrapper from the pen needle and twist the needle onto the insulin pen to the right



- Remove the clear cover from the needle and keep it. Remove the small inner cover and throw it away.
- To remove the air from the needle, dial the dose to 2 and inject the insulin into the air by pushing the plunger button on the end of the pen.
- The dose window should read zero after injecting insulin into the air.
- Now dial the dose to the correct amount.
- The abdomen (belly) is the best place to inject insulin because insulin is absorbed most consistently from the belly. Push the needle straight into the skin of the belly.
- Avoid stretch marks, tattoos and surgical scars because the insulin may not absorb the same way, Do not push the button on the top of the pen until the needle is under the skin.
- The skin may become tight over the front of the belly after the first trimester of **pregnancy**. The outside areas of the belly (circled) may be more comfortable. If unable to inject into the belly, inject into one of the sites pictured below.

Insulin injection sites



- Push the button on the top of the pen and hold it down while counting to 10.
- Then pull the needle straight out of the skin.
- Check the dose window to make sure it says zero.
- Replace the clear needle cover. Twist the needle to the left to remove the needle and put it in a hard

plastic container (for example an empty detergent bottle).

- Inject insulin into a different spot each time to protect your skin.
- Never share your insulin pen with another person.

### Disposal of Needles, Syringes and Lancets



**Do not throw needles, syringes or lancets directly into the garbage. You can buy a sharps container or you can use a hard plastic container with a twist on cap such as a juice bottle or a liquid detergent bottle. Drop your needles, lancets and syringes into the container. When the container is 3/4 full, tape the lid to the container, print "sharps" on all side of the container and place in the trash**

### Sick Day Rules and Meal Plan for Pregnancy

Colds and flu as well as other illness may affect your blood sugars because eating food, taking medicine and exercising may be difficult.

When you are sick or have an infection, your blood sugar level can go up. This is because your body is under stress, and stress raises blood sugars. Here are some important points to remember:

- Follow your usual meal plan, if possible.
- If you take medicine to help control your blood sugars, take your normal dose of that medicine
- Call your healthcare provider right away if you cannot take your medicine or if you have more than two high or low blood sugars in one day.
- Test your blood sugar even more often, preferably every four hours.

– Drink more low-carbohydrate liquids, such as water, clear broth, unsweetened decaffeinated tea or diet ginger ale, every hour that you are awake to keep hydrated.

– If you can't eat enough to follow your meal plan, try drinking small amounts of beverages that provide 15 grams of carbs (1 cup milk, ½ cup regular soda pop, ½ cup fruit juice, ½ cup non-diet ginger ale, ½ cup regular gelatin, 1 cup soup (broth type), 8 oz. sports drink, ½ cup ice-cream, 1 small frozen juice bar) but monitor your blood sugar closely if you do!

– If you cannot eat or drink enough carbohydrates, you may need to check your urine for ketones especially if you have type 1 diabetes when you are sick. Ask your doctor if this would be important for you. Ketone test strips are available at your local pharmacy.

**Call your doctor or nurse right away if:**

- Your blood sugar is less than 60-70 mg/dL and/or greater than 200 mg/dL 2 times in a row in 24 hours.
- Your temperature is greater than 100 F degrees.
- You vomit more than once in six hours and cannot keep any fluids down.
- You have diarrhea more than five times that lasts longer than six hours.
- Your ketones are moderate to large.
- You are feeling more tired, weak and confused.
- You have trouble breathing.
- You do not feel better in 24 hours.
- You are not sure what to do or have questions.

**Strong Recommendations: Talk to your obstetrician about a referral for further education about gestational diabetes to ensure that you have a healthy pregnancy and baby.**

**You can read or download TriHealth's complete gestational diabetes education manual, [Your Journey to Diabetes Wellness during Pregnancy](#), at:**

**<https://www.trihealth.com/institutes-and-services/diabetes/what-is-diabetes/gestational-diabetes>**

**Add your doctor's phone numbers to your phone**

**or keep them written down in a handy spot**

Contact information for family doctor and/or endocrinologist and diabetes educator

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

## MY NOTES:

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