

# DIABETES DURING PREGNANCY

## The Basics



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# Table of Contents

What is Gestational Diabetes.....	Page 2
How is Gestational Diabetes Diagnosed.....	Page 3
Medicines.....	Page 4
Healthy Eating.....	Page 5
Physical Activity.....	Page 8
Monitoring Blood Glucose.....	Page 9
Hypoglycemia.....	Page 10
Hyperglycemia.....	Page 11
Common Pregnancy Illnesses.....	Page 12
Delivery.....	Page 13
Resources.....	Page 14
References.....	Page 15

The content in this booklet is general information and is not meant to replace more individualized education and/or recommendations by your health care team.





# What is Gestational Diabetes?

## Key Terms:

- **Gestational Diabetes-** Diabetes that develops during the second half of pregnancy.
- **Type 1 Diabetes and Pregnancy-** Having type 1 diabetes before getting pregnant.
- **Type 2 Diabetes and Pregnancy-** Having or finding out you have type 2 diabetes before, or during pregnancy (typically early pregnancy).

## Did You Know?

It is recommended that all females of childbearing age take at least 400 mcg of folic acid to help reduce risks of certain birth defects.

Gestational diabetes is a type of diabetes that occurs during the second or third trimester of pregnancy. The body goes through many hormonal changes during pregnancy. Sometimes the body does not make enough insulin, the hormone that lowers blood sugar, or cannot use insulin as well as it should. This causes the blood glucose to go up and leads to gestational diabetes.

## Gestational Diabetes Risks for Both Baby and Mother

Baby	Mother
<ul style="list-style-type: none"><li>• Large baby at birth (9lbs or more)</li><li>• Low blood sugar (hypoglycemia)</li><li>• Breathing problems</li><li>• Greater risk for overweight/obesity</li><li>• Greater risk for type 2 diabetes</li></ul>	<ul style="list-style-type: none"><li>• Greater risk for miscarriage</li><li>• Greater risk for preterm delivery</li><li>• Greater risk for type 2 diabetes</li></ul>

## What Increases Your Risk of Gestational Diabetes?

- Being older (> or equal to 35)
- Having gestational diabetes in an earlier pregnancy
- Being overweight
- Having a family history of diabetes
- Having prediabetes or high blood sugars
- Having a history of polycystic ovarian syndrome (PCOS)
- Being of Native American, African American, Hispanic, Asian or Chinese descent

Regardless of the type of diabetes you have, it is important to work with your health care team, eat healthy, be active, and manage blood glucose levels. Ask for a referral to see a dietitian and/or diabetes educator.

## Before Pregnancy:

An appointment with your health care provider before your pregnancy, known as a preconception counseling appointment, helps you plan for a future pregnancy. If you are a female of child-bearing age, this is an important part of your health care to help you plan for a healthy pregnancy.



# How is Gestational Diabetes Diagnosed?

## Diagnosed with Gestational Diabetes?

Being told you have gestational diabetes may bring up a lot of emotions:

- Fear
- Guilt
- Worry
- Sadness
- Anger
- Acceptance

Practicing good coping skills can help.

## Good Coping Skills Can Include:

- Praying and/or meditating
- Journaling
- Laughing
- Listening to music
- Taking a walk
- Talking to someone
- Deep breathing
- Practicing good self-care
- Reading

**If you feel depressed or like you have too much to handle, GET HELP RIGHT AWAY!**

**Talk to your health care provider, or in an emergency call 988**

Gestational diabetes is diagnosed with blood tests. Tests are usually performed between 24 to 28 weeks of pregnancy when women are most likely to develop gestational diabetes. If you have increased risks, your health care provider may test you earlier.

## Glucose Screening

Glucose Screening is a common screening for gestational diabetes. The first test is a glucose screening test. In this test you drink a glucose containing liquid and an hour later have your blood tested. If your blood sugar is 140mg/dl (some physicians may use 130mg/dl) or more, your doctor will order an oral glucose tolerance test.

## Glucose Tolerance Test

Your doctor may order this test after a screening with blood sugar higher than 140 (some doctors use 130). Your doctor may order this test without the screening.

### During this test:

- When you arrive at your appointment your fasting glucose level will be performed and recorded
  - A fasting blood glucose level requires that you do not eat or drink anything for at least 8 hours before the test
- You will then drink a glucose containing liquid
- Your blood glucose level will then be tested at 1, 2, and possibly 3 hours
- Your diagnosis levels will depend on the amount of glucose in the liquid you drank
- Ask your health care provider for results





## Note:

If you are unable to safely use insulin, oral medicine may be used after the risks of using these are understood. Working with your health care providers to adjust the amount of insulin to take during pregnancy is very important. Be sure to ask questions and write down recommendations.

With type 2 diabetes the increase in insulin resistance during pregnancy can lead to higher blood glucose levels, often more than can be managed with oral medications (pills), healthy eating and being physically active.

## Insulin

Insulin is the first line medication for all types of diabetes during pregnancy. When used during pregnancy to help manage type 2 diabetes, insulin will:

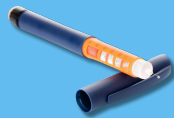
- Not cross the placenta
- Be individualized to your needs throughout your pregnancy

## Types of Insulin Devices

Ask your health care provider, diabetes educator, or pharmacist for instructions on how to use the insulin device that is prescribed for you. Types of insulin devices include:



- Insulin Pump - mechanical device used to give insulin continuously.



- Insulin Pen - an injection device that you can use to deliver preloaded insulin into your body



- Vial and syringe - insulin is pulled out of a vial via a syringe and injected into your body



# Healthy Eating

## Need help with Healthy Foods?

**WIC** (Women, Infants, and Children) is a supplemental nutrition program for low-income Infants, Children, and Women who are pregnant, postpartum, or breastfeeding, who have nutritional risks. Contact your local health department to apply.



Scan the QR code to find out more or visit:

<https://www.chfs.ky.gov/agencies/dph/dmch/nsb/Pages/wic.aspx>

Healthy eating is very important with any pregnancy and with diabetes. Work with a dietitian to develop a healthy eating plan designed just for you. While creating your healthy eating plan remember to:

- Include meals, snacks, and cravings
- Look at weight gain based on pre-pregnancy weight. You will need to gain more weight if you are carrying multiple babies
- Talk about vitamins and minerals
- Keep a food and blood glucose diary
  - Look for patterns in blood glucose numbers and food eaten
  - Adjust meals or snacks according to blood glucose readings and nutrition needs

Remember, eating for two does not mean doubling your calories. Choose healthy foods that provide needed nutrients for you and your baby. During the first trimester you may only need few, if any, extra calories. However, during the second and third trimester your calorie needs will go up. Eating healthy, monitoring your weight, and the weight of your unborn infant is essential.





# Meal Planning

## What is Recommended?

The Dietary Reference Intake (DRI) for all pregnant women recommends at least the following per day:

- **175 grams** of carbohydrate
- **71 grams** of protein
- **28 grams** of fiber

A meal plan is your guide for when, what, and how much to eat to get the nutrition you need while keeping your blood sugar levels in your target range. A good meal plan will consider your goals, tastes, and lifestyle, as well as any medicines you're taking.

A meal plan for gestational diabetes will:

- Be individualized for each person with guidance from a dietitian that is familiar with gestational diabetes
- Include enough calories to promote health for mom and growth for baby
- Be developed to help manage blood glucose levels

Fats should mainly come from monounsaturated and polyunsaturated sources. Limit saturated fats and avoid trans fats. Healthy choices from each of the food groups promotes a healthy lifestyle and a healthier pregnancy.

## Meal Planning in Action

1

Fill 1/2 your plate with non-starchy vegetables. Some healthy choices include:

- |                                  |             |
|----------------------------------|-------------|
| ◦ Asparagus                      | ◦ Lettuce   |
| ◦ Broccoli                       | ◦ Mushrooms |
| ◦ Brussels sprouts               | ◦ Onions    |
| ◦ Cabbage                        | ◦ Peppers   |
| ◦ Cauliflower                    | ◦ Radishes  |
| ◦ Carrots                        | ◦ Spinach   |
| ◦ Celery                         | ◦ Tomatoes  |
| ◦ Eggplant                       | ◦ Turnips   |
| ◦ Green beans                    | ◦ Zucchini  |
| ◦ Greens (kale, mustard, turnip) |             |

2

Fill 1/4 your plate with protein. Some healthy choices include:

- |   |           |
|---|-----------|
| ◦ Dried Beans (also source of starch)       | ◦ Haddock |
| ◦ Beef (round and sirloin)                  | ◦ Lamb    |
| ◦ Chicken Pork (center loin and tenderloin) | ◦ Nuts    |
| ◦ Cheese                                    | ◦ Oysters |
| ◦ Eggs                                      | ◦ Shrimp  |
| ◦ Low-fat cottage cheese                    | ◦ Tofu    |
| ◦ Catfish                                   | ◦ Tuna    |
| ◦ Cod                                       | ◦ Turkey  |

## MyPlate

Customize your own plate to fit your dietary needs, preferences, cultural traditions, and budget. MyPlate is a personalized approach to healthy eating

**For More info visit:**

<https://www.myplate.gov/>



# Meal Planning Cont.



3

Fill 1/4 of your plate with starch/grain. Some healthy choices include:

- Beans (also a source of protein)
- Bread
- Butternut Squash
- Cereal
- Corn
- Crackers
- Green peas
- Lentils (also a source of protein)
- Oatmeal
- Pasta
- Popcorn
- Potatoes (white and sweet)
- Pretzels
- Quinoa
- Rice
- Tortillas

4

Add a serving of fruit. A serving of fruit equals:

- 1 small piece of whole fruit
- 1/2 cup frozen or canned (no sugar added)
- 3/4 to 1 cup of berries or melon
- 2 Tablespoons dried fruit

Some healthy choices include:

- Apple
- Banana
- Blueberries
- Fruit Cocktail
- Honeydew melon
- Kiwi
- Orange
- Pineapple
- Raisins
- Peaches
- Strawberries
- Pears
- Watermelon

5

Add a serving of dairy. A serving of dairy equals:

- 8 ounces of milk
- 6 ounces of yogurt

Some healthy choices include:

- Low-fat or fat-free milk
- Plain non-fat yogurt
- Unsweetened fortified soy, almond, or rice beverage



# Physical Activity

## Did You Know?

If you were used to being physically active pre-pregnancy, then you can most likely continue the routine you are used to.

Be sure to check with your doctor first.

Moderate intensity physical activity is generally recommended with pregnancy and diabetes. Recommendations are typically 20-50 minutes per day, 2-7 days per week.

Make sure the physical activity program you have is safe for you and the baby!

## Precautions to Keep Yourself Safe During Physical Activity Include:

- Having a check-up with your health care provider to discuss planned activity
- Monitoring blood sugar before, during, and after physical activity as needed
- Eating a snack before increased physical activity
- Wearing sunscreen if activity is outdoors
- Wearing comfortable, protective, well-fitting shoes
- Wearing diabetes identification
- Taking a cell phone so you can reach someone if needed
- Carrying emergency foods with you in case you have a low blood sugar (see page 10)
- Drinking plenty of water
- Rest as needed



# Monitoring Blood Glucose

Ask your health care provider where you can get a blood glucose monitor. Take your monitor with you so you can see how things such as eating, exercising, and stress affect your blood sugar.

## Standard Gestational Diabetes Blood Glucose Goals

Blood Sugar Before Meals	Blood Sugar After Eating	
	1 Hour	2 Hours
$\leq 95$ mg/dl	$\leq 140$ mg/dl	$\leq 120$ mg/dl

(Your doctor may adjust these goals based on your needs)

Continuous glucose monitoring is now approved for gestational diabetes as well. Ask your health care provider how often and when you should test your blood glucose. Ask for specific individual blood glucose goals.

## Glucose Monitor Tips

- Follow the instructions that come with your blood sugar monitor (Each meter has a number to call for customer support if you have questions or need more information)
- Store your strips in the original package and at room temperature
- Do not use expired or used strips
- Wash your hands with soap and warm water before checking your blood sugar
- Be sure you have enough blood on/in your test strip
- Dispose of your lancet properly
- Check with your health care provider, diabetes educator, and/or trash company about disposal
- Write your blood sugar in your record/log book
- Bring your monitor and record/log book to each medical visit





# Hypoglycemia: Low Blood Sugar

## Remember to:

Always wear  
diabetes  
identification.



Hypoglycemia is when your blood sugar drops to 70 mg/dl or below. This is considered a low blood sugar reading.

## Causes of Hypoglycemia

- Too little food
- Too much medication
- Extra exercise /movement

## You May Feel Any of The Following Symptoms:



Dizzy



Numb



Sweaty



Shaky

Additional symptoms can include:

- Feeling tired
- Weakness
- Irritability
- Confusion
- Blurry Vision
- Headache

## Treatment

- Check your blood sugar. If you cannot check but you have symptoms of hypoglycemia treat anyway
- If blood sugar is low, follow the Rule of 15



- Eat 15 grams of carbohydrate such as: 3-4 glucose tablets, 15g glucose gel, 1/2 cup juice or regular soft drink, 1 cup milk, or 1 Tbsp corn syrup or sugar.
- Wait 15 minutes
- Retest blood sugar
- If blood sugar is still low, repeat Rule of 15

**Be aware that your blood sugar may fall low again if a snack or meal isn't eaten within the next hour.**

# Hyperglycemia: High Blood Sugar

## Make a Plan

Make a plan with your health care provider to decide when you should call them for a high blood sugar or multiple high blood sugars numbers.

Hyperglycemia is when your blood sugar is too high. High blood glucose happens when the body has too little insulin or when the body can't use insulin properly. Values of a high blood sugar are set by your health care provider.

## Causes of High Blood Sugar

- Too much food
- Too little medication
- Sickness, infection, or stress
- Less exercise than usual

## You May Feel Any of The Following Symptoms:



Frequent Urination



Tired



Thirsty



Blurry Vision

Additional symptoms can include:

- Hungry
- Headache
- Nausea
- Slow healing wounds
- Weight Loss (mainly type 1)

## Treatment

Check your blood sugar

- If sugar is above 300, call your health care provider
- They may tell you to test your urine ketones
  - A prescription is needed for insurance to cover the cost of ketone strips
- Ketones act like a poison and form when the body starts to use its own fat, instead of sugar for energy
- If you have ketones, call your health care provider immediately
- Drink plenty of sugar-free liquid; water is the best choice
- Make a plan with your health care provider if your blood sugar is high



# Common Pregnancy Symptoms

**Remember:**  
Ask your health  
care provider  
before taking any  
over the counter  
medicines

Common pregnancy symptoms such as nausea, vomiting, reflux, constipation, etc... can affect your eating and blood glucose levels. Talk with health care provider or dietitian about foods to eat or avoid when you are experiencing illness related to pregnancy.

## Common Pregnancy Discomforts and Guidelines:

- Vomiting
  - Stay hydrated (sip on liquids)
  - Ask your health care provider at what point you should go to emergency room if your vomiting does not stop
- Reflux
  - Avoid spicy, greasy, fried foods
  - Eat small meals throughout the day
  - Sip on liquids between meals/snacks
  - Wait 2 hours to lie down after eating
  - Talk with your doctor before taking antacids
    - Antacids may bind iron, increasing your risk for low iron
- Nausea
  - Sometimes dry crackers or ginger ale may help
- Constipation/diarrhea
  - Stay hydrated (drink liquids, water is a great choice)
    - Be as active as your health care provider advises





## Remember Your Mental Health

Talk with your health care provider about post-partum depression and/or anxiety. Discuss signs/symptoms and treatment options.

As the time approaches for the delivery of your baby:

- You may have more frequent doctor visits
- Measurements of your baby may be more frequent
- Your obstetrician may advise a C-section (Cesarean) depending on your baby's size

Remember to talk with your health care team about feeding plans for your baby:

- Breastfeeding (which can help reduce risk for type 2 diabetes)
- Formula feeding

## After the Birth of Your Child

After your baby is born:

- Keep doctor and pediatrician appointments
- Follow health care provider's recommendations for blood glucose monitoring
- Continue to:
  - Eat healthy
  - Be physically active
  - Take medication as recommended
  - Get rest as needed



# Resources

## **WIC (Women, Infants, and Children):**

- A supplemental nutrition program for low-income Infants, Children, and Women who are pregnant, postpartum, or breastfeeding, who have nutritional risks. Contact your local health department to apply.
- Website: <https://www.chfs.ky.gov/agencies/dph/dmch/nsb/Pages/wic.aspx>

## **HANDS (Health Access Nurturing Development Services) :**

- A voluntary home visitation program for any new or expectant parents. HANDS supports families as they build healthy, safe environments for the optimal growth and development of children.
- Website: <https://www.chfs.ky.gov/agencies/dph/dmch/ecdb/Pages/hands.aspx>

## **Kentucky Early Intervention Services (KEIS):**

- A statewide, voluntary educational program providing early intervention services for children with disabilities or developmental delays from birth to age 3.
- Website: <https://www.chfs.ky.gov/agencies/ocshcn/Pages/poe.aspx>

## **Ky Moms MATR (Maternal Assistance Towards Recovery) :**

- Helps expectant Kentucky mothers who are at risk for using alcohol, tobacco and other drugs, to reduce harm to their children from their substance use, during, and after pregnancy.
- Website: [dbhdid.ky.gov/dbh/kymomsmatr.aspx](http://dbhdid.ky.gov/dbh/kymomsmatr.aspx)



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