Gestational Diabetes

What to do for a healthy pregnancy

HALTON DIABETES PROGRAM APRIL 2020

Introduction

Welcome to Gestational Diabetes – What to do for a healthy pregnancy handbook

This handbook is your personal diabetes guide. It supports the information that you already know, and provides new information that you gather working alongside your health care team including attending the Gestational Diabetes session.

Using this information, you and your family can make informed decisions about your care and work with your health care team to develop a plan that addresses your specific needs to ensure that you and your baby are healthy.

Your diabetes health care team may include:

	Name	Phone Number
Family physician		
Nurse Educator		
Dietitian Educator		
Endocrinologist/Diabetes Specialist		
Social Worker		
Optometrist/Ophthalmologist		
Chiropodist/Podiatrist		
Kinesiologist/Exercise Specialist		

Understanding gestational diabetes

What is gestational diabetes?

Gestational diabetes is a type of diabetes that develops during pregnancy. Having diabetes means the amount of sugar in your blood, known as glucose, is higher than it should be. Gestational diabetes usually:

- Develops in the second half of pregnancy
- Goes away soon after your baby is born

What happens in gestational diabetes to cause high blood glucose?

- Much of the food you eat is broken down into glucose. The glucose goes from your stomach into your blood stream
- Your body makes a hormone called insulin to move glucose from the blood into your body's cells. The cells use glucose for energy
- Pregnancy weight gain and the effects of pregnancy hormones made by the placenta can cause your body to not use the insulin as well as it normally can. This is called insulin resistance
- Your body may require more insulin to do the same amount of work. If your body is not able to make enough insulin or is not working well enough to move all the glucose into your cells, the glucose can build up in your blood and create gestational diabetes

True or False?		True	False
	Eating too much sugar can cause gestational diabetes	☐	☑

Being Diagnosed with Gestational Diabetes and Your Feelings

Many emotions may occur when you are pregnant and finding out you have gestational diabetes. It is natural to feel a wide variety of emotions such as shock, denial, anxiety, anger or fear. Each individual's experience with their diabetes diagnosis is different.

It is important to understand how your feelings might affect the choices you make in caring for your diabetes. Talk to your health care team if your feelings get in the way of caring for your diabetes.

By having knowledge, help from your health care team and support from family and friends, you can manage gestational diabetes.

The possible risks related to having gestational diabetes

Keeping your blood glucose in or near your target range can to prevent complications during birth and keep you and your baby healthy.

What are the risks for me and my baby when I have gestational diabetes?

- High blood pressure for mother

  There is a higher risk for high blood pressure when you have gestational diabetes.

- A large sized baby at birth

  Extra glucose from your body travels to your baby. Your baby will produce extra insulin in response to the extra glucose. Extra glucose and insulin will cause your baby to grow larger than expected compared to other babies at this age.

- Early (Preterm Birth)

  There may be a need to induce baby early if baby is large. If baby needs to be delivered early, your baby's lungs may not be fully developed. This may result in baby needing more monitoring and care after delivery

- Low blood glucose (hypoglycemia) at birth

  When the baby is in utero, the extra insulin circulates in your baby in response to extra glucose travelling from you to your baby. At birth, the glucose supply stops from the placenta but there is extra insulin circulating in the blood stream of your baby. This extra insulin may create a condition called hypoglycemia (low blood glucose) in your baby on delivery. Baby will need to be monitored more closely and need more frequent feeding.

- Development of type 2 diabetes later in life

  You are at higher risk for developing Type 2 diabetes later in life. If your baby is large, he/she has a higher risk for childhood and adult obesity and risk of developing Type 2 diabetes

Keep in mind that just because you have gestational diabetes, it does not mean these risks will occur. Most women who have gestational diabetes give birth to healthy babies especially when they keep their blood glucose levels under control.

Caring for Gestational Diabetes

What can I do to keep my blood glucose level in a good range and have a healthy pregnancy?

To have a healthy pregnancy and to keep blood glucose values in range:

1. Develop a healthy eating plan
    - You can work with a dietitian to develop a healthy eating plan that provides good nutrition for you and your baby
2. Be physically active each day, if supported by your doctor
    - Exercise helps to lower blood glucose levels. Talk to your health care team about some activities that are safe for you
3. Monitor and record your blood glucose values, food and activity
    - Recording your blood glucose values, food, activity, and insulin (if taken) helps determine what affects your blood glucose. Bring this record with you to each of your appointments with the diabetes team
4. Consider medications such as insulin if needed
5. Follow up with your health care team
    - Keep your appointments with your health care team for ongoing support and assistance

Caring for Gestational Diabetes

1. Develop a healthy eating plan

Most women with gestational diabetes can control their blood glucose levels by making changes in their diet. Healthy eating is an important way to have a healthy pregnancy and a healthy baby.

Eating healthy helps you take charge of your health and helps your baby.

What is healthy eating in gestational diabetes?

Eating healthy gives you the nutrients you need to have energy, stay strong and support a healthy pregnancy. A healthy diet includes a balance of foods from all the food groups.

For women with gestational diabetes, a healthy diet also helps to keep blood glucose levels in the healthy target range.

Carbohydrates are part of a healthy diet for women with gestational diabetes.

Carbohydrates are:

- sources of energy found in a variety of foods
- break down into glucose in your body
- an important component of your diet while you are pregnant

Eating too much carbohydrate will raise your blood glucose levels and eating too little could affect the healthy growth of your baby.

Planning your meals and snacks and spreading your carbohydrates over the day and selecting lower glycemic index (GI) choices will assist in your health and your baby's health.

What food groups provide carbohydrate?

The food groups that provide carbohydrates and will raise your blood glucose are:

- Grains and starches
- Fruits
- Milk and alternatives
- Other choices (sweets, jam, sugary drinks, honey)

The food groups that do not have carbohydrate and will not raise your blood glucose are:

- Non-starchy vegetables – provide vitamins, minerals and fibre
- Meat and alternatives – provide protein
- Fats and oils – provide fat

A balanced healthy diet contains foods with carbohydrates, protein and healthy fats.

Carbohydrate Foods (Increases Blood Glucose)

Breads, Crackers, Roti, Tortilla, Chapatti, Cereal, Grain (Rice, Barley, Corn), Pasta, Noodles, Potatoes, Corn, Yams, Fruits, Juices, Milk, Yogurt, Soy Beverage (Unsweetened), Sweet Foods, Snacks (Potato Chips, Pretzels)

Protein (little or no increase in blood glucose)

Fish, Poultry, Meat, Eggs, Cheese, Cottage Cheese, Plain Greek Yogurt, Beans & Lentils, Tofu, Nuts, Seeds, Peanut Butter, Nut Butters

Vegetables
(little or no increase in blood glucose)

Fats
(little or no increase in blood glucose)

Oils, Salad Dressing, Margarine, Butter

Extra

Water, Coffee, Tea, Sugar-Free Pop

Carbohydrate Portions

The following portion sizes each give 15 grams of carbohydrate which is 1 carbohydrate choice:

Grains & Starches	Fruits	Milk & Alternatives
1 slice bread or small roll	1 medium apple, pear, orange	1 cup milk
¼ of a 4 ½ inch bagel	1 small banana	1 cup soy beverage
½ English muffin	1 cup blueberries	¾ cup plain yogurt
½ cup dry cereal	1 cup melon	½ cup ice cream
¾ cup hot cereal	2 cups strawberries, raspberries	½ cup frozen yogurt
½ cup cooked pasta	1 cup or 1 large peach	¾ cup artificially sweetened yogurt
½ cup cooked quinoa	15 cherries, grapes	½ cup milk pudding *(no sugar added)*
⅓ cup cooked rice	½ cup applesauce	
1 – 6" roti, chapatti, tortilla	¾ cup pineapple	
½ cup corn, 1 small cob	2 tablespoons raisins	
½ cup mashed potato	½ cup apple or orange juice	
½ medium potato	2 medium plums, prunes	
½ cup sweet potato	2 medium kiwis, apricots	
½ cup beans, (kidney, white), *cooked*	½ medium mango	
½ cup lentils (dhal), *cooked, thick*		
1 cup lentils (dhal), *cooked, thin*		
2 small cookies		
7 soda crackers		
3 cups popcorn		

Balance each meal with Protein and Vegetables

How much carbohydrate should I eat at meals and snacks?

Below is guide for the recommended amount of carbohydrates at meals and snacks.

Time	Breakfast	Snack	Lunch	Snack	Supper	Bedtime Snack
Carbohydrate	30 g	15-30 g	45 g	15-30 g	45 g	15 g + protein
Carbohydrate Choices	2	1-2	3	1-2	3	1 + protein

How do I balance my carbohydrates through the day?

- Enjoy three meals and three snacks spaced evenly throughout the day
- Eating the suggested amount of carbohydrates in your meals and snacks
- Limit foods high in added sugar

In your daily choices, include:

- 3 servings of fruit per day
- 3 servings of milk/milk alternatives per day
- Choose fibre-rich sources of carbohydrates like whole grain breads and cereals, and legumes and lentils. Fibre slows carbohydrate absorption into your blood
- Choose vegetables and fruit rather than juice

Practice planning your meals and snacks

Example - Breakfast: Carbohydrate Target - 30 g		
Food	**Portion**	**Carbohydrate (g)**
Whole wheat bread	1 slice	15 g
Egg	2	0 g
Orange	1 medium	15 g
Coffee	1 cup	0 g
		Total Carbohydrate in this meal 30 g

Using your meal plan and food chart as a guide, make a plan for your meals and calculate the amount of carbohydrates:

Breakfast: Carbohydrate Target - 30 g

Food	Portion	Carbohydrate
		Total Carbohydrate in this meal _____g

Snack: Carbohydrate Target – 15 - 30 g

Food	Portion	Carbohydrate (g)
		Total Carbohydrate in this snack _____g

Lunch: Carbohydrate Target - 45 g

Food	Portion	Carbohydrate (g)
		Total Carbohydrate in this meal _____g

Practice planning your meals and snacks

Snack: Carbohydrate Target – 15 - 30 g

Food	Portion	Carbohydrate (g)
Total Carbohydrate in this snack _____g		

Dinner: Carbohydrate Target - 45 g

Food	Portion	Carbohydrate (g)
Total Carbohydrate in this meal _____g		

Bedtime Snack: Carbohydrate Target – 15 g + protein

Food	Portion	Carbohydrate (g)
Total Carbohydrate in this snack _____g		

How to Read Food Labels

How do you count grams of carbohydrate on a food label?

1. Look at the Nutrition Facts on the food label

2. Look for serving size at the top of the Nutrition Facts table
    - The information in the table is based on this serving size

3. Look for the carbohydrate grams
    - Carbohydrate grams include fibre, sugar and starch
    - Starch is not always listed
    - Fibre does not raise your blood sugar

4. Subtract the fibre grams from the carbohydrate grams. This equals the amount of carbohydrate that will affect your blood sugar

How many carbohydrate choices are in the serving size?

(1 carbohydrate choice is about 15 grams carbohydrate)

Wonder White Bread

Nutrition Facts

Per 2 slices (75 g)	
Amount	% Daily Value*
Calories 190	
Fat 2.5 g	4%
Saturated 0.5 g + Trans 0 g	3%
Carbohydrate 38 g	13%
Fibre 2 g	8%
Sugars 3 g	?
Protein 6 g	
Cholesterol 0 mg	0%
Sodium 320 mg	13%
Potassium 65mg	2%

*5% or less is a little, 15% or more is a lot

1. Serving size = **2 slices**
2. Carbohydrate **38 g** — Fibre **2 g** = **36 g** of available carbohydrate
3. Number of carbohydrate choices is about **2**

Country Harvest Grains + Fibre with Chia

Nutrition Facts

Per 1 slice (38 g)	
Amount	% Daily Value*
Calories 80	
Fat 1 g	2%
Saturated 0.4 g + Trans 0 g	2%
Carbohydrate 17 g	6%
Fibre 7 g	28%
Sugars 3 g	?
Protein 4 g	
Cholesterol 0 mg	0%
Sodium 115 mg	5%
Potassium 65mg	2%

*5% or less is a little, 15% or more is a lot

1. Serving size = _____
2. Carbohydrate _____ — Fibre _____ = _____ of available carbohydrate
3. Number of carbohydrate choices is about _____

Dempster's 100% Whole Grains Ancient Grains with Quinoa

Nutrition Facts

Per 1 slice (38 g)	
Amount	% Daily Value*
Calories 100	
Fat 1.5 g	2%
Saturated 0.4 g + Trans 0 g	2%
Carbohydrate 17 g	6%
Fibre 2 g	8%
Sugars 1 g	?
Protein 4 g	
Cholesterol 0 mg	0%
Sodium 150 mg	6%
Potassium 95mg	3%

*5% or less is a little, 15% or more is a lot

1. Serving size = _____
2. Carbohydrate _____ — Fibre _____ = _____ of available carbohydrate
3. Number of carbohydrate choices is about _____

Notes:

Caring for Gestational Diabetes

2. Be physically active each day, if supported by your doctor.

Physical activity is good for your body and mind. Regular physical activity helps keep your blood glucose and weight at a healthy level.

Ask your doctor what activities are safe for you. There may be times when your doctor recommends rest for your health or your baby's health.

If it is safe for you to be active:

- Aim for a moderate level of activity, such as 20 to 30 minutes on most days of the week
- Walking, swimming or doing yoga are moderate activities
- Moderate activity physical activity is not the same as daily, routine activities, such as shopping, doing household chores, or washing dishes
- Being active after a meal will help to control your after meal blood glucose levels

Caring for Gestational Diabetes

3. Monitor and record your blood glucose levels, food and activity.

Should I test my blood glucose?

Testing your blood glucose helps you know what is happening in your body. Blood glucose levels change during the day based on what foods you eat, when you eat, and how much you eat. Activity also affects blood glucose levels. You can track your blood glucose patterns and use this information to help manage your gestational diabetes.

How do I begin testing?

You will need

- A prescription for a blood glucose meter, test strips and lancets (covered by most drug plans)
- Talk to your diabetes educator or doctor if you do not have a drug plan

How often should I test my blood glucose?

- Check your blood glucose 4 times daily
- Record your blood glucose levels on the record sheet provided
- Check blood glucose level when you are fasting (the first glucose level in the morning before you wake up)
- Check blood glucose levels 2 hours after your meals (test 2 hours after the first bite of your meal)
- Occasionally you may be asked to check blood glucose levels 1 hour after a meal instead of 2 hours after

What are my target blood glucose levels?

The target levels for diabetes in pregnancy are listed below:

Time of Day	Healthy Blood Glucose Level
Fasting	Less than 5.3 mmol/L
1 hour after a meal	Less than 7.8 mmol/L
2 hours after a meal	Less than 6.7 mmol/L

Caring for Gestational Diabetes

4. Consider medications such as insulin if needed.

Do I need to take insulin if I have gestational diabetes?

For some women, a healthy eating plan and physical activity are not enough to control their blood glucose levels. If your blood glucose levels remain high, you may need to take insulin.

The Diabetes Team will help you learn how to do this.

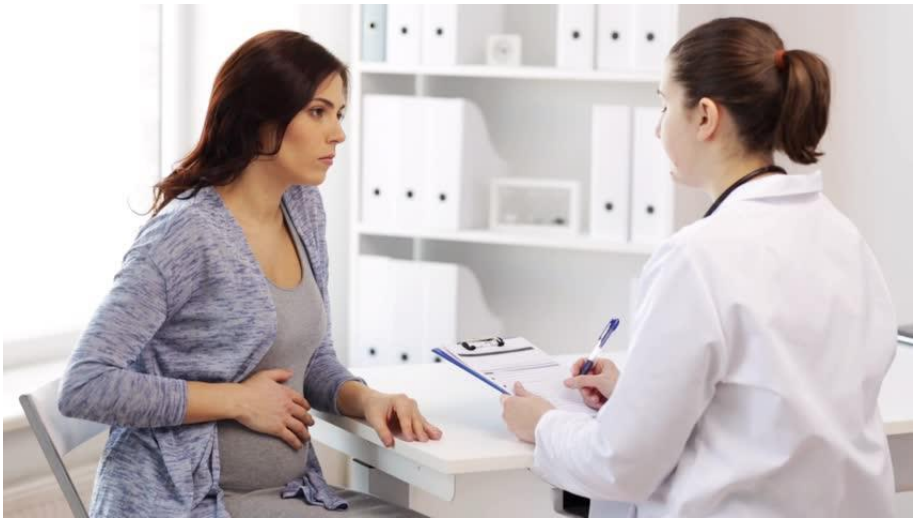
Some things about insulin:

- Insulin does not hurt your baby
- If you need to take insulin, it does not mean that you didn't try hard enough or that you failed at taking care of yourself. It means that your body has a high level of insulin resistance and needs some help getting glucose back into a healthy range
- An increase in the amount of insulin does not mean that your pregnancy is in danger. As your pregnancy progresses, the placenta may make more pregnancy hormones and larger dosages of insulin may be needed to control your blood glucose
- After your pregnancy, you may no longer require insulin. Check with your health care provider to determine your individual requirements

Caring for Gestational Diabetes

5. Follow up with your health care team

Your physician or midwife, together with your diabetes team, will provide care during pregnancy and help you manage gestational diabetes. This means you will have prenatal visits with your physician or midwife, as well as appointments with the diabetes team.



You may require medications including insulin to help manage your blood glucose levels. This is for the safety and health of you and your baby.

Attending your appointments is very important for your health and that of your baby.

How do I prepare for my appointments with the Diabetes Team?

- Record your meals, snacks, blood glucose values and physical activity on the record provided

- Bring your blood glucose meter and your food and blood glucose records to each visit with the Diabetes Team

This information will help you and your Diabetes Team determine the best options for you and your baby.

After Delivery

What should I do after my baby is born?

Gestational diabetes usually goes away soon after your baby is born.

At one of your last visits at the diabetes clinic, your diabetes doctor will provide a lab requisition for you to have a glucose tolerance test 6 weeks to 6 months after you deliver. This is the same test you had during pregnancy. The results will show if you have Type 2 diabetes.

Will I get Type 2 diabetes in the future?

Having gestational diabetes makes it more likely that you will develop diabetes in your next pregnancy or later in life.

It is important to be screened for type 2 diabetes as follows:

- 6 weeks to 6 months after giving birth, with a 2-hour 75g oral glucose tolerance test
- Before planning another pregnancy
- Every 3 years (or more often depending on your risk factors for diabetes)

Talk to your health care team about the need for regular screening for type 2 diabetes.

To lower the chance of getting diabetes in the future:

- Breastfeed your baby. It is important to breastfeed immediately after delivery for at least four months, if you can, to help reduce the risk of obesity and diabetes for you and your baby
- Follow Canada's Food Guide to continue with healthy eating
- Aim for a healthy body weight
- Incorporate regular physical activity

Making a Plan to care for Gestational Diabetes

Making a plan is another important part of caring for your gestational diabetes.

Take a moment to think about everything we have discussed during this session.

Where would you like to start to manage gestational diabetes?

Things I would like to try:

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