



Gestational Diabetes:

What to do for a healthy pregnancy



**Women's Reproductive Health
and Newborn Care Program**

When you attend the “Learning about gestational diabetes” class, the Registered Dietitian will give you this book.

Your checklist for after the class:

- ☐ Make sure you have a follow-up appointment with your Obstetrician in 1 to 2 weeks.
- ☐ Make sure you have a prescription for lancets and test strips.
- ☐ Call your Obstetrician or Midwife if you have any concerns or questions.

Inside this book

	Page
Understanding gestational diabetes	
What is gestational diabetes?	1
What causes gestational diabetes?.....	1
How can gestational diabetes affect me and my baby?	2
Will I need insulin?	2
What happens after I have my baby?.....	2
Will I get diabetes in the future?	3
What can I do for a healthy pregnancy?.....	3
Healthy eating for you and your baby	
What is healthy eating?	4
How do I plan meals and snacks?	5
Which foods contain carbohydrates?	6
How do I read food labels?	13
Testing your blood sugar	
How often do I test my blood sugar?	15
Getting regular physical activity	16
Keeping your appointments	16
Finding more information	17
Summary: How to manage gestational diabetes.....	18
Notes and questions	19

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 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 causes gestational diabetes?

Gestational diabetes:

- develops when insulin doesn't do a good job of moving sugar from your blood into your body's cells
- is not caused by anything you did. You could not have prevented it from happening

How does this happen?

Much of the food you eat is broken down into sugar. The sugar goes from your stomach into your bloodstream.



Your body makes a hormone called insulin to move sugar from the blood into your body's cells. The cells use sugar for energy.



During pregnancy, weight gain and the effects of hormones made by the placenta (also called the 'afterbirth') can cause "insulin resistance". This means that your body needs more insulin to do the same amount of work. If your body is not able to make enough insulin the sugar can build up in your blood.



By the second half of your pregnancy, there is not enough insulin or it isn't working well enough to move all the sugar into the cells. The amount of sugar in your blood becomes too high.

How can gestational diabetes affect me and my baby?

During pregnancy, when you have high blood sugar, your baby will have high blood sugar too. Your baby's body responds by making extra insulin to move the sugar into the body cells. The baby is able to use this extra sugar by storing it as fat. This makes your baby grow larger. Extra sugar can impair the development of your baby's lungs, liver and other organs.

Your baby's growth will be measured using ultrasound. If your baby is large, a vaginal birth can be more difficult. Your doctor or midwife will discuss your risks around the time of delivery, when they know the size of your baby.

After birth, your baby is no longer affected by your high blood sugar level. However, the extra insulin your baby was used to making continues to work. This could lead to a drop in his or her blood sugar initially after birth. Your baby will be closely watched and treated for low blood sugar if needed.

Will I need insulin?

For some women, healthy eating and physical activity are not enough to control their blood sugars. If your blood sugars stay high, you may need to take insulin.

What happens after I have my baby?

Gestational diabetes usually goes away soon after your baby is born. In the hospital, you can check your blood sugar to see if it has returned to normal.

When you have finished breastfeeding or 6 weeks after you deliver, your family doctor will arrange a glucose tolerance test. This is the same blood test that you had during pregnancy. The results will show if you continue to have diabetes.

Will I get diabetes in the future?

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

To lower the chance of getting diabetes in the future:

- ✓ breastfeed your baby
- ✓ continue healthy eating (as described in this booklet)
- ✓ keep your weight at a healthy level
- ✓ exercise regularly

What can I do for a healthy pregnancy?

To have a healthy pregnancy and prevent complications:

1. Plan a healthy pregnancy weight gain.
2. Plan healthy eating for you and your baby.
3. Test your blood sugar 4 times a day and record the results.
4. Be active each day, if OK with your doctor.
5. Keep appointments with your health care team.

This booklet has more information about each of these steps.

Healthy eating for you and your baby

Most women with gestational diabetes can control their blood sugars just by making simple changes in their diet. Healthy eating is the most important way to have a healthy pregnancy and baby.

Healthy eating is up to you. It helps you take charge of your health and helps your baby.

What is healthy eating?

The Dietitian will help you make a plan for healthy eating. Eating well gives you the nutrients you need to feel good, have energy and support a healthy pregnancy.

Your plan will include:

- avoiding foods that are high in sugar
- eating smaller, more frequent meals
- eating the suggested amount of carbohydrate in your meals and snacks

Carbohydrates (sugar, starches and fibre) are sources of energy found in a variety of foods. Most carbohydrates breakdown into glucose, a type of sugar. You need to eat carbohydrates for good health and a healthy pregnancy. However, eating too much carbohydrate will raise your blood sugar.

How healthy eating helps control your blood sugar levels

Limiting the amount of sugar/carbohydrate in a meal or snack	→	Limits the amount of blood sugar that your body has to cope with at that time.	→	Blood sugars are better controlled.
--	---	--	---	-------------------------------------

How do I plan meals and snacks?

The Dietitian will tell you how many grams of carbohydrates to have in each meal and snack. Write these suggested amounts in your logbook.

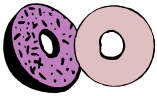






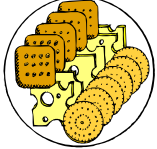









	Carbohydrate grams
Breakfast	
Snack	
Lunch	
Snack	
Dinner	
Snack	

Which foods contain carbohydrates?

**Each portion contains 15 grams of carbohydrate.
But all foods are not the same. Always check the label!**

Choose whole grains more often!

Grains and starches

 Bagel ¼ large	 Bread 1 slice	 Cereal cold Read label	 Cereal hot, cooked ¾ cup	 Pancakes, Waffles 1	 Hamburger or hotdog bun ½
 Corn ½ cup or 6" cob	 Crackers soda 6	 English muffin ½	 French fries 10	 Soup 1 cup homemade (or read label)	 Pasta, Quinoa Couscous cooked ½ cup
 Pita bread, wrap Read label Tortilla (7 inch)	 Naan (1/4 or 33g) Chapati (6 inch) Dosa (10 inch)	 Potato white or sweet, boiled or baked ½ medium (size of ½ tennis ball) or ½ cup mashed	 Rice cooked 1/3 cup	 Taco shells 2 (5 inches)	






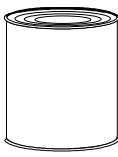
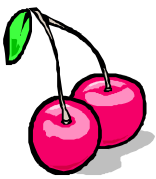

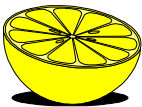









Foods not to eat:

- pie, pastries, donuts, squares,
- sugary cereals, muffins and cookies

Fruits

**Each portion contains 15 grams of carbohydrate.
But all foods are not the same. Always check the label!**

Choose whole fruits more often!
**If you prefer to drink juice, look for a low carbohydrate fruit
drink, made with an artificial sweetener such as Splenda®.**

 <p>Apple 1 medium</p>	 <p>Applesauce unsweetened ½ cup</p>	 <p>Banana 1 small (6 inches)</p>	 <p>Blackberries, Strawberries 2 cups</p>	 <p>Other berries 1 cup</p>	 <p>Canned fruit (not in syrup) ½ cup</p>
 <p>Cherries 15</p>	 <p>Dried fruit ¼ cup</p>	 <p>Grapefruit 1/2</p>	 <p>Grapes 15</p>	 <p>Papaya, cubed 1 cup</p>	 <p>Kiwi 2 medium</p>
 <p>Mango ½ medium</p>	 <p>Melon 1 cup</p>	 <p>Orange or Peach 1 medium</p>	 <p>Pear 1 medium</p>	 <p>Pineapple ¾ cup</p>	 <p>Plums 2 medium</p>

Vegetables

Choose any vegetable, anytime of the day.









A healthy serving size (1 cup) of vegetables twice a day will not increase your blood sugar.



Milk and alternatives

**Each portion contains 15 grams of carbohydrate.
But all foods are not the same. Always check the label!**







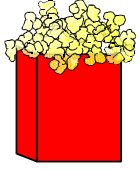



Choose lower fat milk products!

 <p>Milk Skim, 1% or 2% 1 cup</p>	 <p>Chocolate milk $\frac{1}{2}$ cup</p>	 <p>Soy beverage flavoured Read label</p>	 <p>Soy beverage plain 2 cups</p>
 <p>Yogurt plain $\frac{3}{4}$ cup</p>	 <p>Yogurt artificially sweetened Read label</p>	 <p>Original Rice Milk $\frac{1}{2}$ cup</p>	 <p>Original Almond, Cashew/Soy beverage (plain) 2 cups</p>

Other common choices

These foods are not low in carbohydrates, but they can be a part of healthy eating, if not chosen often. The chart shows the amount of carbohydrate in one portion. Please read food labels for more information.

**Choose foods which are low in saturated fat
and “no trans fat”.**

 <p>Muffin ½ small 15 g 1 large (eg; Tim Horton's) 55 g</p>	 <p>3 Plain cookies (Arrowroots, Social teas) 18 g</p>	 <p>Jam or jelly 1 tbsp. 15 g</p>	 <p>Diet jam or jelly 1 tbsp 5 g</p>	 <p>Ice cream (plain flavours) ½ cup 17 g</p>
 <p>Oatmeal or Granola bar 1 bar 15 g</p>	 <p>Popcorn 3 cups 15 g</p>	 <p>Sugar brown or white 3 tsp 15 g</p>	 <p>Pretzels 7 large or 30 sticks 15 g</p>	 <p>1 slice of med pizza, regular crust 25 to 32 g</p>

Sugar substitutes (aspartame, sucralose, Stevia, saccharin and acesulfame potassium) in moderation are acceptable during pregnancy.


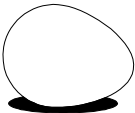







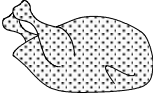

Cyclamate is not recommended.

Meat and alternatives

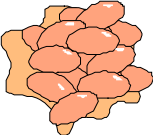





Meat and alternatives contain protein. Eat protein 4 times a day.
It helps control your blood sugar. Most proteins do not contain carbohydrate.

Choose lean meats and low fat cheese.

Here are some examples of healthy servings of meat or protein.













					
Cheese 2 ounces	Egg 1 or 2 large	Fish canned, water packed, 2 oz	Fish cooked 2 to 3 ounces	Shellfish cooked 2 to 3 ounces	Tofu ½ block (100 grams)
					
Meat cooked 2 to 3 ounces	Peameal/ Back bacon cooked 1 or 2 slices	Nuts and Seeds ¼ cup Note: Nuts and seeds also contain fat	Poultry skinless, cooked 2 to 3 ounces	Plain Greek yogurt with at least 7g protein per serving ½ cup	

Some proteins contain small amounts of carbohydrate. These may need to be counted.

					
Legumes, Lentils (dal) cooked ½ cup = 15 g carbohydrate	Peanut Butter 2 tbsp = 8 g carbohydrate	Cottage cheese 1/2 cup = 7 g carbohydrate	Imitation crab 3 oz = 13 g carbohydrate	Edamame 1 cup = 7 g carbohydrate	Textured vegetable protein ¼ cup dried = 7 g carbohydrate

Fats

Healthy eating includes 3 to 4 servings of fat a day. Most fats do not contain carbohydrate and won't raise your blood sugar.

 <p>Cooking oil (canola and olive) 1 tsp.</p>	 <p>Salad dressing low calorie 2 tbsp.</p>	 <p>Mayonnaise light 2 tbsp.</p>	 <p>Nuts and Seeds ¼ cup</p>	 <p>Olives 6</p>	 <p>Vegetable dips (baba ganoush, hummus) 15 ml</p>
 <p>Cheese spread light 2 tbsp.</p>	 <p>Margarine Non-Hydrogenated 1 tsp.</p>	 <p>Bacon 1 strip</p>	 <p>Butter 1 tsp.</p>	 <p>Cream 5%, 10%, 35% 15 ml</p>	 <p>Avocado 1/3</p>

Spices, herbs and water, do not contain carbohydrate and can be used as desired.

How do I read food labels?

Did you know?

Carbohydrates are found in a variety of foods such as milk.

1% Milk

Nutrition Facts	
Per 250 mL (1 cup)	
Amount	% Daily Value
Calories 110	
Fat 2.5 g	4%
Saturated 1.5 g	8%
+ Trans 0 g	
Cholesterol 10 mg	4%
Sodium 120 mg	4%
Carbohydrate 12 g	4%
Fibre 0 g	0%
Sugars 12 g	
Protein 9 g	

To count grams of carbohydrate on a food label:

1. Look for the:

Serving size

Carbohydrates

Fibre

Old Mill

Nutrition Facts	
Per 1 bagel (85 g)	
Amount	% Daily Value
Calories 220	
Fat 1.5 g	2%
Saturated 0.3 g	
+ Trans 0 g	2%
Cholesterol 0 mg	0%
Sodium 430 mg	18%
Carbohydrate 39 g	13%
Fibre 4 g	15%
Sugars 3 g	
Protein 9g	

2. Subtract the Fibre grams from the Carbohydrate grams.

This equals the available carbohydrate in 1 serving.

Carbohydrate	39 g
Fibre	- 4 g
Available carbohydrate	35 g

**1 Old Mill bagel contains
35 g available carbohydrate.**

Practice with these food labels

Dempster's

Nutrition Facts	
Per 1 bagel (90 g)	
Amount	% Daily Value
Calories 240	
Fat 2 g	3%
Saturated 0.2 g	
+ Trans 0 g	1%
Cholesterol 0 mg	0%
Sodium 410 mg	17%
Potassium 60 mg	2%
Carbohydrate 47 g	16%
Fibre 2 g	8%
Sugars 4 g	
Protein 8 g	

Country Harvest

Nutrition Facts	
Per 1/2 bagel (56 g)	
Amount	% Daily Value
Calories 150	
Fat 1 g	2%
Saturated 0.2 g	
+ Trans 0 g	1%
Cholesterol 0 mg	
Sodium 340 mg	14%
Potassium 75 mg	2%
Carbohydrate 30 g	10%
Fibre 1 g	5%
Sugars 3 g	
Protein 5 g	

Serving size: _____

Carbohydrate grams: _____

Subtract Fibre grams: - _____

Grams of available carbohydrate = _____

Serving size: _____

Carbohydrate grams: _____

Subtract Fibre grams: - _____

Grams of available carbohydrate = _____

Check the serving size!

Compare this with the actual amount that you eat.

In this example, the serving size (1/2 bagel) is different than the others (1 bagel).

If I eat a whole bagel, the grams of available carbohydrate would be: _____

Testing your blood sugar

We will give you a blood sugar monitor, show you how to test your blood sugars and record them in your log book. You will need to buy more test strips and lancets from your pharmacy, using the prescription from your doctor. These supplies are covered by most drug plans. If you do not have a drug plan, you can apply for funds from the Ontario Monitoring for Health Program. For more information talk to your health care provider.

How often do I test my blood sugar?

Test your blood sugar 4 times a day. Write down each result in your log book. Match it with the “target” blood sugar levels in this chart.

Time of day	Healthy blood sugar level
Before breakfast	Less than 5.3
2 hours after breakfast	Less than 6.7
2 hours after lunch	
2 hours after dinner	
1 hour after a meal (if you are unable to wait for 2 hours)	Less than 7.8

Bring your logbook and monitor to all your appointments.

Getting regular physical activity

During your prenatal visits, your health care providers will talk about physical activity during pregnancy.

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:

- Physical activity is good for your body and mind. Regular physical activity helps keep your blood sugar and weight at a healthy level.
- Do activities that are comfortable for you. You may enjoy walking, swimming, doing yoga or exercising.
- Aim for a moderate level of activity, such as 20 to 30 minutes of walking on most days of the week.
- Being active after you eat will help to control your blood sugar levels.

Keeping your appointments

Your family doctor or an obstetrician will provide your care during pregnancy and help you manage gestational diabetes.

Regular prenatal visits are very important for your health and that of your baby.

Finding more information



Here are some helpful websites:

- Nutrition Data – Know what you eat:
www.nutritiondata.com
- Calorie King – For food awareness:
www.calorieking.com
- Canadian Diabetes Association:
www.diabetes.ca
- My Fitness Pal:
www.myfitnesspal.com

Smart phone apps for carbohydrate counting:

- Calorie King
- My Fitness Pal



Our thanks

We are grateful to St. Joseph's Healthcare Hamilton, St. Michael's Hospital and the Niagara Region Diabetes Education Centre for sharing their patient education materials. We have used some pictures and information from their resources in this booklet.

Summary: How to manage gestational diabetes

Controlling your blood sugar:

- ✓ Makes you feel healthier and less tired
- ✓ Lowers the chances of having a very large baby with serious health problems
- ✓ Keeps your baby's blood sugar at a healthy level after birth

To keep your blood sugar at a healthy level:

1. Follow a plan for healthy eating.
2. Test your blood sugar 4 times a day and record the results.
3. Be active each day, if OK with your doctor.
4. Keep appointments with your health care team.



**If you have questions or concerns,
call your family doctor or obstetrician.**

