



Diabetes in Pregnancy

Gestational Diabetes

Information on:

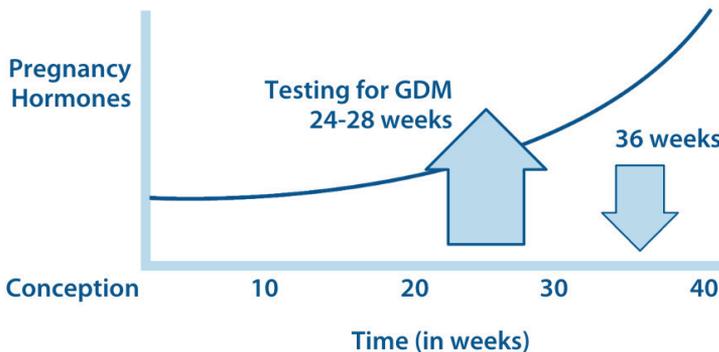
- What is gestational diabetes?
- Healthy eating
- Healthy blood sugar levels or targets
- Active living

Gestational Diabetes

Gestational Diabetes (GDM) means diabetes during pregnancy.

- Hormones during pregnancy make it harder for insulin to work in your body. This is called insulin resistance.
- Insulin is a hormone made by your pancreas and it is needed to help move sugar from your blood to your cells for energy.
- The pancreas must make 2-3 times more insulin during pregnancy to keep your blood sugars within a normal and healthy range.
- GDM develops when the pancreas cannot make enough insulin to keep up with the pregnancy hormones and when cells become more resistant to insulin action.
- GDM is most common during the second half of pregnancy.

How do your hormones change during pregnancy?



Women who are at greater risk of having gestational diabetes should be screened during the first 3 months of their pregnancy.

How is it determined you have GDM?

All pregnant women should be screened for gestational diabetes (GDM). At 24-28 weeks of your pregnancy, your blood sugar levels will be measured after consuming a sweet drink.

How do you know if you are more likely to develop GDM?

- Someone in your family has diabetes: parent, brother or sister
- You come from a high-risk ethnic group: Aboriginal, African, Arab, Asian, South Asian, or Hispanic
- You are overweight/have obesity;
- You have prediabetes;
- You had GDM in a previous pregnancy or a large baby who weighed over 4 kg (9 pounds) at birth;
- You are 35 years or older;
- You use corticosteroid medication;
- You have polycystic ovary syndrome (PCOS) or acanthosis nigricans (darkened patches of skin).

How does it affect your baby?

High blood sugar levels can be unhealthy for both you and your baby.

- Your baby may have problems at birth and may have a low blood sugar level (hypoglycemia) after birth. This may cause drowsiness, irritability and feeding problems.
- Your baby may have difficulty breathing.
- Your baby may have jaundice.
- Your baby may weigh much more than normal and could be at higher risk for obesity and Type 2 diabetes as a child or young adult.

How does it affect you as a mother?

- If your baby is very large:
 - » You may have a more difficult delivery or need a caesarian section (C-section)
 - » There is an increased chance of premature birth.
- There is a greater chance of you gaining too much weight and developing Type 2 diabetes after the pregnancy.
- There is a chance of developing preeclampsia -- high blood pressure that occurs during pregnancy.

What can you do to take care of yourself and your baby?

- ✓ Eat healthy and spread your food intake, including carbohydrates, over the day
- ✓ Be physically active
- ✓ Do blood tests to monitor your blood sugars
- ✓ Reduce stress
- ✓ Get enough sleep and rest

If healthy eating and physical activity are not enough to control your blood sugars, you may also need to take insulin or diabetes medications.



How Should You Eat?

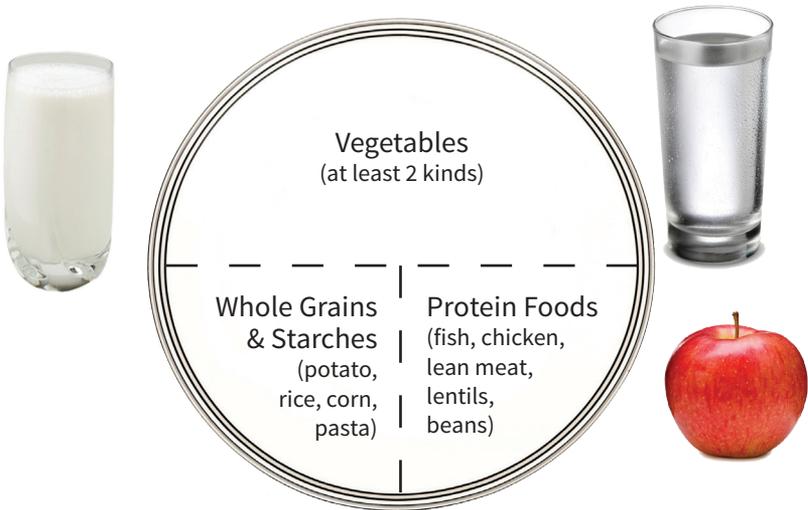
Healthy Eating Guidelines

- ✓ Try to eat every 2 to 3 hours. This means 3 balanced meals and 2-3 healthy snacks each day, with one snack being at bedtime. Breakfast should be a small meal because blood sugars tend to be high in the morning.
- ✓ Follow [Canada's Food Guide](#).
- ✓ Take a prenatal multivitamin that contains folic acid and iron every day. A health care provider can help you find the multivitamin that's right for you.
- ✓ Avoid high sugar foods and drinks (regular pop, juice, punch, jam, candy, cookies, purchased muffins and cereals) because they will cause your blood sugar to rise quickly.
- ✓ Limit coffee, strong tea, and diet cola to 2 cups per day. Use only herbal tea considered safe in pregnancy (ie: citrus peel, ginger, lemon balm, and rosehip).
- ✓ Artificial sweeteners, foods and beverages containing acesulfame potassium (AceK), aspartame (Equal, NutraSweet), saccharin (Hermasetas), sucralose (Splenda), or steviol glycosides (Stevia, Truvia, Krisda, Pure Via) are considered safe in moderate amounts. **Avoid cyclamate (Sucaryl, Sugar Twin, Sweet 'N Low) during pregnancy.**
- ✓ Choose foods prepared with little or no added fat, sugar, or salt. Ask your healthcare provider for information on reading labels.



Tips To Help You Plan Your Plate

- ✓ Enjoy a variety of foods to achieve healthy weight during pregnancy. Refer to [Canada's Food Guide](#).
- ✓ Eat plenty of vegetables. They are very high in nutrients and most do not affect blood sugar levels.
- ✓ Choose starchy foods at every meal such as **whole grain** breads and cereals, rice, pasta, quinoa or regular and sweet potatoes. Starchy foods are broken down into sugar that your body needs for energy.
- ✓ Include fish, lean meats, cheese, eggs, nuts, nut butters, or legumes (dried peas, beans, and lentils) as part of your meal.



See a Registered Dietitian to help you plan meals and snacks for a healthy pregnancy and blood sugar control.

Carbohydrates

- ✓ You need carbohydrate as the main source of energy for you and your growing baby. Carbohydrates break down into sugar which goes into your blood stream and can raise blood sugars.
- ✓ Carbohydrates include grains, starchy vegetables, milk, fruit, dried peas, beans and lentils, and sugars.

Pregnancy does not mean you need to eat a lot of extra food. Watch your portion size and use your hands to help you plan your meals.

Fruit

- ✓ Choose an amount up to the size of your fist at meals or snacks.
- ✓ Limit or avoid all types of juice and sugary drinks as they quickly increase blood sugar.



Whole Grains & Starches

- ✓ Choose an amount up to the size of your fist at each meal.
- ✓ Make at least half of your grains and starches whole grain each day.

Milk & Yogurt

- ✓ Have at least two servings of milk or yogurt each day.
- ✓ Choose less than 2% milk fat yogurt or milk.
- ✓ If you're lactose intolerant, choose soy or almond milk containing calcium.



Vegetables

- ✓ Choose as many vegetables as you can hold in both hands
- ✓ Eat at least one dark green and one orange vegetable each day



Protein Foods

- ✓ Choose an amount of protein up to the size of the palm of your hand and the thickness of your little finger at each meal
- ✓ Eat at least 2 servings of fish each week



Fats

- ✓ Limit fat to an amount the size of the tip of your thumb at each meal
- ✓ Most of the time, use vegetable oils and fats low in saturated and trans fats such as olive or canola oil

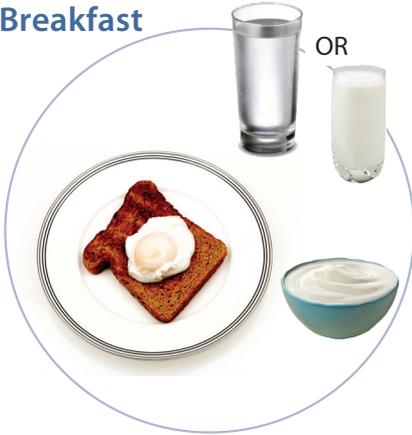


**Satisfy your thirst
with water.**

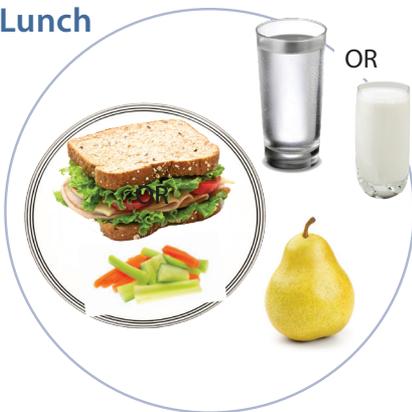


Sample Menu

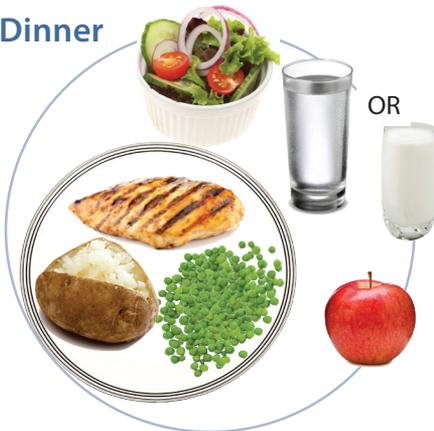
Breakfast



Lunch



Dinner



Between meal snack ideas:

- Whole wheat crackers (8) with 1 oz/30g cheese, OR
- 1 cup of berries and ½ cup/125ml cottage cheese, OR
- Veggies and yogurt dip, OR
- 1 medium apple or banana with 1 TBSP peanut butter

Bedtime snack ideas:

- Hummus and whole wheat crackers (8), OR
- One slice whole wheat toast with one boiled egg or 1 TBSP peanut butter

**Have at least
2 servings of milk or
yogurt per day.**

		Breakfast		Lunch	
Day		Before <i>Goal < 5.3</i>	1 hour after <i>Goal < 7.8</i> 2 hours after <i>Goal < 6.7</i>	Before <i>Goal < 5.3</i>	1 hour after <i>Goal < 7.8</i> 2 hours after <i>Goal < 6.7</i>
Week 1	1				
	2				
	3				
	4				
	5				
	6				
	7				
Week 2	1				
	2				
	3				
	4				
	5				
	6				
	7				
Week 3	1				
	2				
	3				
	4				
	5				
	6				
	7				
Week 4	1				
	2				
	3				
	4				
	5				
	6				
	7				

What should your Blood Sugar targets be?

- Fasting and before meals: less than 5.3 mmol / L
- One hour after meals: less than 7.8 mmol / L
- Two hours after meals: less than 6.7 mmol / L

The goal is to have your blood sugars within target.

Checking your blood sugar level is a key part of taking care of yourself and your baby. Use the My Blood Sugar Levels record in this book or an app to record your blood sugar levels.

Prescription medications may be needed if meal planning and activity cannot keep blood sugars in the target range. If your blood sugar levels are above the target, contact your health care provider.

- Your health care provider will tell you how often you should check your blood sugars.
- Check your blood sugars regularly. For example, before you eat, and 1 or 2 hours after eating.
- Bring your written record with you when you visit your health care provider. They can help you make any changes needed to your meal plan, activity plan or medication.

Always wash your hands before testing and remember to change lancets each time you check your blood.

Any needle you use to check your blood sugar or to take insulin should be thrown into a special container available from your local pharmacy.



Where Does the Extra Weight Go?

It is healthy and normal to gain some weight during pregnancy. The speed of your weight gain is important and it should be steady throughout the pregnancy with a gain of $\frac{1}{2}$ to 1 lb (0.3 kg to 0.5 kg) per week in the second and third trimesters. The amount of weight your body needs to gain depends on your weight before you became pregnant. Please talk to your health care provider about how much weight gain is right for you.

You need to gain more than just your baby's 7½ pounds!

Muscle and Fat – 2-3.5 kg (5-8 lbs)
To help your body during delivery and breastfeeding

Breasts – 1-1.5 kg (2-3 lbs)
To prepare for feeding your baby

Average Baby – 3.5 kg (7.5 lbs)

Amniotic Fluid – 1.0 kg (2.2 lbs)
The water in which the baby floats and grows, and helps to protect the baby.

Blood and Extra Fluid – 3-3.5 kg (6-7.5 lbs)
To help bring food and air to your baby

Uterus – 1-1.5 kg (2-3 lbs)
Increases in size about 20 times to hold your growing baby

Placenta – 0.5-0.7 kg (1-1.5 lbs)
Formed to bring food to your baby and take away waste



What about Active Living and Exercise?

- Active living and exercise are important because it can help to:
 - ✓ control your blood sugar
 - ✓ prepare your body for childbirth
 - ✓ prevent or delay development of diabetes
 - ✓ reduce stress
 - ✓ boost energy
 - ✓ sleep better
- Active living will help you achieve your blood sugar goals (for example, a 10 to 15 minute walk after meals).
- If you are not used to being active, begin with 5 or 10 minutes every day. As you get stronger, you can increase to 30 minutes or more each time.
- Check with your health care provider to see how active you can be and how to get started, or adjust your current activities.
- Examples of active living include: walking, vacuuming or mopping, yard work, gardening, shoveling snow, swimming.
- Reduce long periods of sitting or screen time.
- Use an app to track your activity.

Safety comes first!

Talk to your health care provider if you become dizzy, have pain, or are generally unwell while exercising.



Will Gestational Diabetes go away?

- GDM usually goes away after the birth of your baby.
- If you have GDM, you are more likely to have GDM with your next pregnancies.
- If you have had GDM you have a greater chance of developing Type 2 diabetes in the next several years.

What should you do after your pregnancy?

- See your health care provider 6 weeks after having your baby to be re-tested for diabetes. Before your next pregnancy have blood sugars tested.
- Eating a well balanced diet following Canada's Food Guide and being physically active every day will help reduce your risk of developing diabetes later in life.

Why should you breastfeed your baby?

- Breastfeeding may help stop your baby from becoming overweight or developing diabetes later in life.
- Breastfeeding helps you to return to your pre-pregnancy weight which can help prevent the development of Type 2 diabetes.
- Breastfeeding is the natural, traditional way to feed baby and is the only food your baby will need for the first 6 months.
- Breastfeeding support can be essential for new mothers. If you need assistance or have questions about breastfeeding, contact your local public health office or seek lactation services if available in your area before your due date.



What are your feelings about GDM?

It is not unusual to feel scared, shocked and overwhelmed when you first hear that you have GDM. You are not alone in your efforts to have a healthy baby. You are the most important person in promoting a healthy pregnancy but your health care providers are available to give support. This booklet only provides the basic guidelines and more detailed assistance may be needed. Keep in contact with your health care providers as they can help develop a treatment plan that is unique to you.



Contact Information and Resources

To find a Diabetes Educator:

- Call your local Health Clinic/ Office
- Call the Saskatchewan HealthLine @ 811
- On Reserve, call your local Community Health Clinic or Tribal Council
- Ask your health care provider

For Diabetes Information:

Diabetes Canada

1-800-BANTING
(1-800-226-8464)
www.diabetes.ca

National Aboriginal Diabetes Association

1-877-232-6232
www.nada.ca

First Nations Inuit Health

www.hc-sc.gc.ca/fnih-spni/index_e.html

Saskatchewan HealthLine 811

www.healthlineonline.ca

Websites

Health Canada

<https://www.canada.ca/en/health-canada/services/canada-food-guide/resources/prenatal-nutrition.html>

Dietitians of Canada

www.dietitians.ca

Health Canada- Canada's Food Guide

<https://food-guide.canada.ca/en/>

Saskatchewan Ministry of Health

<https://www.saskatchewan.ca/residents/health/diseases-and-conditions/diabetes>

Saskatchewan In Motion

www.saskatchewaninmotion.ca

Saskatchewan Prevention Institute

www.preventioninstitute.sk.ca

International Breastfeeding Centre

ibconline.ca/information-sheets

Information in this resource was provided in part by the Canadian Diabetes Association.

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Originally developed in 2008 by the Gestational Diabetes Provincial Working Group.