

Between 3 – 20% of pregnant women develop GDM, depending on their risk factors.

Risk Factors for GDM

Being:

- 35 years of age or older
- From a high-risk group (African, Arab, Asian, Hispanic, Indigenous, or South Asian)

Using:

- Corticosteroid medication

Having:

- Obesity (BMI of 30 kg/m² or greater)
- Prediabetes
- GDM in a previous pregnancy
- Given birth to a baby that weighed more than 4 kg (9 lbs)
- A parent, brother or sister with type 2 diabetes
- Polycystic ovary syndrome (PCOS) or acanthosis nigricans (darkened patches of skin)

All pregnant women should be screened for GDM between 24 to 28 weeks of pregnancy. Women who are at high risk for undiagnosed type 2 diabetes should be screened at less than 20 weeks of pregnancy.

What is Gestational Diabetes Mellitus (GDM)?

GDM is a type of diabetes that occurs during pregnancy. Your body cannot produce enough insulin to handle the effects of a growing baby and changing hormone levels. Insulin helps your body to control the level of glucose (sugar) in your blood. If your body cannot produce enough insulin, your blood sugar levels will rise.

The good news

- Your baby will not be born with diabetes.
- GDM can be managed and you can expect to have a happy, healthy baby

What does GDM mean for me?

A diagnosis of GDM means you will be working closely with your health-care team to manage your blood sugar levels and keep them in the target range. This will help you avoid complications in labor and delivery. After your baby is born, blood sugar levels will usually return to normal. However, you are at greater risk for GDM in your next pregnancy and of developing type 2 diabetes in the future. Achieving a healthy weight in the normal BMI range can help reduce this risk.

What does GDM mean for my baby?

If left undiagnosed or untreated, GDM can lead to high blood sugar levels. This increases the risk that your baby will weigh more than 4 kg (9lbs) and will have a difficult delivery. GDM can also increase the risk of your baby becoming overweight and developing type 2 diabetes in the future.

GDM and breastfeeding

It is important to breastfeed immediately after birth for at least 4 months to help avoid low blood sugar in your newborn, and to reduce the risk of obesity and diabetes for your baby.



After your pregnancy, it is important to be screened for type 2 diabetes:

- within 6 weeks to 6 months of giving birth
- before planning another pregnancy
- every 3 years (or more often depending on your risk factors)

Early diagnosis and management of type 2 diabetes IS IMPORTANT because:

- undiagnosed or poorly controlled type 2 diabetes in a pregnant woman increases her risk of miscarriage, the baby being born with a malformation, or having a stillborn baby
- it will improve your chances of having healthy pregnancies and healthy babies in the future

For a healthy tomorrow, take good care of your GDM today by

Choosing a healthy diet:

Ask your doctor to refer you to a registered dietitian to learn about healthy eating during pregnancy. Try eating low-glycemic index foods (e.g. whole grains, legumes), spread over 3 meals and 2 snacks to help manage your blood sugar.

Achieving a normal pregnancy weight gain:

The amount of weight you gain will vary depending on your weight before your pregnancy. Weight loss is not recommended. Talk to your health-care provider about appropriate weight gain for you.

Being physically active:

Regular physical activity can help control your blood sugar levels. It can also help you:

- Boost your energy
- Sleep better
- Reduce stress
- Reduce pregnancy discomfort
- Prepare for childbirth
- Get your body back faster after childbirth

Talk to your health-care provider about the right type and amount of activity for you.

Checking your blood sugar at home:

Checking and tracking your blood sugar with a blood glucose meter will help you and your health-care team manage your GDM.

Taking medication, if needed:

Sometimes healthy eating and physical activity are not enough to manage blood sugar levels and your health-care provider may recommend insulin injections or pills for the duration of your pregnancy. Medication will help keep your blood sugar level within your target range. This will help to keep you and your baby in good health.

Your health-care team can answer your questions and support you through this important time in your life. Your team may include your doctor, nurse and dietitian, but remember: The most important member of your health-care team is you!

Related article: *As you take your baby in your arms, take your health in your hands, and Type 2 diabetes: the basics*



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Diabetes Canada is making the invisible epidemic of diabetes visible and urgent. Eleven million Canadians have diabetes or prediabetes. Now is the time to End Diabetes - its health impacts as well as the blame, shame and misinformation associated with it. Diabetes Canada partners with Canadians to End Diabetes through education and support services, resources for health-care professionals, advocacy to governments, schools and workplaces, and, funding research to improve treatments and find a cure.

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Healthy Eating with Gestational Diabetes

Gestational diabetes is when you have high blood sugar during pregnancy. This happens because of changes in your hormones during pregnancy. The hormones affect how your body's cells use sugar, which can raise your blood sugar.

Having high blood sugar increases the risk for you and your baby.

- Your baby may grow bigger than is healthy. This can cause problems during your baby's birth and later in life.
- You're at higher risk of having gestational diabetes in your next pregnancy, and of having diabetes later in life.

There are many things you can do to lower these risks:

- eat healthy
- take prescribed medicine
- be active
- check your blood sugar

Your healthcare team will support you in managing your blood sugar to have a healthy pregnancy.



Nutrition tips

1. Eat 3 meals and 3 snacks every day.

Spreading food over your day helps to keep your blood sugar from going too high or too low. Try having a snack between meals and one before bed.

2. Spread carbohydrates over the day.

It's important to spread carbohydrate foods over the day so that your body has a steady supply of sugar in the blood to meet the needs of you and your growing baby.

Carbohydrate foods have sugar and starch, which cause your blood sugar to go up. Examples of carbohydrate foods are:

- grains
- starchy vegetables
- beans, lentils
- milk and yogurt
- fruits
- sugar and sweet foods

There's more information about foods with carbohydrates on page 3.



3. Limit sweet foods and foods and drinks with added sugar.

These foods quickly raise blood sugar:

- table sugar
- syrup
- brown sugar
- regular jams
- candy
- unsweetened juice (has natural sugar)
- honey
- sweetened drinks

When you're thirsty, choose water instead of juice or drinks with added sugar.

4. Choose higher fibre foods more often.

Foods higher in fibre help control your blood sugar and help prevent constipation. Higher fibre foods include:

- whole grains
- beans, peas, and lentils, dried, cooked
- vegetables
- fruits
- nuts and seeds

5. Eat foods higher in protein at each meal and evening snack.

Protein is important for your health and your baby's health. Protein doesn't raise blood sugars. It can help keep your blood sugar from rising too high after you eat.

Foods higher in protein are Meat and Protein Alternatives. They include:

- beans, peas, and lentils, dried, cooked
- cheese
- cottage cheese
- eggs
- fish
- Greek yogurt
- meat
- poultry
- tofu



6. Get enough calcium and vitamin D from the foods and drinks you have every day.

If you don't drink at least 2 cups (500 mL) of milk or fortified soy beverage a day, talk to your dietitian about how to make sure you get enough calcium and vitamin D each day.

7. Take a multivitamin pill every day.

Take a multivitamin pill with 0.4 mg (400 mcg) of folic acid every day.

Your multivitamin should also contain iron, vitamin B₁₂, and vitamin D.

Take your multivitamin every day during your pregnancy and for as long as you breastfeed.

8. You can use sugar substitutes and foods with sugar substitutes in small amounts.

Sugar substitutes don't raise your blood sugar. Read labels to find out what kind of substitute is in the food you buy.

These sugar substitutes are safe when you're pregnant:	
Sugar substitute	Brand name
acesulfame potassium (Ace-K)	Added to packaged foods
aspartame	Nutrasweet [®] , Equal [®] , store brands
saccharin	Hermesetas [®]
stevia	Sugar Twin [®] , Truvia [®] , Pure Via [®] , store brands
sucralose	Splenda [®] , Sugar Twin [®] , store brands
These sugar substitutes are NOT safe when you're pregnant:	
Sugar substitute	Brand name
cyclamate	<ul style="list-style-type: none"> • Sucaryl[®] • Sugar Twin[®] • Sweet N'Low[®] • Weight Watchers[®] • store brands

Lifestyle tips

1. Gain a healthy amount of weight.

Your recommended weight gain depends on your weight before pregnancy. Your healthcare provider can help you decide the healthy amount of weight gain for you.

2. Be active every day.

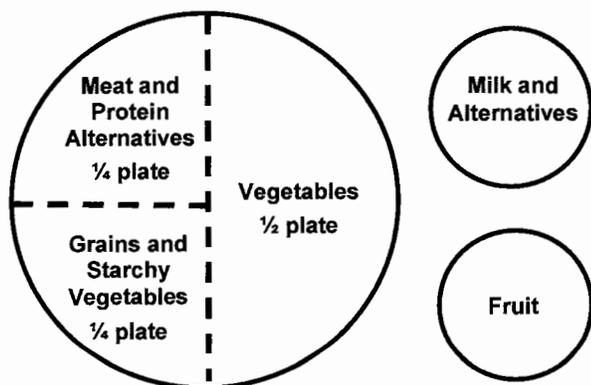
Talk to your healthcare provider about what type and amount of activity is right for you.

Being active can help control your blood sugar and help you manage weight gain while you're pregnant. Aim for 30 minutes of activity most days of the week. Activity after a meal helps keep your blood sugar from rising too high.

Healthy meal planning

A meal that looks like the one below can help you balance your meals and spread carbohydrate over the day.

- Fill ½ your plate with vegetables.
- Put grains and starchy vegetables on ¼ of your plate. Some starchy vegetables are potatoes, yams, corn, squash, and parsnips.
- Put Meat and Protein Alternatives on ¼ of your plate.
- Plan for fruit as part of some of your meals or snacks. See page 4 for suggested serving sizes.
- Have Milk and Alternatives with some of your meals or snacks. One serving is 1 cup (250 mL) of milk or ¾ cup (175 mL) of plain yogurt.



Snacks

Healthy snacks give you and your baby the extra energy, vitamins, and minerals you both need during pregnancy.

Aim for a snack with carbohydrate between each meal and before bed. Your bedtime snack should include a food higher in protein.

See the sample meal plan on the last page for some examples of healthy snacks.

Carbohydrate choices

Carbohydrates include sugar, starch, and fibre. Sugar and starch raise your blood sugar. Fibre doesn't raise your blood sugar. Choose higher fibre carbohydrate foods most often.

A carbohydrate choice is the amount of food that has about 15 grams of carbohydrate.

Counting carbohydrate choices will help you:

- know how much carbohydrate you're eating and how much it raises your blood sugar
- meet your carbohydrate goals for meals and snacks

For example: ⅓ cup (75 mL) serving of cooked brown rice has about 15 grams of carbohydrate. This means that ⅓ cup (75 mL) of brown rice is 1 carbohydrate choice, and 1 cup (250 mL) of brown rice is 3 carbohydrate choices.

The food lists on the next pages tell you what 1 carbohydrate choice is for different foods.

How much carbohydrate do I need in a day?

Everyone needs a different amount of carbohydrate. Your dietitian can help you find the amount that's right for you.

My carbohydrate goals:

At a meal: _____ choices or _____ grams

At a snack: _____ choices or _____ grams

Below is an example of how to spread your carbohydrate over the day.

Meal	Carbohydrate choices	Grams of carbohydrate
Breakfast	3 choices	45 grams
Snack	1–2 choices	15–30 grams
Lunch	3–4 choices	45–60 grams
Snack	1–2 choices	15–30 grams
Dinner	3–4 choices	45–60 grams
Bedtime snack	1–2 choices	15–30 grams

Carbohydrate choices

The food lists below tell you how much food is 1 carbohydrate choice.

Each carbohydrate choice has about 15 grams of carbohydrate.

<p>Grains and Starchy Vegetables Choose whole grain and higher fibre foods more often.</p>	
<p>Grains: bagel, ¼ large or ½ small bannock, whole grain, 1½ x 2½ inches (4 x 6 cm) barley or bulgur, ½ cup (125 mL) cooked bread, 1 slice (30 gram weight) bun, hamburger or hotdog, whole grain, ½ cereal, hot, ¾ cup (175 mL) cereal, cold: ½ cup (125 mL) chapati, roti, whole grain, 1 small (44 gram weight) English muffin, ½ granola bar, plain, 1 bar (28 gram weight) injera, ½ of a 12 inch (30 cm) round muffin, homemade, 1 small (45 gram weight) pancake or waffle, 1 small (4 inch or 10 cm) pasta, couscous, ½ cup (125 mL) cooked pita bread, ½ small (6 inches or 15 cm) pizza, thin crust, 1/12 (12 inches or 30 cm) quinoa, ½ cup (125 mL) cooked rice, rice noodles, ½ cup (75 mL) cooked rye crisps, 2–3 crackers (30 gram weight) tortilla, 1 small (6 inches or 15 cm) or ½ large (10 inches or 25 cm) whole grain crackers, 3–6 (30 gram weight)</p>	<p>Starchy Vegetables: beans, lentils, peas, ½ cup (125 mL) dried and cooked, or canned corn, ½ cup (125 mL) or ½ cob green peas, 1 cup (250 mL) parsnips, ¾ cup (175 mL) plantain, mashed, ⅓ cup (75 mL) popcorn, 3 cups (750 mL) potatoes, ½ medium or ½ cup (125 mL) baked, boiled, or mashed soup, 1 cup (250 mL) squash: acorn, butternut, hubbard, ¾ cup (175 mL) sweet potato or yam, ½ cup (125 mL) baked and cubed</p> <div style="text-align: center;">  </div>
<p>Fruit Choose fresh, frozen, or canned fruit with no added sugar. Choose whole fruit instead of juice.</p>	
<p>fresh fruit, 1 medium banana, 1 small or ½ large blackberries, strawberries, raspberries, 2 cups (500 mL) grapes, 15 fresh fruit, cut-up, 1 cup (250 mL)</p>	<p>canned and frozen fruit, no added sugar, ½ cup (125 mL) dried fruit, ¼ cup (60 mL) juice, unsweetened, ½ cup (125 mL)</p> <div style="text-align: right;">  </div>
<p>Milk and Alternatives Milk and alternatives are a good source of calcium, which is important for you and your baby.</p>	
<p>milk, 1 cup (250 mL) fortified soy beverage, plain, 1 cup (250 mL)</p>	<p>yogurt, lower fat, plain/no added sugar, ¾ cup (175 mL) yogurt, flavoured, with added sugar, ⅓ cup (75 mL)</p> <div style="text-align: right;">  </div>

Other Choices

Limit as they're often higher in sugar and calories, and low in nutrients.

cakes	gelatin desserts	molasses	sherbet
candies	honey	muffins, store-bought	slushes
chocolate	ice cream	pastries	soft drinks (pop)
cookies	iced tea	pies	sugar
cranberry sauce	jam	potato chips	sweet coffee drinks
donuts	ketchup	powdered drink mixes	sweetened drinks
French fries	milkshakes	relish	syrup
frozen yogurt			

Foods with little or no carbohydrates

The foods below have little effect on blood sugar.

Low Carbohydrate Vegetables

- Most vegetables are low in carbohydrate, including spinach and other greens, cabbage, cauliflower, broccoli, tomatoes, peppers, mushrooms, and green beans.
- Eat vegetables throughout the day. Cover $\frac{1}{2}$ your plate with vegetables at most meals.

Meat and Protein Alternatives

- Protein is found in meat, fish, poultry, dairy products, eggs, and legumes (dried cooked beans, peas, lentils, and soy products like tofu).
- Choose Meat and Protein Alternatives that are lower in fat. Put Meat and Protein Alternatives on $\frac{1}{4}$ of your plate.
- Cheese is a good source of protein and calcium. It's low in carbohydrate. A healthy portion of cheese is the size of your thumb.



Fats

- Choose small amounts of healthy fats like canola or olive oil, non-hydrogenated margarine, nuts, and seeds.
- For added fats like oils and margarine, use the tip of your thumb as a guide to 1 serving.



Extras

- Extras are foods that are lower in calories and carbohydrates: herbs and spices, broth, coffee and tea.

More questions?

Even when you've been meal planning for a while, you may still have questions. Talk to your dietitian about eating for diabetes in pregnancy.

For general information about eating during pregnancy, go to www.healthyparentshealthychildren.ca. If you feel you need more supports during your pregnancy, talk to your healthcare provider.

Sample meal and snack ideas

The meal ideas on this page show how you can use some of the eating choices in this handout. These are examples only—the best meals for you may look different from these. There is space to write your own ideas.

Sample Meal Plan	My Meal Plan
Breakfast	
1 whole grain English muffin 1 cup (250 mL) skim or 1% milk 1 egg scrambled with: ½ ounce (15 grams) low fat cheese ½ cup (125 mL) onions, tomato, mushrooms	
Snack	
1 medium orange and ¼ cup (60 mL) walnut halves	
Lunch	
1 cup (250 mL) lentil soup 3–6 whole grain crackers (30 grams) ¾ cup (175 mL) plain or no added sugar yogurt with ½ cup (125 mL) berries ½ cup (125 mL) carrots	
Snack	
1 cup (250 mL) carrots, celery, cucumbers with ¼ cup (60 mL) hummus and 2–3 rye crisps	
Supper	
2½ ounces (75 grams) baked salmon 1 cup (250 mL) brown rice, cooked ½ cup (125 mL) steamed green beans 1 tsp (5 mL) soft, non-hydrogenated margarine ½ a sliced tomato 1 cup (250 mL) cantaloupe, cut up	
Snack	
1 slice whole grain toast with 2 tsp (10 mL) peanut butter and 1 cup (250 mL) of milk	

Examples of Snacks (each bullet is 1 snack)

Daytime snacks	Evening snacks
<ul style="list-style-type: none"> • 1 apple, sliced, with cinnamon • 3 cups (750 mL) plain popcorn with herbs • 3–6 (30 grams) whole grain crackers • 1 cup (250 mL) berries with ¾ cup (175 mL) plain yogurt 	<ul style="list-style-type: none"> • ½ whole wheat pita, with 1 ounce (30 grams) cheese, and a medium pear • ¼ cup (60 mL) cottage cheese with ½ cup (125 mL) pineapple chunks, drained, and 1 small homemade muffin