

## Gestational Diabetes

### What is gestational diabetes?

Gestational diabetes means diabetes in pregnancy. Your body is not able to use glucose (sugar) normally. Glucose is the body's main source of energy. For your body to use sugar, you need to have a hormone called insulin.

In the second half of pregnancy, your body makes more of the hormones that work against insulin. As your pregnancy progresses, extra insulin is needed to overcome this resistance. If your pancreas cannot produce enough extra insulin, blood sugar levels rise and you develop gestational diabetes. About 3–10 percent of all pregnant women will have gestational diabetes.

### How does gestational diabetes affect my baby?

Sugar passes from the mother to the baby. If your blood sugar is high, your baby also gets more sugar. In response, your baby will make more insulin. Insulin encourages fat and muscle growth, which increases your baby's size and weight. If your baby is large (over 9 lbs./4 kg) it may be harder to deliver your baby. Your age and weight are also important factors that can affect your baby's weight.

### How does gestational diabetes affect me?

Often, there are no symptoms at all. If your blood sugars are higher you may:

- feel tired
- be thirstier than normal
- feel sleepy after meals
- pass water (urine) more often

### Who is at risk for developing gestational diabetes?

Risk factors for developing gestational diabetes include:

- being overweight before pregnancy (or gaining more than the normal amount of weight in pregnancy)
- having a family history of diabetes
- being over 35
- having had gestational diabetes before
- having large babies (more than 9 lbs. or 4 kg)
- belonging to some ethnic groups (Aboriginal people, Asian, Hispanic, or African descent—can be up to 20 percent in these groups)

### How is gestational diabetes diagnosed?

All pregnant women should be tested by the 28<sup>th</sup> week of pregnancy. One or two tests are done to make this diagnosis. Speak with your diabetes educator about your results.

How can I take care of myself to keep my baby healthy?

### *Healthy Eating*

Eating too many foods with starch or sugar (carbohydrates) at one time will cause the blood sugar to go too high. Spreading out your food by eating smaller meals and snacks will help. Making sure you are getting the vitamins and minerals you need is also very important.

### *Activity*

Activity or exercise (for example, walking after a meal) can help lower blood sugar. Talk to your healthcare provider about the right type and amount of activity for you.

### *Blood Testing*

You must test your blood sugar levels regularly to check how your diabetes treatments are working. Blood tests are done before breakfast and after meals. Your care provider will teach you how to test your blood sugar and plan a schedule of testing with you.

### *Urine Testing*

If you are having problems with nausea and vomiting, the diabetes team may ask you to test your urine for ketones.

### *Insulin*

Blood sugar can't always be controlled by diet and activity alone. Insulin injections are often needed to help keep your blood sugar levels normal. This insulin helps control the amount of sugar going to the baby. You stop taking the injections when your baby is born. Using insulin in pregnancy does not make you more likely to develop diabetes later in life. *Your body does not become dependant on insulin injections. Insulin does not cross to your baby.*

Will my baby have diabetes?

No, your baby will not be born with diabetes. When a mother has gestational diabetes, there is a greater risk for that child to develop type 2 diabetes later in life. A family history of diabetes will also increase this risk.

How do I look after my health after pregnancy?

Your blood sugar will go back to normal right after you have your baby. However, your family doctor should do a glucose tolerance test 3-6 months after you have had your baby. Healthy eating as you were doing in pregnancy should continue, especially if you are breastfeeding. Regular physical activity will help with weight loss. Remember to decrease your snacks when you stop breastfeeding, as this will also help you lose weight.

Screening for diabetes should be done before you get pregnant again. If you are diagnosed with diabetes before you get pregnant again, you should be seen at the Diabetes in Pregnancy Clinic before you become pregnant.

You are likely to have gestational diabetes in your other pregnancies once you have had it. Once you know you are pregnant again you need to be checked for gestational diabetes.

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## Healthy Eating for Diabetes in Pregnancy




1. Limit foods and drinks that are high in added sugar.
2. Choose fresh fruit instead of fruit juices. Drink water to quench your thirst.
3. Eat a well-balanced diet with enough calories to gain weight gradually (about 0.5 kg or 1 lb a week after the first 12 weeks of pregnancy).
4. Grain products and other starchy foods, fruit, milk and yogurt contain natural sugar (carbohydrate). Servings of these foods should be spread out between 3 meals and 3 snacks. Eat a meal or snack every 2–3 hours.
5. Have a bedtime snack every day, including foods from at least 2–3 food groups.
6. Choose foods high in fibre often, as they may be more slowly digested and cause a smaller increase in blood sugar.




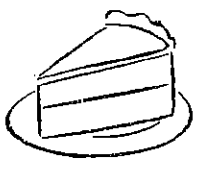
Dietitian: \_\_\_\_\_

Phone: \_\_\_\_\_

Healthy Portions based on *Eating Well with Canada's Food Guide*.

Grain products and other starchy foods, fruit, milk, and yogurt all contain about 15 grams of carbohydrate per serving.

<p><b>Grain Products and other Starchy Foods</b></p>  <p>At least 6-7 servings per day</p>	<p>Limit to 2-3 servings per meal and 1-2 servings per snack.</p> <p><i>One serving is:</i></p> <table border="0"> <tbody> <tr> <td>1 slice bread</td> <td>½ English muffin</td> <td>2 perogies</td> </tr> <tr> <td>⅓ - 6" submarine bun</td> <td>¾ cup lentils or beans</td> <td>7 small crackers</td> </tr> <tr> <td>1 small or ½ large bun</td> <td>½ cup barley or couscous, cooked</td> <td>4 Melba toast</td> </tr> <tr> <td>½ hamburger or hotdog bun</td> <td>½ cup pasta, cooked</td> <td>2 rice cakes or crispbread</td> </tr> <tr> <td>½ small or ¼ large bagel</td> <td>½ cup rice, cooked</td> <td>1 cup soup</td> </tr> <tr> <td>½ small pita</td> <td>½ cup grains, cooked</td> <td>1 slice thin pizza crust</td> </tr> <tr> <td>1 small (6") roti or chapati</td> <td>¾ cup cooked cereal</td> <td>1 small homemade muffin</td> </tr> <tr> <td>1 small or ½ large tortilla</td> <td>½ cup cold cereal</td> <td>3 cups popcorn</td> </tr> <tr> <td>2 small taco shells</td> <td>½ cup potato, cooked</td> <td>2-3 plain cookies</td> </tr> <tr> <td>1 small waffle or pancake</td> <td>½ large potato</td> <td>4 graham wafers</td> </tr> <tr> <td></td> <td>½ cup or ½ cob corn</td> <td>1 plain granola bar</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• Choose whole grain bread (e.g., stoneground, multigrain, pumpernickel) and cereal.</li> <li>• Bake low sugar muffins, loaves, and cookies by using half the amount of sugar that is in the recipe.</li> <li>• Examples of plain cookies are digestive, oatmeal, Arrowroot®, Social Tea®, and gingersnap.</li> </ul>	1 slice bread	½ English muffin	2 perogies	⅓ - 6" submarine bun	¾ cup lentils or beans	7 small crackers	1 small or ½ large bun	½ cup barley or couscous, cooked	4 Melba toast	½ hamburger or hotdog bun	½ cup pasta, cooked	2 rice cakes or crispbread	½ small or ¼ large bagel	½ cup rice, cooked	1 cup soup	½ small pita	½ cup grains, cooked	1 slice thin pizza crust	1 small (6") roti or chapati	¾ cup cooked cereal	1 small homemade muffin	1 small or ½ large tortilla	½ cup cold cereal	3 cups popcorn	2 small taco shells	½ cup potato, cooked	2-3 plain cookies	1 small waffle or pancake	½ large potato	4 graham wafers		½ cup or ½ cob corn	1 plain granola bar
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<p><b>Vegetables and Fruit</b></p>  <p>At least 7-8 servings per day</p>	<p><b>Vegetables</b></p> <p><i>One serving is:</i></p> <p>½ cup vegetables or 1 cup salad</p> <ul style="list-style-type: none"> <li>• Choose generous portions of vegetables.</li> <li>• Count potato and corn as servings from the Grain Products group.</li> </ul> <hr/> <p><b>Fruit</b></p> <p>Limit to 1 serving of fruit per meal or snack.</p> <p><i>One serving is:</i></p> <table border="0"> <tbody> <tr> <td>1 medium-sized fruit</td> <td>½ cup unsweetened frozen fruit</td> </tr> <tr> <td>1 cup fresh fruit</td> <td>¼ cup dried fruit</td> </tr> <tr> <td>½ cup canned fruit (no sugar added)</td> <td>2 fruit leathers</td> </tr> </tbody> </table>	1 medium-sized fruit	½ cup unsweetened frozen fruit	1 cup fresh fruit	¼ cup dried fruit	½ cup canned fruit (no sugar added)	2 fruit leathers																											
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<p><b>Milk Products</b></p>  <p>At least 3 servings per day</p>	<p>Limit to 1-1½ servings of milk or yogurt per meal or snack.</p> <p><i>One serving is:</i></p> <p>1 cup milk          ¾ cup yogurt (plain or diet)          1½ ounces (50 grams) cheese</p> <ul style="list-style-type: none"> <li>• If you are unable to take milk products, please speak with your dietitian. Plain, calcium-fortified soy milk can be used instead.</li> <li>• There is no limit on cheese.</li> </ul>																																	

<p><b>Meat and Alternatives</b></p>  <p>At least 2-3 servings per day</p>	<p><i>One serving is:</i></p> <p>2½ ounces (75 grams) or ½ cup cooked meat, poultry, or fish  2 eggs  2 tbsp. peanut butter  ¾ cup tofu</p> <p>½ cup cottage cheese  ¼ cup nuts  *¾ cup cooked legumes, lentils and beans (these also count as 1 serving from the Grain Products group)</p> <ul style="list-style-type: none"> <li>• These foods do not raise blood sugar (*except legumes, lentils, and beans).</li> <li>• Limit sweet sauces such as sweet &amp; sour and teriyaki, and breading/batter on meat and fish.</li> <li>• Refer to the book <i>From Here Through Maternity</i> for important food safety information.</li> </ul>																												
<p><b>Fats</b></p> 	<p><i>Examples:</i></p> <table border="0"> <tr> <td>oil</td> <td>mayonnaise</td> <td>cheese spread</td> </tr> <tr> <td>margarine</td> <td>sour cream</td> <td>gravy</td> </tr> <tr> <td>butter</td> <td>cream cheese</td> <td>cream sauces</td> </tr> <tr> <td>salad dressing</td> <td></td> <td></td> </tr> </table> <ul style="list-style-type: none"> <li>• These foods do not raise blood sugar.</li> <li>• If needed, use moderation to help control weight gain.</li> </ul>	oil	mayonnaise	cheese spread	margarine	sour cream	gravy	butter	cream cheese	cream sauces	salad dressing																		
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Metric conversion: ½ cup = 125 mL      1 tablespoon = 15 mL      1 ounce = 30 grams  
1 cup = 250 mL      1 teaspoon = 5 mL

## Sample One Day Menu

### Breakfast

1 slice multigrain toast with  
peanut butter  
 $\frac{3}{4}$  cup oatmeal  
1 cup milk

### Lunch

1 tuna sandwich  
1 apple  
raw vegetables  
1 cup milk

### Supper

1 chicken breast  
1 cup pasta  
broccoli  
salad  
1 cup strawberries  
1 cup milk

### Morning Snack

1 banana  
Stoned Wheat Thins® with  
cheese

### Afternoon Snack

1 pear  
1 homemade muffin

### Bedtime Snack

$\frac{1}{2}$ –1 sandwich  
 $\frac{3}{4}$  cup yogurt

## Other Snack Ideas

1 medium fruit	1 cup taco chips with cheese and salsa
1 small homemade muffin	3 cups popcorn
raw vegetables	2–3 plain cookies
1 English muffin	cottage cheese with fruit
$\frac{3}{4}$ cup yogurt	1 cup milk
1–2 toast with peanut butter	1 plain granola or cereal bar
$\frac{3}{4}$ cup cereal with milk	nuts/dried fruit “trail mix”
$\frac{1}{2}$ –1 sandwich	$\frac{1}{2}$ pita bread with hummus
4–6 crackers and cheese	small serving of leftovers

### Notes:

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## Healthy Eating Guidelines For Women with Gestational Diabetes

Gestational diabetes is a type of diabetes that some women develop during pregnancy due to changes in hormone levels. Gestational diabetes makes it harder to control your blood glucose (sugar). Controlling your blood glucose by eating a healthy diet can help keep you and your baby well.

Ask your doctor to refer you to the Diabetes Education Centre at your local hospital or in your community. They will give you more information that is specific to your nutrition needs.



### Steps you can take

Continue to follow general healthy eating guidelines for pregnancy. See Canada's Food Guide at [www.healthcanada.gc.ca/foodguide](http://www.healthcanada.gc.ca/foodguide) and Additional Resources section below.

Learn about how food affects your blood sugars:

- Carbohydrate is a nutrient in food which turn into glucose. This is what is used to give you and your baby energy. Carbohydrates are important for your baby's growth and your energy level.
- Protein foods help to build and repair muscle and healthy tissue. Including protein containing foods with each meal ensures balance. Most protein foods have very little carbohydrates and have minimal effect on blood glucose.
- Other foods, such as fats and oils, used in moderation, are important for our health and help make our food taste good. Fat has very little impact on blood glucose.

Carbohydrate Foods	Protein Foods	Other Foods
Sugar, syrup, honey, jam, jelly	Legumes (beans, peas and lentils)*	Water
Grains (rice, pasta, bread)	Chicken, fish, beef, pork	Most vegetables
Fruit, juice	Nuts and seeds, nut butters	Herbs and seasonings
Potato, corn, yam or sweet potato	Tofu	Mustard, relish, mayo, vinegar
Milk and yogurt	Eggs	Oils and fats
Cakes and cookies	Cheese	Sweeteners (sugar substitutes)
Pop, fruit drinks and sweetened ice tea		

\*if you eat more than 1/2 cup of legumes they will start to impact blood sugar as they do contain some carbohydrate.

#### Meal planning tips:

- Enjoy three meals and three snacks spaced evenly throughout the day.
  - Eat breakfast within one hour of waking up.
  - Have one of your snacks at bedtime.
- Balance your meals and snacks
  - For breakfast include: a high fibre grain product, a protein food, a piece of fruit and a glass of skim or 1% milk, fortified soy or almond beverage.
  - For lunch and dinner: fill 1/2 of your plate with vegetables, 1/4 with protein and 1/4 (about a fist full) with grains. Have a glass of skim or 1% milk and a piece of fruit.
  - Include a carbohydrate food with all snacks, for larger and bed time snacks also include a protein.
  - For ideas and approximate portion sizes see 'Meal planning handout' in the Additional Resources section below.
- Drink water when you are thirsty

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## Other Considerations

### Vitamin Supplements

Continue to take a supplement that contains 16-20 mg iron, 0.4mg (400 mcg) of folic acid, and some vitamin B12 each day.

### Sweeteners (Sugar Substitutes)

- Health Canada has approved: **aspartame, acesulfame potassium, neotame, sucralose and thaumatin** to use as food ingredients or sweeteners. They are safe for use, in moderation, during pregnancy. Be sure that foods made with these sweeteners do not replace more nutritious foods or drinks.
- Some natural health products contain **Stevia**, which is considered safe to use, in moderation, during pregnancy.
- **Saccharin** and **cyclamates** are not recommended.

### Physical Activity

Enjoy some form of daily physical activity, especially after meals, as this helps to control blood sugars. Check with your doctor or diabetes educator before starting any new activity plan.



## Additional Resources

- Canadian Diabetes Association. Available at [www.diabetes.ca](http://www.diabetes.ca).

*These resources are provided as sources of additional information believed to be reliable and accurate at the time of publication and should not be considered an endorsement of any information, service, product or company.*



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