

Sick Day Management

For patients with Type 1 Diabetes

Why is it important to manage sick days?

You have a higher chance of going into diabetic ketoacidosis (DKA) when you are sick.

When you are sick your blood sugar may get higher than normal. If you do not have enough insulin, your body will start burning fat for energy. When your body burns fat for energy it makes ketones. This can cause diabetic ketoacidosis.

How should I manage my diabetes if I am sick?

1. Check your blood sugar every 2 to 4 hours and during the night.
2. Do not stop taking your insulin.
3. You may need extra insulin to help manage your blood sugar.
4. You may need less insulin if you are vomiting, have diarrhea or do not feel like eating.
5. To avoid getting dehydrated, drink 250 millilitres (8 ounces) of water or sugar-free fluids every hour when you are awake. Some examples include:
 - Diet juice or diet pop
 - Broth or consommé
 - Sugar-free Jell-O
 - Sugar-free Crystal Lite

6. If you are not able to eat your meal, try eating 15 grams of carbohydrate every hour or 45 grams of carbohydrate every 3 to 4 hours.

Foods and drinks with 15 grams of carbohydrate

Solids	Liquids
<ul style="list-style-type: none">• 6 soda crackers• 1 slice of bread• 4 melba toast• 1 piece of fruit (apple, pear, orange)• ½ cup applesauce	<ul style="list-style-type: none">• ¾ cup regular pop• ¾ cup fruit juice• 1 cup Gatorade• 1 cup milk• 1 to 2 popsicles (1 popsicle = 1 stick)

Can I continue taking my medicines if I am sick?

If you are not able to drink enough fluids, you may need to stop taking some of your medicines. Speak to your doctor if you take any of these types of medicines.

- Blood pressure pills
- Water pills
- Diabetes pills
- Pain medicine
- Non-steroidal anti-inflammatory drugs

If you are not sure if you take any of these medicines, speak to your doctor, pharmacist or diabetes team.

Tip – Have a sick day kit that includes:

- This handout
- Glucose tablets for low blood sugar
- Sugar-free beverages
- Thermometer
- Ketone meter and strips (Precision Neo is the only ketone meter available)

When should I ask for help?

- If you vomit 2 or more times in 12 hours.
- If you are vomiting or have diarrhea, and you cannot eat or drink anything for 4 hours.
- If you are sick for more than 24 hours or you start to feel worse.
- If you take extra insulin, but your blood sugars do not go down.
- If you get symptoms of diabetic ketoacidosis: abdominal pain, nausea, vomiting or difficulty breathing.
- If you are not able to keep your blood sugars above 4 mmol/L.

When should I test for ketones?

- If your blood sugar is above 16 mmol/L on two tests in a row, check your blood or urine for ketones every 4 hours.
- If you take a diabetes medication called an SGLT2 inhibitors (for example, Canagliflozin, Dapagliflozin, or Empagliflozin) you will need to test for ketones when your blood sugar is above 10 mmol/L.
- If you have ketones in your blood or urine, you will need more insulin to correct your high blood sugar.

How do I adjust my insulin for ketones?

1. If you have ketones in your urine or blood, you will need to take extra rapid acting insulin.
 - If you are not eating, take the extra insulin in addition to your regular correction dose.
 - If you are eating, take the extra insulin in addition to your regular meal and correction dose.

2. Calculate your total daily dose (TDD) of insulin by adding up your rapid and basal insulin.

TDD _____ = total basal insulin _____ + total rapid insulin _____

3. The extra insulin you need will be a percentage of your total daily dose. Your diabetes team will help you use the chart below to find out how much extra insulin you need.

Blood sugar	Blood or urine ketones	Action required	Your dose
Less than 3.9	None	No extra insulin required. Decrease your meal dose by 10 percent. If you are vomiting, contact your diabetes team.	
4 to 16	Blood – less than 0.6 Urine – negative to trace	Take your usual dose.	
4 to 16	Blood – above 0.6 Urine – trace to moderate	Take an additional 10 percent of your total daily dose.	
Above 16	Blood – less than 0.6 Urine – negative to trace	Take an additional 10 percent of your total daily dose.	
Above 16	Blood – 0.7 to 1.4 Urine – trace to moderate	Take an additional 15 percent of your total daily dose.	
Above 16	Blood – 1.5 to 3.0 Urine – moderate to large	Take an additional 20 percent of your total daily dose. Call your diabetes team as soon as possible or go to the nearest emergency room.	

St. Michael's cares about your health. For reliable health information, visit our Patient and Family Learning Centre, Room 6-004, 6th floor, Cardinal Carter Wing, or find us online at www.stmichaelshospital.com/learn

This information is not intended as a substitute for professional medical care. Ask your healthcare provider about this information if you have questions.