

## **Managing your diabetes when you are sick**

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### **Information for pumpers**

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When you are sick, it can be harder to keep your blood glucose under control. Managing your diabetes will take a little extra time and attention. Your diabetes care team will help you learn what to watch for and what to do when you are sick. If you don't feel well enough to manage on your own, ask your parents for help.

### **How does illness affect my diabetes?**

#### **Changes in blood glucose and ketones**

Illness usually makes your blood glucose go higher. But if you have no appetite, are throwing up or have diarrhea, your blood glucose may go low.

When you are sick, ketones may start to show in your urine. This means there are ketoacids in your blood. If the amount of ketoacids gets too high, you will be in diabetic ketoacidosis (DKA). This is a life-threatening condition.

You can't be sure how an illness will affect your blood glucose and ketones, so it is important to check them often.

#### **Changes in insulin needs**

There must always be enough insulin working to do these two jobs in your body:

- Controlling blood glucose, and
- Shutting off the production of ketones

Illness can increase the amount of stress hormones such as adrenalin. Stress hormones can prevent insulin from working as well as it normally does. Your usual amount of insulin may no longer be enough to get the jobs done. You may need to take extra insulin to control your blood glucose and stop ketones from being made.

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## What should I do when I'm sick?



### Prevent DKA

- ✓ Check your blood glucose early and often during an illness
- ✓ Give extra insulin if needed to stop the production of ketones

- 1. Do not remove your insulin pump**
- 2. Check your blood glucose and ketones often**
  - Every 2 to 4 hours during the day and night
- 3. Change your infusion set right away when:**
  - Your blood glucose is greater than 13 mmol/L two times in a row, or
  - You have nausea with a high blood glucose.

Always assume that your pump may not be delivering insulin. Be prepared to give insulin using a pen or syringe.

- 4. Make sure you are taking in enough sugar**

You must always have enough sugar going in to allow insulin to be given safely. Giving insulin without a source of sugar can make your blood glucose dangerously low.

There are three ways to get sugar into your body:

- Your normal diet.
  - Liquids that contain sugar such as fruit juices, Gatorade®, regular pop, popsicles or jello.
  - Intravenous glucose (I.V. dextrose) given in the hospital.
- 5. Try to drink extra water**
    - Drinking water can help clear ketones and prevent dehydration.

**6. Take your usual insulin PLUS a bolus if needed.**

You must always have insulin. If you are taking in enough sugar, keep your insulin pump going at the usual rate. Do not remove your insulin pump.

Be prepared to adjust your insulin. You may need more insulin, because insulin may not work as effectively during an illness. The chart below tells you what to do.

You may need to give an extra bolus as often as every 4 hours when your blood glucose is greater than 13 mmol/L, with or without ketones.

Blood Glucose	Ketones		Action
	Urine	Blood	
Greater than 13 mmol/L	Negative or trace		<ul style="list-style-type: none"> <li>Use your correction factor.</li> </ul>
Less than 13 mmol/L	Negative or trace	Less than 1 mmol/L	<ul style="list-style-type: none"> <li>Give the usual insulin at the usual time.</li> <li>Drink fluids that contain sugar if you can't eat your usual foods.</li> </ul>
Greater than 13 mmol/L	Small to large	More than 0.9 mmol/L	<ul style="list-style-type: none"> <li>Give the usual insulin at the usual time, <b>plus</b> 10-20% of your Total Daily Dose (TDD).</li> </ul>
Less than 10 mmol/L	Small to large	More than 0.9 mmol/L	<ul style="list-style-type: none"> <li>Give the usual insulin at the usual time.</li> <li>Drink fluids that contain sugar to raise your blood glucose above 10 mmol/L, so that you can give 10% (only) of your TDD to correct the ketones.</li> <li><b>Note</b> – If you give 10% of your TDD as extra insulin with a normal blood sugar, you can get hypoglycemia.</li> </ul>

**Do not give more than 10 extra units of insulin at one time.**



**Go to the Emergency Department:**

- If you cannot drink or you vomit 2 times in 4 hours, or
- Ketones are still present after giving extra insulin 2 times in a row

## **When should I see my family doctor?**

You may need to see your family doctor to treat the illness.

You may need treatment if you have a fever longer than 2 days or you have diarrhea longer than 8 hours.

To treat an infection, the doctor may prescribe antibiotics. Antibiotics are safe for people with diabetes. Even if you feel better quickly, you must finish all the antibiotics.

To treat a fever, the doctor may tell you to take acetaminophen (Tylenol<sup>®</sup>) or ibuprofen (Advil<sup>®</sup>). Follow the directions on the package.

Some medications needed to treat an illness contain sugar. Even though this may cause your blood glucose to go higher, it is important that you take the medication as directed by your doctor. This will help you get better as soon as possible.

## **When do I need to call the Diabetes Care Team?**

If you notice any of the following problems, call your Pediatric Diabetes Nurse Case Manager:

- Your symptoms get worse
- You are not able to eat or drink
- You vomit 2 times in 4 hours
- Ketones are still present after giving extra insulin 2 times in a row
- Your blood glucose remains low
- You are dehydrated (dry mouth and skin, cracked lips)

The Pediatric Diabetes Nurse Case Manager is available weekdays until 4 pm at the phone number on your contact list. If there is a problem after 4 pm or on a weekend, go to the hospital emergency department.