

Type 1 Diabetes: Sick Day Management and Insulin Guidelines

Fraser Health Diabetes Health Centres

Staying Out of Hospital

A bad cold, the flu or a serious illness can make your blood glucose too high. If you are unable to eat your usual foods your blood glucose may go too low. Follow these guidelines to help you stay out of hospital:

- Continue to take your insulin even if you are not eating your normal meals. Your insulin requirements may increase when you are sick and so you need to do one of the following:
 - Follow the sliding scale your doctor has given you
 - Follow suggestions given in the chart on page 2 (see chart for extra insulin needed).
- **Continue to take your intermediate- or long-acting insulin when you are ill.** Your doctor may recommend you take ½ your usual dose if you are unable to eat or drink to prevent low blood glucose.
- Continue to follow your meal plan. If you are unable to eat your usual foods, try to follow the **Foods for Sick Days** ideas on page 3.
- Drink plenty of sugar-free fluids such as water, weak or caffeine-free tea and sugar-free pop. Try to drink at least 8 to 10 cups of fluids each day.
- Test your blood glucose and your ketones (urine or blood) every 4 hours. Your pharmacist can show you how to test for ketones (see chart for extra insulin needed).

See Your Doctor or Go To Emergency

See your doctor **today** or go to emergency for help if any one of the following occurs:

- your blood glucose is greater than 14 mmol/L before meals or bedtime on two tests in a row **and** your urine ketones are moderate to large or blood ketones are 1.5 mmol/L or higher.
- you are unable to eat or drink due to vomiting for longer than 24 hours. You need to drink 8 cups or 2 litres of fluid in 24 hours.

- you have diarrhea lasting longer than 24 hours.

High blood glucose and ketones mean you need more insulin. The amount depends on your blood glucose level and the amount of ketones. Use the following guidelines under the direction of your doctor or diabetes nurse educator.

Guidelines for Extra Insulin When You Are Sick

Blood Glucose (mmol/L)	KETONES		Extra Rapid-acting or Short-acting Insulin Every 4 – 6 Hours
	Urine	Blood (mmol/L)	
14 – 16	Negative – Small	1.4 or less	Usual dose
	Moderate – Large	1.5 or more	Usual dose + 10% of total daily units of insulin
16.1 – 22	Negative – Small	1.4 or less	Usual dose + 10% of total daily units of insulin
	Moderate – Large	1.5 or more	Usual dose + 15% of total daily units of insulin
22.1 or more	Negative – Small	1.4 or less	Usual dose + 15% of total daily units of insulin
	Moderate – Large	1.5 or more	Usual dose + 20% of total daily units of insulin

What Are Your Total Daily Units of Insulin?

Add all your different types of insulin doses together. For example:

- Intermediate- or long-acting insulin: 36 units at breakfast & 15 units at bedtime = 51 units
- Rapid- or short-acting insulin : 12 units at each meal = 36 units
- Total daily units of insulin is 51 + 36 = 87 units
 - 10% of this is 9 units
 - 15% of this is 13 units
 - 20% of this is 17 units

What Can Happen When Your Blood Glucose is High?

- High blood glucose on 2 tests (4 hours apart) can quickly become Diabetic Ketoacidosis (DKA)
- You do not have enough insulin and are unable to use glucose for energy
- When glucose cannot be used, your body burns fat
- Burning fat makes ketones. Ketones are toxic to your body and can cause weakness, fatigue, weight loss, stomach pain, rapid breathing, nausea and vomiting
- DKA must be treated immediately! Failure to do so may lead to shock, coma and death.

Foods for Sick Days

Drink plenty of sugar-free fluids such as water, weak or caffeine-free tea, sugar-free pop, Crystal light® or broth. Try to drink 8 to 10 cups of fluid per day.

Continue to eat your usual foods as much as possible. If you are not able to eat your usual foods, have **one** of the following every 1 to 2 hours, even if your blood glucose is high. (Each of these servings contain about 15 grams of carbohydrate.)

- ½ cup (125 mL) fruit juice
- ½ cup (125 mL) regular pop (not sugar-free)
- 1 cup (250 mL) Gatorade®
- ½ cup (125 mL) regular Jell-O®
- 1 twin popsicle
- 1 cup (250 mL) milk
- 1 cup (250 mL) cream soup
- ½ cup (125 mL) ice cream, custard or pudding
- 6 soda crackers
- 1 slice toast with margarine/butter/jam.
- ½ cup (125 mL) applesauce
- ½ cup (125 mL) milk shake or liquid meal replacement