

Sick Day Management for Adults with Diabetes Who Take Insulin¹

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When people have type 1 diabetes or have type 2 diabetes and take daily multiple insulin injections, getting a cold or another minor illness can cause their blood glucose levels to go very high. This can result in serious health problems. The best way for people with diabetes to prevent a minor illness from becoming a major illness is to have a personalized sick day plan designed with their health care provider before they get ill.

How Illness Affects Diabetes Control

When you are sick your body is under stress. Your body responds to stress by releasing hormones that help fight disease. Although this is a natural and beneficial response, some hormones interfere with the ability of insulin to control blood glucose. As a result, it becomes more difficult to keep your blood glucose within a healthy range. If not properly managed, very high blood glucose levels can lead to dangerous and life-threatening conditions such as ketoacidosis (primarily in type 1 diabetes).

Develop a Sick Day Plan

Ask your health care provider to develop a written diabetes management plan for you to follow when you become sick. It should be based on your current diabetes treatment plan and include the following:

- When to call your health care provider

Symptoms of Ketoacidosis

Decreased consciousness*
 Difficulty breathing*
 Dry skin and mouth
 Flushed face
 Fruity breath odor*
 Mental confusion*
 Nausea and vomiting*
 Stomach pain

Ketoacidosis can lead to severe illness and even death, so it must be treated immediately. Have someone take you to the emergency room or call 911 if you experience the symptoms starred (*) above.

- How often to check blood glucose and urine ketones*
- Written log of important information
- What medicines to take
- What to eat and drink

*If you don't know how to check your urine for ketones, speak to your health care provider.

When to Call Your Health Care Provider

Your illness and symptoms will determine whether you need to contact your health care provider. While it is not necessary to call your physician every time you are sick, you will need to call if you are experiencing any of the following symptoms:

1. This document is FCS8996, one of a series of the Family Youth and Community Sciences Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date March 2012. Visit the EDIS website at <http://edis.ifas.ufl.edu>.
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- You've been sick or have had a fever for a few days and aren't getting better.
- You have vomited more than once.
- You have had diarrhea more than five times or longer than 6 hours.
- Your blood glucose has been higher than 300 mg/dl two times and is not lowered with increased insulin and liquids.
- You have moderate to large amounts of ketones in your urine.
- You have symptoms such as trouble breathing; fruity smelling breath; dry cracked lips and mouth; and feeling drowsy.
- You do not know what to do to take care of yourself.

How Often to Check Blood Glucose and Urine Ketones

When you are sick you need to check both your blood glucose and urine ketones more frequently. Ketones are waste products that build up in your body when you are sick. It's important to measure them because high levels over time can lead to serious health problems. For adults with type 1 diabetes it may be necessary to check blood glucose and urine ketones at least every four hours. Adults with type 2 diabetes may only need to check urine ketones if your blood glucose is greater than 300 mg/dl. You should check blood glucose every two to four hours while blood glucose is elevated or until your symptoms improve. Your health care provider will suggest the proper plan for you.

Written Log of Important Information

It is a good idea to keep a written log of key information to share with your health care provider. This log may include the following:

- How you feel and your symptoms
- How long you have been sick
- Your blood glucose values
- Your urine ketone values
- What you have been eating and drinking
- Your temperature
- Name and dosage of all medications (prescription and over-the-counter) you have taken

What Medicines to Take

When you are sick you still need to take your diabetes medications because your body makes extra glucose during times of illness. For adults with type 1 diabetes, extra insulin may be necessary to reduce elevated blood glucose



Figure 1. If you are sick and have diabetes, it is a good idea to keep a written log of key information to share with your health care provider.

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levels. For adults with type 2 diabetes, it is important to continue taking your diabetes medicine, whether it is insulin or oral medications. Sometimes it is also necessary for people with type 2 diabetes who are not usually on insulin to use insulin for a brief time period while they are sick. Your health care provider will recommend the proper plan based on your situation.

What to Eat and Drink

While you may not feel like eating or drinking when you are sick, it is important to follow your normal meal plan as closely as possible. In addition to meals, drink plenty of non-caloric liquids to prevent dehydration. Drink a glass of liquid (non-alcoholic and caffeine-free) every hour when sick to prevent dehydration. If you are not able to follow your regular meal plan, your sick day plan should include an alternate meal plan that provides about 150–200 grams of carbohydrate per day. Distribute this amount of carbohydrate evenly throughout the day by either consuming soft foods you tolerate well or calorie-containing liquids. It is a good idea to have a small supply of ready-to-eat and easy-to-prepare foods and drinks on hand. Each item listed below contains approximately 10–15 grams of carbohydrate.

Fluids

- 1 cup sports drink
- 1 cup milk
- 1 cup soup (reduced sodium – NOT sodium-free – recommended)

- 1 double-stick popsicle
- ½ cup fruit juice or regular soda
- ½ cup lemonade



Figure 2. Individuals with diabetes should have a sick-day plan that includes a diet with plenty of **non-caloric** liquids to prevent dehydration.

Credits: D. Sharon Pruitt

Foods

- 6 saltine-type crackers
- 5 vanilla wafers
- 3 graham crackers
- 1 slice dry toast
- ½ cup cooked cereal
- ½ cup regular ice cream
- ½ cup regular frozen yogurt
- ½ cup sugar-free pudding
- ½ cup regular gelatin
- ½ cup custard
- ½ cup mashed potatoes
- ¼ cup sherbet
- ¼ cup regular pudding

Summary

When people with diabetes get sick their blood glucose levels often become elevated, which can lead to serious health problems. A sick day plan prepared by your health care provider in advance will help prevent acute diabetic complications while you are sick.

For additional information about diabetes, contact the American Diabetes Association at 1-800-DIABETES (1-800-342-2383) or visit the website at <http://www.diabetes.org>.

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