

Sick Day Guidelines for Type 1 Diabetes

Diabetic ketoacidosis or “DKA” happens when there is not enough insulin in the body. It can happen quickly, even within a few hours. When there is not enough insulin, the body burns fat for energy. This breakdown of fat produces ketones (an acid). If high levels of ketones build up in the blood, DKA develops. If not treated, it can lead to coma and death.

When sick, stress hormones increase and raise blood sugar levels. This happens **even if you are not able to eat or drink**. Blood sugar levels may become hard to manage and lead to diabetic ketoacidosis or DKA.

Prevent DKA by following the steps in the chart below if you are sick or if you have ketones.

Symptoms	What to Do
<p>Mild</p> <ul style="list-style-type: none"> • Able to eat and drink • No vomiting • No fever • Urine: No ketones • Blood: Ketones <0.6 mmol/L 	<p>Take your long-acting insulin as usual OR make sure your insulin pump is working. Also do the following:</p> <p>Ketones: Check once a day Insulin: Give all doses (meal dose and correction) Sugar: Check before meals/bedtime Hydrate: Drink at least 4 ounces (½ cup) of fluids every 30 minutes. Fluids are very important.</p>
<p>Moderate</p> <ul style="list-style-type: none"> • Fever, nausea, or diarrhea • Urine: Small/moderate ketones • Blood: Ketones 0.6 -1.5 mmol/L 	<p>Take your long-acting insulin as usual. If using a pump, insert new site. Also do the following:</p> <p>Ketones: Check every 4-6 hours and more often with large ketones.</p> <p>Insulin: Use syringe or pen to give correction insulin every 3 hours (hold meal dose if unable to eat).</p> <p>Sugar: Check every 3 hours</p>
<p>Severe</p> <ul style="list-style-type: none"> • Vomiting • Urine: Large ketones • Blood: Ketones >1.5 mmol/L 	<p>Hydrate: If you cannot eat your normal meals, replace carbs from the meal with foods that have sugar. These foods must have sugar regardless of your blood sugar level to prevent the breakdown of fat into ketones. Examples include soda, Jell-o, pudding, juice, popsicles, sports drinks.</p>

Causes of High Blood Sugars

- Any illness, infection, surgery
- Missed or skipped insulin doses
- Physical or emotional stress
- Some medicines (steroids)

Symptoms of High Blood Sugars

Symptom	Cause
Urinating more	This is the body's way of getting rid of extra sugar.
Thirsty	This is because the body needs fluid.
Dehydrated	Excess fluid is lost to get rid of sugar. This happens more with vomiting and diarrhea.
Very Tired	The body is not getting enough insulin to turn sugar into energy.

When to Call Your Doctor

Make plans with your health care team about when to call and what to do if they are not available. If you have not discussed this, call as follows:

- If you have moderate to large urine ketones or blood ketones 0.6 mmol/L or higher.
- If you have symptoms of DKA and are unable to manage your blood sugar.
- If you have any questions about your sick day plan.
- If you use U-500 or pre-mixed insulin (70/30, 75/25, 50/50), take half of your usual dose if unable to eat your normal meal.

When to Call 911 or Go to the Emergency Room

If you have large ketones or blood ketones more than 3.0 mmol/L and you cannot reach your doctor or cannot eat or drink, go to the nearest ER or call 911.

Do not delay treatment. DKA needs to be treated right away. This can be a life-threatening condition.

Checking Glucoses

If you use a continuous glucose monitor (sensor or CGM), you can watch the CGM results for trends as long as it is working as expected. Use a blood glucose meter for treatment decisions if the sensor reading does not match how you feel or if you think sensor results are wrong.

If You Use an Insulin Pump

If your sugar levels are high or you have ketones, make sure you are getting insulin. If your pump isn't working, or the site or tubing is kinked or disconnected, this may cause high blood sugars and ketones. Make sure you get insulin by taking an injection with a pen or syringe. The amount should be based on your correction dose. Next, replace your pump site and troubleshoot the pump before using it. For more information, read [Problem Solving High Blood Sugars When Using an Insulin Pump](#). (Scan QR code below to access.)



Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright ©12/2023. University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#4505.