

Sick Day Guidelines When You Have Type 1 Diabetes

When you are sick, stress hormones are made which 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.

Diabetic Ketoacidosis or DKA

DKA comes from not having enough insulin in the body. It can be life threatening. When you are sick, it often develops quickly. It can even happen within a few hours. When you do not have enough insulin, the body burns fat for energy. This breakdown of fat produces ketones (an acid). DKA can occur when high levels of ketones build up in the blood. If not treated, it can lead to coma and death.

Causes of High Blood Sugars

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

Signs and Symptoms

- Increased thirst
- Increased urination
- Fatigue
- Weight loss
- Dehydration
- Nausea or vomiting
- Abdominal pain
- Rapid, labored breathing
- Fruity odor to the breath
- Severe dehydration

Be careful! Signs and symptoms of DKA are often the same as the flu. If you live alone, you should tell a family member or close friend that you are ill and have them call to check on you several times each day.

How to Prevent DKA

Monitor More Often

- Check your blood sugar every 2 hours.
- Check urine or blood for ketones when you feel sick.
 - If you have no ketones, and you are able to eat/drink and have no fever, check ketones daily.
 - If you have ketones, check every time you go to the bathroom or every 4 to 6 hours if you have a fever, nausea or diarrhea.

Prevent Dehydration

- Drink at least 4 ounces (1/2 cup) of fluids every 30 minutes.
- With vomiting and diarrhea, your body loses electrolytes like potassium and sodium. Replace these losses with bouillon, soups, sports drinks, and juices.

If you cannot eat your normal meals, replace carbohydrates 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. If you use insulin with meals, take insulin for the carbohydrates in the liquids or food that you have. Examples are:

- Soda
- Jell-O
- Pudding
- Juices
- Popsicles, sherbet or ice cream
- Sports drinks
- Cooked cereals, crackers or toast
- Soups

Adjust Insulin Doses

Always take your insulin when you are sick to avoid DKA. Doses may change based on whether you feel well enough to eat or not.

Insulin Plan When Eating

- Take your usual dose of basal (long-acting) insulin (NPH, Levemir[®], Basaglar[®], Lantus[®], Toujeo[®], or Tresiba[®]).
- Keep taking your mealtime (short or rapid-acting) insulin.
- Use correction insulin. Call your health care team to decide if your doses need to be changed while you are sick.
- If you use an insulin pump:
 - Give a correction bolus with the pump.
 - Change your pump site if your blood sugar has not improved after a correction bolus.
 - Talk with your care team about what other changes are needed.

Insulin Plan When Not Eating

It is always best to discuss insulin changes with your health care team. See below for common changes when not eating your usual meals.

- NPH: Take ½ of usual dose
- Levemir[®], Basaglar[®], Lantus[®], Toujeo[®], or Tresiba[®]: Take usual dose
- Regular Novolog[®], Apidra[®], Humalog[®], Admelog[®]: Do not take meal insulin. Only use your correction scale.
- Pre-mixed insulin (70/30, 75/25, 50/50): Take ½ of usual dose and call your health care team for direction.
- Concentrated insulin (U-500, U-300, U-200): Call your health care team for direction.

When to Call Your Health Care Team

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 your blood sugar is greater than 250 mg/dL and 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 your health care provider is not available and/or if vomiting begins when ketones are large, go to the nearest emergency room or call 911.

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