

S.I.C.K. DAY MANAGEMENT WITH DIABETES

Diabetic Ketoacidosis is an illness that can happen in people with diabetes when they are sick or are not getting enough insulin. DKA happens when ketones build up to unsafe levels in the body.

Why does the body make ketones?

The body makes ketones when a person cannot use sugar for energy. Ketones are created if your body does not have enough insulin to move sugar out of the blood and into the cell. You may need more insulin than usual when you are ill or have a severe injury, which increases the risk for DKA in people with diabetes. You may also make ketones when you do not eat or drink enough carbohydrates (carbs).

Why are ketones concerning?

Ketones are acids. High ketone levels poison the body. If ketones are not treated quickly, this can become life-threatening!

When should I test for ketones?

- If you are sick, have an infection, a broken bone, are having surgery, or have a severe injury.
- If you are having stomach upset, stomach pain, nausea, and/or vomiting. These are symptoms of ketones!
- If you have two blood sugar readings in a row of 250 mg/dl or higher when testing with a blood sugar meter.
- If your blood sugar is over 250 mg/dL for two hours on your continuous glucose monitor.
- If you have missed your long-acting insulin shot.
- If you think your insulin pump is not delivering insulin because it has become disconnected from the body, or insulin flow was stopped.

What should I do if I am sick or severely injured as a person with diabetes?

Remember the acronym S.I.C.K. This will help guide your care during times of illness and injury.

S	BLOOD SUGAR	<ul style="list-style-type: none">• Check blood sugar every 2-3 hours, both day and night.
I	INSULIN	<ul style="list-style-type: none">• Do not stop taking insulin or oral diabetes medications with illness, unless directed to by your diabetes provider. Even if you cannot eat, your body will need insulin.• If you use insulin shots, continue to take your daily long-acting insulin shot of Tresiba or Lantus.• You may need changes to your insulin doses while you are ill. Call the pediatric endocrinology team to help you.
C	CARBS	<ul style="list-style-type: none">• The body needs carbs for fuel.• Continue to eat normally, if possible.• If you are unable to eat or hold down food, it is important to still drink fluids.<ul style="list-style-type: none">• If blood sugar levels are below 200 mg/dL, drink sugary fluids such as an electrolyte drink or juice.• If blood sugar levels are above 200 mg/dL, drink sugar free fluids.
K	KETONES	<ul style="list-style-type: none">• Check for ketones daily during illness or injury.• If ketones are negative, continue to check for ketones every 2-4 hours while ill.• If you have ketones, check and treat ketones every 2 hours until the ketones are negative for 2 tests in a row.• Use the box on page two to guide ketone treatment.

To reach the on-call pediatric endocrinologist, please call 907-563-2662 or toll free 855-482-4382. Ask for the “on-call pediatric endocrinologist.”



ALASKA NATIVE
MEDICAL CENTER



The Alaska Native Tribal Health Consortium and Southcentral Foundation jointly own and manage the Alaska Native Medical Center under the terms of Public Law 105-85. These parent organizations have established a Joint Operating Board to ensure unified operation of health services provided by the Medical Center.

KETONE TREATMENT

Treat ketones with insulin and fluids. You need insulin to stop making ketones. You need fluids to flush out the ketones that are in your body.

Urine Ketones	Blood Ketones	Rapid Acting Insulin Correction	On an Insulin Pump?	Fluids	How Often to Check Ketones
Negative	Less than 0.6	Use your usual insulin correction.	Deliver corrections through the pump.	Small kids: Drink at least 4 ounces an hour. Older kids and teens: Drink at least 8 ounces an hour.	Check every 2-4 hours while ill. Check sooner if you have stomach symptoms.
Trace, 5	Less than 0.6	If blood sugar is >100 mg/dL, use your usual insulin correction dose.	Change the pump site and give a correction through the pump.	Small kids: Drink 8 ounces an hour. Older kids and teens: Drink 16 ounces an hour.	Check ketones and blood sugar every 2 hours until ketones are clear.
Small, 15	0.6-0.9				
Moderate, 40	1.0-1.4	For blood sugars of 100-200 mg/dL, use your usual insulin correction.	Change the pump site and give the correction with an insulin pen.	Small kids: Drink 8 ounces an hour. Older kids and teens: Drink 16 ounces an hour.	Check ketones and blood sugar every 2 hours until ketones are clear.
Large or Extra Large, 80 +	1.5 +	For blood sugar >200 mg/dL, double the usual insulin correction.			

When to call the on-call pediatric endocrinologist:

- If you have any questions about sick day care.
- If you are unsure about the insulin dose you should use to treat ketones.
- If your ketone level is not lower when you recheck in 2 hours, after treatment.
- If you are struggling with ongoing high or low blood sugars.
- If you are vomiting and cannot hold down liquids.
- If you go to the emergency room or village clinic.



Low Blood Sugar and Ketones

You can have ketones when your blood sugar is low. If blood sugar levels are too low to allow for an insulin correction, when ketones are present, drink 8 ounces of juice to increase blood sugar levels.

When to go to the emergency room:

- Ketones levels are not coming down with treatment.
- If you are vomiting for more than 2-4 hours and cannot hold down liquids.
- If you are having difficulty breathing or can only take fast, deep breaths.
- If you are unable to urinate to collect ketones or make no tears when crying.
- If you are unusually sleepy or confused.

Your family should call 911 if they are unable to wake you.

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