

Ketone/Sick Day Guidelines

	CORRECTION INSULIN	FOOD BOLUS	FLUIDS	RECHECK (Blood sugar and ketones)	ACTIVITY
<i>Blood sugar greater than 250 Negative ketones No Vomiting</i>	Correct only if it has been 4 hours or more since last dose of fast acting insulin (Humalog/Novolog/Apidra)	Cover all carbs using insulin to carb ratio	Encourage sugar free fluids (1 ounce per year of age per hour)	Next major meal or four hours after last dose of fast acting insulin (Humalog/Novolog/Apidra)	No restrictions on activity
<i>Blood sugar greater than 250 SMALL OR TRACE urine ketones (0.6-1.0 blood ketones) No Vomiting</i>	Correct only if it has been 4 hours or more since last dose of fast acting insulin (Humalog/Novolog/Apidra)	Cover all carbs using insulin to carb ratio	Consume sugar free fluids (1 ounce per year of age per hour)	Two hours after last dose of fast acting insulin (Humalog/Novolog/Apidra) until ketones are cleared Consider changing pump site (if applicable)	Restrict activity
<i>Blood sugar greater than 250 MODERATE OR LARGE ketones (>1.1 blood ketones) No vomiting</i>	Need additional fast acting (Humalog/Novolog/Apidra) insulin dose (see diabetes management plan for ketone dose)	Cover all carbs using insulin to carb ratio	Consume sugar free fluids (1 ounce per year of age per hour)	Two hours after last dose of fast acting insulin (Humalog/Novolog/Apidra) Call school hotline for further assistance and change pump site (if applicable)	Restrict activity
<i>Vomiting</i>	Contact parent or Cook Children's Diabetes Team for further instruction	Withhold until further instruction	Small sips sugar free fluids (may need sugary drinks if blood sugar is low)	Every two hours or if condition changes	Restrict activity

What are Ketones?

When the body is deficient in insulin or carbs, ketones are made from fat breakdown. Insulin is needed to stop fat breakdown. When the blood sugar is high (above 250) and ketones are being produced it can lead to a very serious condition called diabetic ketoacidosis.

What can cause ketones?

- Forgetting to give one or more insulin shots. Giving spoiled insulin (over 30 days old, over 90 degrees or less than 32 degrees)
- Illness – the amount of insulin needed is usually more so the body will have the extra energy it needs to fight the illness
- Not enough insulin
- An insulin pump that is not working or has been disconnected from the body

What are the signs of DKA?

- Stomachache, vomiting, or a sweet odor to the breath that can occur with high ketones
- Large urine ketones or blood ketones above 3.0 mmol/L. When this large amount of ketones has been present for several hours, you may see deep or troubled breathing. This is a sign to go to the Emergency room.

Does the student have to go home when they have ketones?

No. Students with ketones can be managed at school. Activity must be restricted but they may attend class if they are feeling ok. If vomiting or lethargic, call parents. Good communication with parents is strongly encouraged.