

Hyperglycemia and Ketones

Hyperglycemia means high blood sugar. Blood sugar will be high if there is not enough insulin present in the body to carry the glucose (sugar) in the blood stream to the cells of the body so the sugar can be used for energy. When there is not enough insulin or calories (sugar) present to produce energy, the body starts burning fat for energy. When the body burns fat for energy, ketones develop. Ketones are acids in the blood that can make you/your child sick. **Symptoms of ketoacidosis may resemble symptoms of the flu.** Ketoacidosis may lead to hospitalization and is a life-threatening situation. Here are the causes and symptoms of hyperglycemia and ketones.

Causes:

Too little insulin
Illness/stress
Poor eating habits
Poor drinking habits

Symptoms of Hyperglycemia:

Often hungry
Often thirsty
Often urinating (peeing)
Often tired
Headache
Blurry vision

Symptoms of Ketones:

Ketones are present
Nausea and/or vomiting
Fruity/medicine breath (like fingernail polish remover)
Dehydration/dry mouth
Deep rapid breathing (like after a hard run)
Often sleepy
Weight loss
Unconsciousness

How do I test for ketones?

- Testing is done by placing the ketone strip in a stream of urine or collecting urine in a cup then dipping the ketone strip into the urine. Once saturated, remove the strip from the urine. Wait 15 seconds and then compare the color of the strip to the colors on the ketone strip bottle, which represent different amounts of ketones in the urine. Delayed reading of the strip can cause false results.
- Ketones are measured in amounts of trace, small, moderate or large.

When do I test for ketones?

- If blood sugars are greater than 240.
- When ill or not feeling well, even if blood sugar is less than 240.

Facts About Ketone Strips:

- Date the ketone strip bottle when first opened. Replace it 6 months after opening.
- **DO NOT** store strips in the bathroom, kitchen, or any place with increased moisture and heat.

Treatment:

1. If ketones are negative, you/your child may continue normal activity.
2. If ketones are trace, drink plenty of sugar free fluids (like water) and continue to check ketones hourly until they are negative.
3. **CALL** your Diabetes team (402-955-3871) immediately if ketones are small, moderate, or large.
4. Anytime your/your child's blood sugar is high (higher than 240), drink plenty of sugar-free fluids (such as water or diet pop).
5. **REST** if ketones are present – **DO NOT EXERCISE.**
6. If you/your child start vomiting, **CALL** the Diabetes team immediately (402-955-3871). If vomiting or ill, refer to Sick Day Management Teaching Sheet.

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