



Ketone and Glucose Monitor Education

Tools

1. Precision Xtra Ketone/Glucose Monitor (availability, cost effective and ease of use)
2. Lancets
3. Precision Xtra glucose strips –
4. Precision Xtra ketone strips -



Monitor Set Up

Monitor basic



Monitor Set Up (cont.)

1. To turn the monitor ON, Press and Hold the ⓘ button (for 2 seconds).
2. The musical note will appear for the beeper. Press and Release the ⓘ button to save the beeper setting and to move to the Set Time.
3. The hour and minutes can be set by using the arrow buttons.
4. Press and release the ⓘ button to move to next set of numbers and then the date.



Monitor Set Up (cont.)

- The monitor will show mg/dL for the glucose reading and mmol/L for the ketone reading.
- The monitor will determine the reading by the type of strip that is placed in the machine.

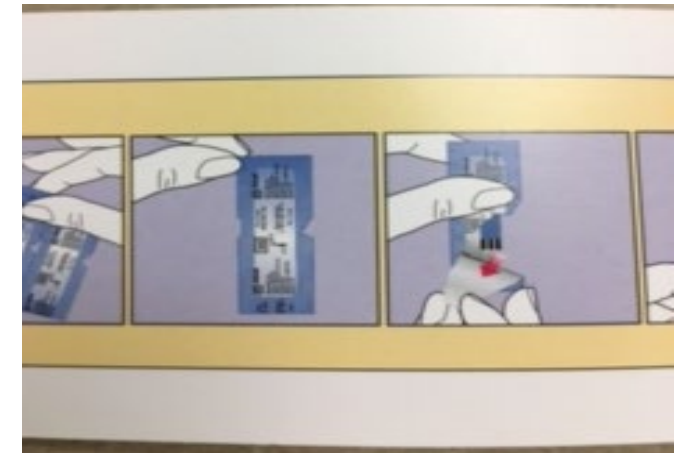


Why do we monitor Ketone/Glucose levels?

- Ketones – to monitor that your child is in therapeutic ketosis (using fat for fuel instead of glucose)
- Glucose – to monitor for hypoglycemia (low blood sugars)

How to Obtain Sample

- Prepare lancing device.
- The lancing device in the precision xtra kit is for fingertip use only. Blood ketone strips have not been evaluated for alternative site monitoring.
- Wash hands with soap and water or use alcohol wipe to clean the site area
- Remove the test strip from the foil packet. Hold at the top with the 2 notches on the side pointing down.
- Tear off the bottom half.



How to Obtain Sample (cont.)

- Insert the test strip with the 3 black lines at the end of the test strip into the strip port.
- Push the test strip in until it stops (the monitor will turn on automatically and will identify if it's a glucose or ketone strip)



How to Obtain Sample (cont.)

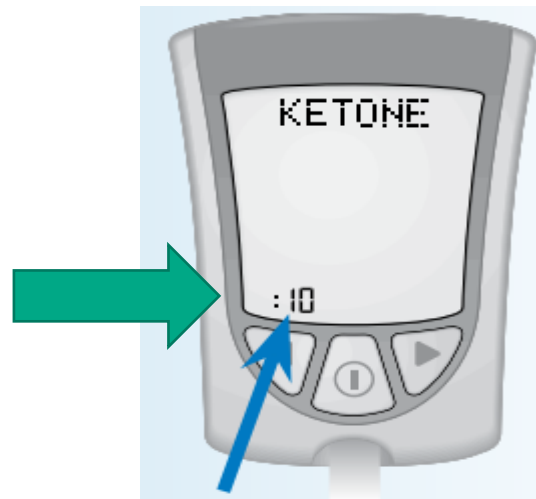
- Obtain blood sample using lancing device.
- Touch the blood drop to the white area at the end of the test strip. The blood is drawn into the test strip.



How to Obtain Sample (cont)

- Continue to touch the blood drop to the white area at the end of the strip until the monitor begins the test

10 second countdown
will appear once enough
sample is present



How to Obtain Sample (cont)

- Record the number that appears on the screen and the time it was obtained

When will the Glucose and Ketones be checked?

- The testing frequency is at the discretion of the Physician and Keto team, and dependent on the child's age/ability to report symptoms
- Typically the glucose and ketones will be checked twice a day for the first two weeks while initiating the diet
- Recommendation for time of checks:
 - First check - Before 1st meal of the day (after longest fasting time)
 - Second check – Before or after evening meal
 - **As needed:** check the **glucose** if excessively sleepy, irritable, nausea, upset stomach, refusing meals
 - **As needed:** check the **ketone** if vomiting, refusing meals or excessively sleepy

What to do with glucose results or symptoms of hypoglycemia?

- If glucose is less than 50 or child is excessively sleepy, irritable, nauseous, upset stomach, refusing meals:
 - Give 30 ml of 100% apple juice.
 - Recheck glucose in 30 minutes. If glucose is still less than 50 or symptoms above remain, give 2nd dose of 30 ml of 100% apple juice.
 - If 2nd dose of juice is needed, call Neurology on-call doctor at 860-837-7500

What to do with Ketone level results?

- Goal is to have ketone level between 2-5
- In the beginning while child is adjusting to being in ketosis, this level can be > 5
- Symptoms of being in too high ketosis include vomiting, excessive sleepiness or nausea (symptoms similar to hypoglycemia)
- If symptoms above are present:
 - Give 30 ml of 100% apple juice
 - If symptoms persist 30 minutes later, give a 2nd dose of 30 ml of 100% apple juice and call Neurology @ 860-837-7500
- If Ketone level greater than 5 **AND** has symptoms:
 - Give 30 ml of 100% apple juice and recheck ketone level in 30 minutes
 - If level still greater than 5, give 2nd dose of 100% apple juice and call Neurology.
 - This is only recommended for the 1st month of being full keto. Some children may need the ketone level to be in the 5s for better symptom control. Keto team will work with you to determine at the 1 month check in.