Ketones

What are Ketones?

Ketones are waste products which develop when the body breaks down fat (instead of food/glucose) as an energy source. Ketones can occur when there is not enough insulin to circulate around the body or when not enough food (carbohydrates) has been eaten. Ketones are a type of acid. They are dangerous to the body if they build up over a long period of time.

What is Diabetic Ketoacidosis (DKA)?

DKA is a condition that happens when there is not enough insulin in the body. This leads to a large number of ketones in the blood which causes the blood to become acidic.

DKA requires urgent medical attention as the child can become unwell very quickly.

What causes Ketones?

- Missed insulin or inadequate insulin therapy
- Illness (e.g. Infection or Vomiting)
- Not enough carbohydrates (Starvation)
- Dehydration or fasting.

What are the signs and symptoms of Ketones?

- Rapid Breathing
- Headache
- Sweet acetone smell on the breath
- Abdominal Pain
- Nausea and/or vomiting
- Dehydration
- Altered conscious state (unusual behaviour or sleepy)

When should I check my ketones?

- When your blood sugar level is 15mmol/L or above and you feel **unwell.**
- If you are feeling unwell no matter what your blood sugar level is.
- If you're nauseated or vomiting.

How do I test my ketone level?

Only some glucose monitors can test for blood ketones. You will be provided with a glucose monitor which can record your ketone level. Follow the steps below;

1. Wash hands.
2. Ensure the ketone strip is in date and insert ketone strip (purple strip) into meter.
3. Prick your finger and apply blood to strip.
4. The result will take 10 seconds. A normal ketone level is below < 1.0mmol/L.

Management of Ketones:

1. If your ketone level is below **< 1.0mmol/L** this is considered within range and does not require immediate attention. A correctional dose of insulin may be required to lower your BGL if your insulin is due.

   If your ketone level is above **> 1.0mmol/L** this is considered above range and requires immediate action. A correctional dose of insulin will be required to lower BGL and clear the ketones from your blood. **Refer to your sick day management plan.**

2. Encourage fluids to help prevent dehydration and clear ketones.

3. Continue to test your ketone level every 1-2 hours until they have cleared **(<1.0mmol/L)**

For advice around management of ketones during business hours please call the diabetes educators or if after hours and Ketone level is not decreasing attend your nearest Emergency Department.

For information

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