

Ketones

What are Ketones?

Ketones are waste products which develop when the body breaks down fat as an energy source. This is because glucose is unable to enter the cells. Ketones can occur when there is not enough insulin given to circulate around the blood or when not enough food (carbohydrates) has been eaten. Ketones are acidic and are dangerous to the body if they are allowed to build up over a long period of time.

What is DKA?

DKA or Diabetic Ketoacidosis is a condition which occurs when there isn't enough insulin in the body leading to the development of large amounts of ketones. DKA requires urgent medical attention as the child can become unwell very quickly.

What causes Ketones?

- Missed insulin or inadequate insulin therapy
- Illness (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

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.

Information for patients, families and carers

- 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 the Optium NEO glucose monitor which can record your ketone level. Follow the steps below;

1. Wash your hands
2. Ensure the ketone strip is in date and insert ketone strip (purple strip) into meter. Your ketone strip is purple.
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 any advice around management of ketones or if you are not confident, please call the diabetes educators or the hospital switchboard 03 9594 6666

For information



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