Important tips

If you are vomiting and unwell and are unable to control your blood glucose and ketones, then go to the hospital as an emergency!

- If vomiting, you do not need to eat but keep drinking to prevent dehydration.
- If you don't wish to eat normal meals, try soup, ice cream or milk puddings.
- Do not omit insulin even if you are not eating.
- If blood glucose falls below normal, sip sugary drinks.
- Make an appointment to see your GP because if there is an infection you may need antibiotics.

Contact us

Centre for Diabetes and Endocrinology
Melrose House
71 London Road
Reading RG1 5BS
Tel: 0118 322 7478

Further information

- Diabetes UK
  www.diabetes.org.uk/Type-1-diabetes/
- NHS Website
  http://www.nhs.uk/Conditions/Diabetes-type1/Pages/living-with.aspx

To find out more about our Trust visit
www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

Chandrawati Mcculloch, Diabetes Nurse
RBFT Diabetes Centre
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NHS
Royal Berkshire
NHS Foundation Trust

Coping during illness with raised blood glucose and ketones

Information for adult patients with Type 1 diabetes

Compassionate | Aspirational | Resourceful | Excellent

This leaflet explains how to monitor your Type 1 diabetes during illness.

When you are unwell, your body becomes more resistant to the insulin you take. This can cause your blood glucose level to rise and lead to your body producing ketones which can lead to Diabetic Ketoacidosis.

When to test for ketones:

When unwell or blood glucose levels are above 16.9mmol.

Stage 1:

Minor illness, e.g. migraine or headache:

- If ketones are negative or trace on urine test.
- Less than 1.5mmols on blood test.
- Blood glucose within target or slightly raised.

Advice

- **Drink plenty of fluids and test blood glucose 4 to 6 hourly.**
- **Continue giving your regular insulin doses, you may need to increase if blood glucose start to rise.**

Stage 2:

Severe illness, e.g. high temperature or infection:

- If ketones are more than a trace on urine test.
- More than 1.5 mmols on blood test.
- Blood glucose raised, usually above 16.9mmols.

If ketones are:
+ – ++ (urine) or
1.5 – 3mmols (on blood test):

Advice

- **Give 10% of TDD (see example*) as rapid acting insulin every 2 hours.**
- **Drink plenty of sugar free fluid.**
- **Check your blood glucose and ketones every two hours. If ketones have not reduced within two hours then contact your doctor or diabetes nurse.**
- **If you are eating, give your normal rapid acting insulin as well.**
- **Plus basal insulin when it's due.**

If ketones are:
++ – +++ on urine test or
Over 3mmols on ketone meter:

Advice

- **Give 20% of TDD (see example*) as rapid acting insulin every 2 hours.**
- **Drink plenty of fluids.**
- **Check your blood glucose and ketones every two hours, and if ketones are not down then contact your doctor.**
- **If you are eating, give your normal rapid acting insulin as well.**
- **Plus basal insulin when due.**
- **Drink fluids, do not exercise and rest until ketones are clear.**

**Example of how to calculate TDD*

TDD (total daily dose) is the total number of insulin units given the previous day.

Rapid acting daily total = 30 units.

Basal insulin daily total = 40 units.

TDD = 30 + 40 = 70 units.

10% of TDD is 70 divided by 10 = 7 units.

20% of TDD is 70 divided by 5 = 14 units.