



3 Steps to preventing Diabetic Ketoacidosis (DKA)

This advice is intended for patients in the outpatient setting or with Diabetes Specialist Nurses (DSN) support from the Diabetes Centre. This advice is not suitable for those in pregnancy.

Diabetic Ketoacidosis (DKA) is a serious complication of type 1 Diabetes. People develop DKA for a number of reasons such as:

- serious illness, such as infection, vomiting and diarrhoea
- stopping or forgetting insulin injections.

Testing your blood ketones helps you to spot the signs and treat the condition before it get too serious or you need to go to hospital.

3 steps to prevent DKA

Step 1

D - Do have blood ketone meter and fast-acting insulin available.

D - Don't stop taking your long acting insulin.

Step 2

K - Know when to test for blood ketones:

- when prompted by your Blood glucose meter or if your blood glucose (BG) is more than 14mmol/l for more than 4 hrs.
- when you feel ill, especially if you have an infection and a temperature or if you have been sick.
- if you are suffering from any of the symptoms of DKA:
 - ~ thirst
 - ~ passing lots of urine
 - ~ feeling or being sick
 - ~ difficulty breathing
 - ~ feeling tired and, or confused.

Step 3

A - Act on your blood ketone results:

Blood Ketone level	Advice	Action
Below 0.6mmol/l	Normal. Carry on with your usual blood glucose testing.	If Blood glucose was high consider why and act to correct or avoid this happening.
Between 0.6 and 1.4mmols	<ul style="list-style-type: none"> Consider fast-acting insulin correction dose. Re-test glucose and ketones 2 hourly until ketones below 0.6. 	Consider taking: _____ units of _____ <i>(To be completed by Diabetes team)</i>
Between 1.5mmols and 3mmols	You need extra fast-acting insulin. <ul style="list-style-type: none"> Take 10% of your total daily dose* as fast-acting insulin up to a maximum of 10 units. Sip sugar-free clear liquid (aim for 100mls per hour). Retest your ketones and glucose in 2 hours and consider another dose of fast-acting insulin. If your blood ketones are not falling contact your GP, Emergency Department or Diabetes Centre.	Consider taking: _____ units of _____ <i>(To be completed by Diabetes team)</i>
Above 3mmols	You need extra fast-acting insulin and urgent medical advice. <ul style="list-style-type: none"> Take 20% of your total daily dose* as fast-acting insulin up to a maximum of 10 units. Drink 1 cup of sugar-free clear liquid every 15 minutes (aim for 500mls per hour). Go to your Emergency Department immediately. 	Consider taking: _____ units of _____ <i>(To be completed by Diabetes team)</i>

* **Total daily dose** = Add up the number of units of long acting insulin and fast acting insulin that you took the previous day.

- Long acting insulins include humulin I, levemir, lantus, abasaglar, toujeo, tresiba.
- Fast Acting insulins include Novorapid, Humalog, Fiasp and Apidra.

For example, Novorapid 4 units at breakfast, 6 units at lunch, 10 units at tea and 24 units of lantus at bedtime would be a total daily dose of 44 units.

Using your Ketone strips: Normal levels will vary slightly from person-to-person depending on length of time since eating, what you have had to eat and how long you might have been unwell.

Remember it is better to be to be careful. If in any doubt, check your ketones and contact the Western Isles Hospital Diabetes Centre on 01851 704704, or out-of-hours telephone NHS on 111.

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- share your story at: www.careopinion.org.uk
- visit our website: www.wihb.scot.nhs.uk/feedback
- tel. 01851 704704 (ext. 2236) - answering machine available if no one answers.

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