

Diabetes and Ketones

Diabetes Ketoacidosis (DKA) can occur in people with Type 1 and Type 2 diabetes. It is more common in people who are ill.

There are reports of DKA in people on SGLT2i (dapa/empa/canagliflozin). This class of diabetes medication should be stopped on admission.

Check ketones when blood glucose levels are ≥ 14 mmol/l on two consecutive occasions.

Acute areas (ED, HDU/ITU and diabetes wards) have a point of care testing capillary blood machine, otherwise a venous blood sample can be sent to the laboratory for urgent ketone measurement.

Ketone Result (urine dipstix)	Action
Less than 0.6mmol/l (0)	This level is normal. Continue to monitor blood glucose levels at least pre-meals and bedtime and give normal insulin doses. No additional action is required.
0.6—1.5 mmol/l (trace)	Continue with regular insulin and recheck blood glucose and ketone level after 2 hours. If blood glucose level or blood ketone level is increasing prescribe an additional stat dose of rapid (Novorapid/Humalog/Apidra) insulin. The dose should be 10% of the total daily dose of insulin. Recheck glucose and ketones in 2 hours.
1.5—3.0mmol/l (+)	Give an additional stat dose of rapid insulin. The dose should be 20% of the total daily dose of insulin. Recheck blood glucose and blood ketones in 2 hours. Repeat rapid acting insulin dose if blood glucose or ketone level unchanged or increasing.
Above 3.0mmol/l (++ or more)	Assess for DKA (diabetic ketoacidosis) See accompanying guideline on microguide

Ketone meters are located in the following places within BSUH:

RSCH

- A&E
- AAU
- EACU
- ITU
- HDU
- Bristol
- Renal

PRH

- A&E
- RAMU
- Balcombe
- ITU
- MDCU