

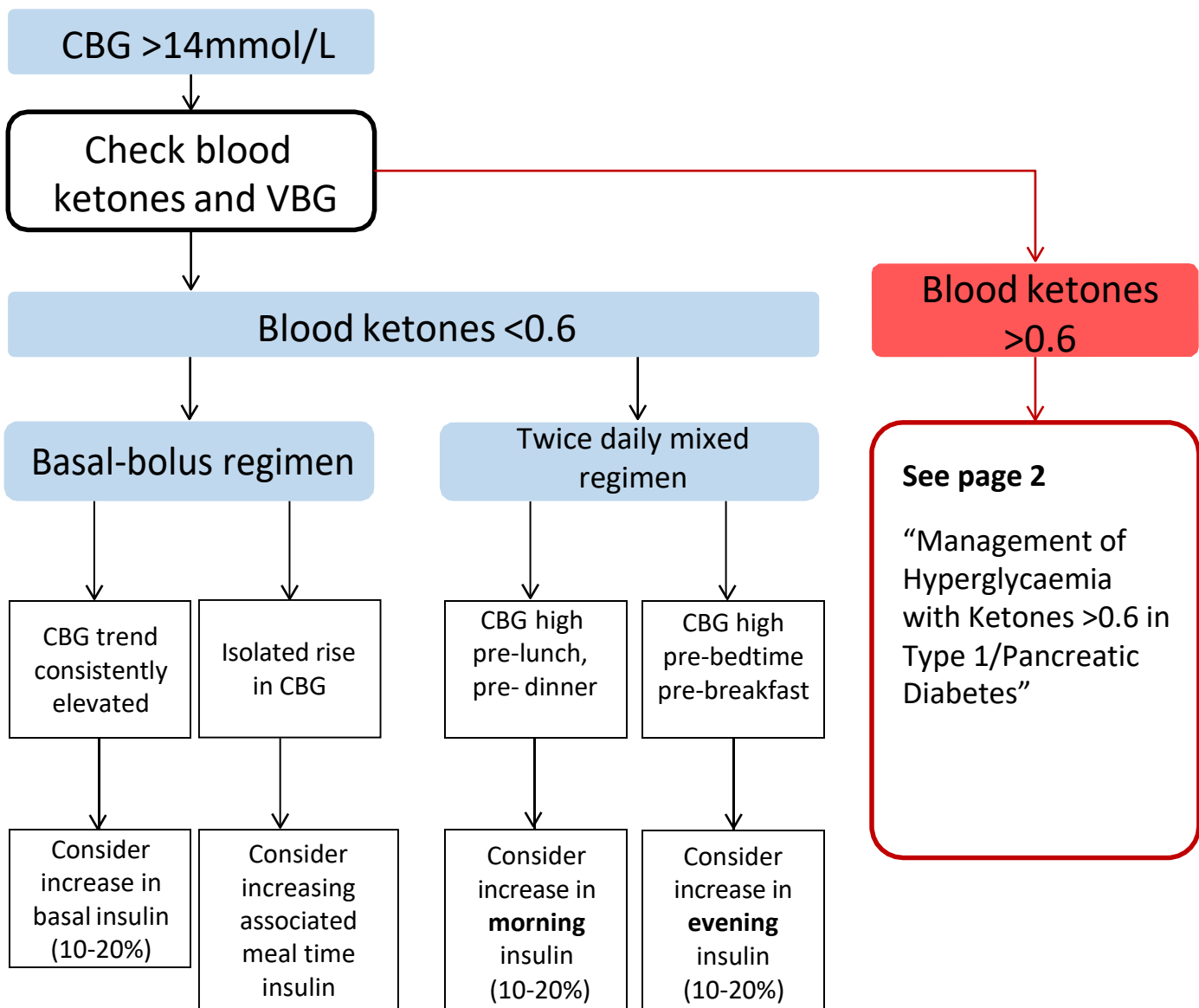
Guideline for the Management of Hyperglycaemia in Adults with Diabetes Mellitus in Hospital.

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Adapted from NHS Greater Glasgow & Clyde 'Diabetes, Inpatient Prescribing FAQs for Junior Doctors' guideline.
Available from: [897-diabetes-inpatient-prescribing-faqs.pdf \(scot.nhs.uk\)](https://scot.nhs.uk/897-diabetes-inpatient-prescribing-faqs.pdf) (accessed 8th of August 2023)

Management of Hyperglycaemia in **Type 1 /Pancreatic Diabetes**

- Aim target capillary blood glucose (CBG) 6 – 10 mmol/L (unless specified otherwise).
- Capillary Blood Ketone (CBK) to Urine Ketone conversion:
CBK >1.5 – 3 = Urine Ketones ++
CBK >3 = Urine Ketones +++ or ++++
- Venous Blood Gas = VBG



Management of Hyperglycaemia with Ketones >0.6 in **Type 1/Pancreatic Diabetes**

- TDD = Total Daily Dose – the total number of units of all long-acting and fast-acting insulin taken in 24 hours, e.g. Novorapid[®] 6 units three times daily with meals and Lantus[®] 15 units at night = TDD of 33 units.
- Capillary Blood Ketone (CBK) to Urine Ketone conversion
CBK >1.5 – 3 = Urine Ketones ++
CBK >3 = Urine Ketones +++ or ++++

Type 1 Diabetes and CBG >14mmol/L

Check capillary blood ketones (CBK) and venous blood gas (VBG)
VBG required first cycle only

CBK >0.6-1.5
H+ <45

Consider
correction dose
See page 4

CBK >1.5-3.0
H+ <45

Give 10% TDD as
fast-acting
insulin

CBK >3.0
H+ <45

Give 20% TDD as
fast-acting
insulin

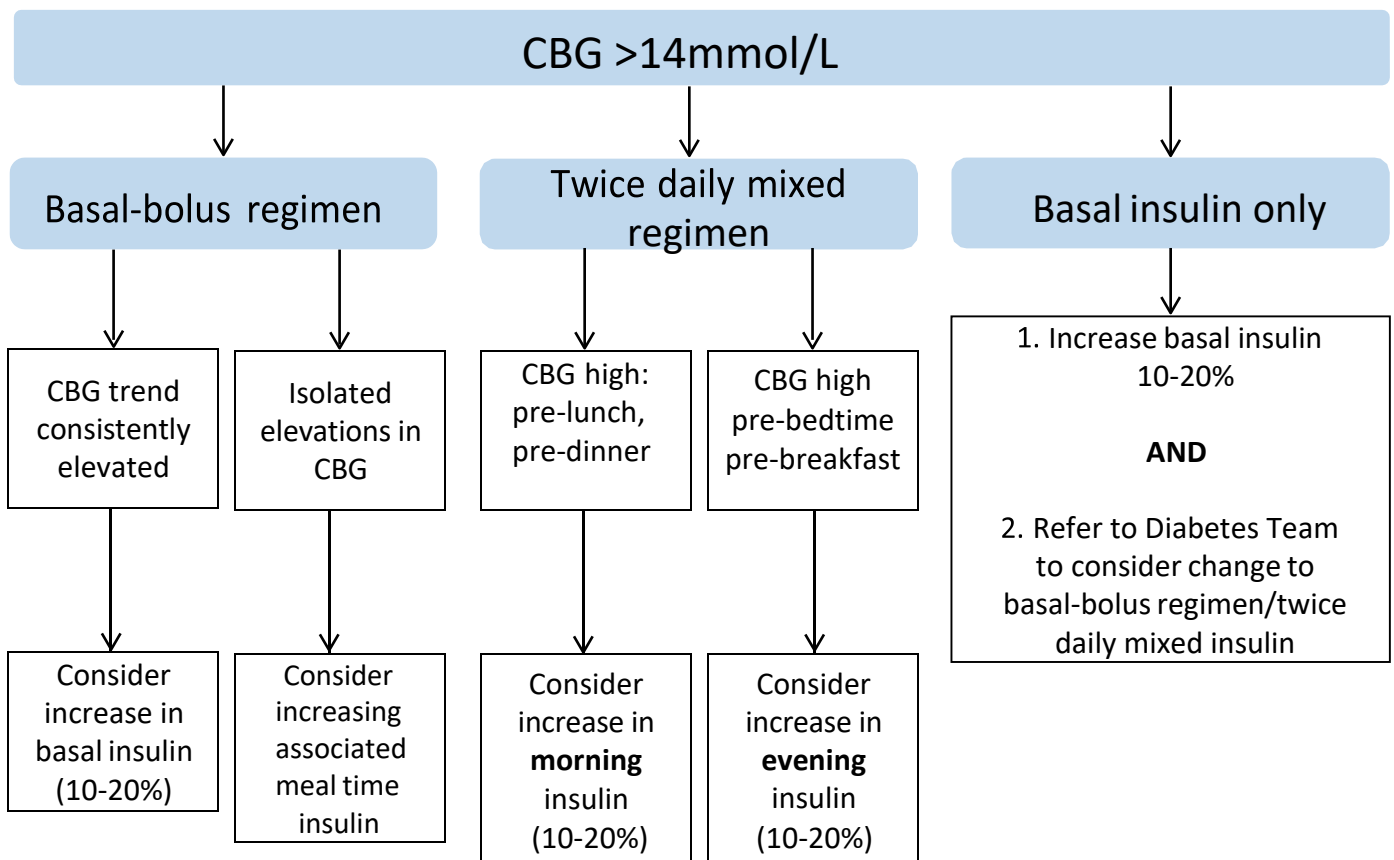
CBK >3.0
H+ >45
± Bicarb <18

DKA Protocol

Recheck CBG and CBK in 2 hours

Management of Hyperglycaemia in patients with T2DM on insulin

- Aim target capillary blood glucose (CBG) 6 – 10 mmol/L (unless specified otherwise).
- Why is CBG high? Consider causes e.g. sepsis, steroids, nutritional supplements.
- Usually no need for correction dose – aim to increase usual doses of insulin.
- If CBG >20mmol/L on 2 or more measurements, check venous blood gas (VBG) & blood ketones. Consider variable rate intravenous insulin infusion (VRIII)/diabetic ketoacidosis (DKA)/hyperosmolar hyperglycemic state (HHS) and seek senior help



Insulin Correction Doses

- Aim target capillary blood glucose (CBG) 6–10mmol/L (unless specified otherwise).
- Avoid using correction doses where possible – review, identify causes and amend patient’s regimen instead.
- Use Novorapid[®] for as required (PRN) correction doses.
- **Actrapid[®] should not be used** as it has slower onset of action, it also has a longer half-life which increases the risk of hypoglycaemia with repeated doses.
- As a guide, 1 unit of Novorapid[®] will reduce the CBG by 3mmol/L

CBG (mmol/L)	PRN Novorapid [®] dose
18-20	2 units
20-24	4 units
>24	6 units

- Re-check CBG after 2 hours. If >18mmol/L repeat PRN dose.
- Avoid repeat PRN doses, particularly overnight, due to risk of insulin ‘stacking’ and hypoglycaemia. Aim to adjust usual insulin instead.
- See page 2 for management of patients with T1DM and raised ketones.