NHS SCOTLAND

Unexplained Hyperglycaemia and Sick day rules (Hybrid Closed Loop)

Blood glucose above 14mmol/L and not responding to bolus corrections or feel unwell? Check ketones

If you are vomiting and unable to keep fluids down or unable to control blood glucose/ketones you must go to hospital as an emergency

Ketones below 1.5 mmol/L

MINOR ILLNESS: Stay in closed loop mode

Change cannula, infusion set and reservoir

- The closed loop system will try and cope with raised glucose by increasing your basal and giving corrections
- Check sensor glucose matches blood glucose
- Take additional corrective doses via bolus calculator if glucose is raised, even if not eating
- Usual bolus if eating carbohydrate
- Check glucose and ketones every 2 -4 hours

Sip sugar free fluids (at least 100ml/hour)

If blood ketones below 1.5 mmol/L

Stay in closed loop

If blood ketones 1.5 mmol/L or above

Ketones 1.5 mmol/L or above

SEVERE ILLNESS: Exit closed loop mode

Calculate Average Total Daily Dose (TDD)

Blood ketones 1.5 - 3.0 mmol/L

Give 10% of TDD of quick acting insulin using insulin pen or syringe

Blood ketones above 3 mmol/L

Give 20% of TDD of quick acting insulin using insulin pen or syringe

Change cannula, infusion set and reservoir
DO NOT RESTART CLOSED LOOP MODE
Use usual I:C ratio when eating Check glucose and ketones every 2hours

Blood ketones 1.5–3 mmol/L

Give 10% of TDD as bolus via pump every 2 hours & increase basal by 30%
+ usual bolus if eating (override bolus calculator)

Blood ketones above 3 mmol/L

Give 20% of TDDas bolus via pump every 2 hours& increase basalby 50% or more +usual bolus if eating (override bolus calculator)

Sip sugar free fluids (at least 100ml/hour)
Eat as normal if you are able with usual bolus
If you don't feel like eating, try to have some carbohydrate (eg.20g) with bolus insulin every 2-4hrs

Blood ketones 1.5 - 3 mmol/L

Blood ketones above 3 mmol/L

Blood ketones below 1.5 mmol/L
Before re-entering closed loop mode youmust wait 4 hours after the last manual (pen/syringe) injection of quick acting insulin

If you have been trying to address hyperglycaemia for more than 4 hours with no improvement please seek help.

If you are vomiting and are unable to keep fluids down, or unable to control your blood glucose or ketones you must go to the hospital as an emergency.