

PEDIATRIC DKA PREVENTION DECISION TREE - PUMPS

If sick or unexpected glucose over 300 → CHECK KETONES!

Negative/trace urine ketones or blood ketones under 0.6 mmol/l

Check infusion set/pod and pump/Controller to ensure working properly

Problem identified: Non-fixable issue
Pump/Controller not working

- Remove pump and use injections until pump issue resolved or replaced; consider basal injection
- Contact pump company customer service for replacement

Problem identified: Fixable issue

- *Pump working, but issue with site/pod/tubing*
- Fix issue and give correction bolus via pump

- Recheck glucose in 1 hour
- If glucose the same or higher, change infusion set/pod and give correction bolus via pump
- Recheck glucose in 1 hour to ensure new site is working
- If glucose remains >300 in 3 hours, recheck ketones

Positive urine ketones or blood ketones at or over 0.6 mmol/l

Standard pump
Not linked with CGM

Hybrid closed-loop pump

- Turn OFF automation setting. Leave basal rate running in background.
- Medtronic users: turn on suspend-before-low

Give increased BG correction bolus with PEN/SYRINGE, not the pump

- **Small/moderate ketones or blood ketones 0.6-1.5 mmol/l**
Give 1.5x correction dose (increase dose by 50%)
Example: Normal dose is 2 units, increasing by 50% would be 3 units
- **Large ketones or blood ketones over 1.5 mmol/l**
Give 2x correction dose (double the dose)
Example: Normal dose is 2 units, increased dose would be 4 units

- **Change infusion set/pod and troubleshoot pump**
- **Give all boluses with pen/syringe until ketones negative**
Do not increase carb bolus; ONLY increase BG correction bolus for ketones
- **Encourage clear fluids** (3-4oz every 30 minutes)
If nauseous/vomiting, sip on carb-containing fluids. Do not bolus for carbs until kept down without vomiting for 20-30 minutes
- **Recheck glucose and ketones every 3 hours**
- **Once ketones negative AND has been 3 hours since last injection, turn ON automation setting and resume pump use as usual**
- **Call clinic if ketones still positive after 2 increased doses.**