

Preventing Diabetic Ketoacidosis (DKA) in Adults on Insulin Pump Therapy

DKA happens when there is not enough insulin to use blood glucose for energy. Glucose rises quickly and the body uses fat for energy instead, creating a sudden buildup of ketones in the blood. This can make the blood acidic. If not treated, this can lead to severe illness, hospitalization and potentially death.

IMPORTANT:

- Carry a Pump Safety Kit with “fresh” insulin and syringe/pen
- If you are pregnant with ketones, contact your diabetes in pregnancy team or follow their instructions to visit Labor & Delivery to protect your baby.
- If you are on an SGLT-2 inhibitor (generic names end in “flozin”) DKA can happen with normal glucose levels. Talk to your educator for more instructions.

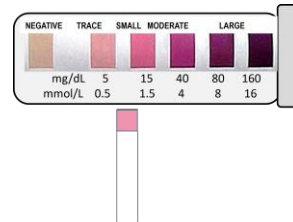
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Test for ketones if you have:

- Signs & symptoms of DKA (nausea, vomiting, belly pain, fruity breath, trouble breathing, fast heartbeat, weakness)
– or –
- Glucose readings over 14 mmol/L

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If blood or urine ketones are 0.6 mmol/L or more take these steps



1. Confirm your sensor glucose reading with a fingertip blood test.
2. Put your pump in manual mode.
3. Take **1.5X** correction of insulin **by pen or syringe**: Use the formula below:

$$1.5 \times \frac{(\text{Current Blood Glucose} - \text{Target Blood Glucose})}{(\text{Insulin Sensitivity Factor or Correction Factor})} = \text{Number of units of insulin}$$

4. Change infusion set or pod, reservoir, tubing, infusion site, insulin.
5. Drink 125 to 250 mL (1/2 to 1 cup) of sugar-free fluids every hour.
6. After 2 hours, recheck ketones and blood glucose. Repeat steps if ketones over 0.6 mmol/L.
7. Stay in manual mode for 4 hours after the last manual injection. Do not use automated insulin delivery feature during that time.

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Go to the Emergency Department if :

- Vomiting **and** unable to keep fluids down for more than 4 hr or signs of dehydration (lightheadedness, dry mouth or tongue, or cracked lips)
- High blood glucose and ketones continue or get worse after 2 corrections
- Pump failure when a replacement pump is more than 2 hours away and you don't know how to replace insulin manually, and you can't reach your diabetes team.
- Be sure to tell the emergency team you are on an insulin pump and it should not be removed unless insulin is replaced by I.V. or injections.

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Your personal pump rates & notes:

- Your ISF or Correction Factor (CF) _____
- If you don't know your ISF or Correction Factor:
 $90 \div \text{Your Total Daily Insulin Dose of } \underline{\quad} \text{ units} = \underline{\quad} \text{ (ISF or CF)}$