

How to Prevent Ketoacidosis While on a Pump

Causes of unexplained high blood sugars when on an insulin pump

Your insulin pump uses rapid-acting insulin only. If insulin delivery is interrupted, ketosis can develop very quickly. Possible causes of unexplained high blood sugars (over 300) could be:

- Empty cartridge
- Kink in cannula or tubing
- Insulin that has lost its potency or is expired
- Infusion set was inserted into scar tissue – that means insulin can't be absorbed
- Infusion set got disconnected from pump
- Insulin is not absorbing for unknown reason

Treatment for unexplained blood sugar over 300

- Check tubing for leaks, air bubbles and kinks, and see if the set is inserted properly.
- Test for ketones immediately.
- If negative or trace ketones: Give correction bolus on pump and retest in 1 hour.
- If blood sugar is not lower in 1 hour, give another correction by injections with a syringe or insulin pen and change the infusion set.
- If ketones are moderate, give 1.5 times correction bolus by injection and change infusion set.
- If ketones are large, give 2 times correction bolus by injection and change infusion set.
- Continue to check for ketones every 2 hours until negative. If you continue to have moderate to large ketones after giving extra insulin, page the diabetes nurse or doctor on call at 206-987-2000 or 866-987-2000.
- Use the same guidelines for extra correction insulin if you have ketones due to illness. Corrections may be given every 2 hours on an insulin pump.

To Learn More

- Diabetes Clinic
206-987-2640
- Ask your child's healthcare provider
- seattlechildrens.org

Free Interpreter Services

- In the hospital, ask your nurse.
- From outside the hospital, call the toll-free Family Interpreting Line, 1-866-583-1527. Tell the interpreter the name or extension you need.

If you need to go off your pump and start injections

Lantus dose: this is the amount of basal insulin that you receive on the pump in a 24-hour period. You can find this on your pump settings report or on the pump itself under the basal menu- basal review.

Carb and correction ratios and Target: These can be found on the software pump report or on the pump under bolus menu - bolus setup - review settings.

For carb coverage calculation: Divide carbs eaten by ratio.

Example: If you take 1 unit per 10 carbs and are eating 100 carbs, give 10 units.

Correction Factor (sensitivity): Take actual blood sugar minus target and divide by sensitivity.

Example: 375 – 120 divided by 40 if sensitivity is 40.