Insulin Pump Therapy: Coming Off the Pump

You need a plan to replace insulin and prevent diabetic ketoacidsosis (DKA) if you're off your pump for longer than 2 hours. Speak with your healthcare provider.

Start Here

- If your pump fails, call the 1-800 number on the back of your pump for a replacement. Ask if the replacement will take less than 1 day. Replacement pumps cannot be shipped outside of Canada. If planning a vacation, ask the company about a loaner pump or take a vial of basal insulin and syringes with you. Talk with your diabetes team about the type of basal insulin.
- Have your current insulin doses written down in a safe place. Include basal rates, total daily units of basal, insulin-to-carbohydrate ratios, insulin sensitivity factor (ISF), and target blood sugars.
- Calculate your insulin doses for basal and bolus insulin replacement using this handout.

No Pump for Less than a Day

To replace *basal* insulin

- Use rapid insulin (Apidra®, Fiasp®, Humalog®, NovoRapid®) by syringe or insulin pen every 3 hours until the pump is re-started.

  Example: Basal rate is 0.7 units/hr from 12 noon to 3 p.m. = 0.7 x 3 hrs = 2.1 units (round to 2).

To replace *meal bolus* insulin

- Use the insulin-to-carbohydrate ratio that was programmed in your pump.

  Example: Insulin-to-carbohydrate ratio of 1 unit per 12 grams (1:12). If eating 60 grams of carbohydrate, 60 ÷ 12 = 5 units of rapid insulin.
- Don't do this step if you're not eating.

To replace *correction insulin* to correct a high blood sugar

- Use the insulin sensitivity factor (ISF) that was programmed into your pump.

  Example: ISF = 2, target blood sugar = 6 mmol/L. Blood sugar is 12 mmol, so the correction would be (12 − 6) ÷ 2 = 3 units of rapid insulin.
- Check for ketones if over 14 mmol/L. Give extra insulin if needed. (Think about 1.5 times the usual correction dose if ketones are trace/0.6 mmol/L or greater and blood sugar 14 mmol/L or more).

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If no meal in 3 hours

- Replace the basal insulin for the next 3 hours and correct for high blood sugar if needed. Continue every 3 hours until the pump is re-started.
- When re-starting the pump, wait 3 hours after the last injection before starting the pump's basal rates (or use a temporary basal rate of 0% for up to 3 hours past the last injection).

Without the pump for more than a day

- To replace meal bolus insulin and correction insulin, follow the guidelines on the first page "No pump for less than a day".

Replace basal insulin with once a day Basaglar® or Lantus®

(unless you've discussed an alternative basal insulin with your diabetes team)

- Calculate the total daily units of basal insulin. Inject this dose of Basaglar® or Lantus® at the time you're taken off the pump or the pump fails. Repeat every 24 hours.

  Example: If the total daily basal dose is 30 units, then 30 units of Basaglar® or Lantus® insulin is given at the time the pump fails and is repeated at the same time daily.
- Use rapid insulin for meal boluses and correction insulin only (not for basal insulin).
- Re-starting the pump: Wait 24 hours from when the Basaglar® or Lantus® was last given before re-starting basal insulin in the pump.

OPTION 3: Write down any different plans your healthcare provider suggests.

Adapted from Insulin Pump Failure or Temporary Interruption, IWK Pediatric Diabetes Clinic, Halifax, N.S