

Preparing for a Medical Procedure

Guidelines for Adults on Hybrid Closed Loop Insulin Pumps

If you have Type 1 Diabetes, you **must not** stop your basal insulin or you will go into diabetic ketoacidosis

1. General guidelines

- If you are having surgery, make sure your infusion and sensor sites are in a location away from where the surgery will occur.
- If you wear a Continuous Glucose Monitor, the sensor must be removed for all CT scans, MRIs, X-rays and radiation treatments. Please remind your team that your transmitter is not disposable and must be saved.
- Your insulin pump must be removed for all CT scans, MRIs and X-rays.
- If your pump needs to be removed during procedure (all procedures longer 2 hours):
 - Remove your pump immediately before the procedure and put it in a safe place close to or within the procedure room. Reconnect your pump as soon as your procedure is complete.
- If your pump can stay on during procedure (most procedures less than 2 hours):
 - The anesthesiologist will use the pump as needed during the procedure.

Summary: Remind your care team you are wearing a pump and/or continuous glucose monitor. Discuss pump use during the procedure with the team and review what will happen and where your pump will be stored should the pump need to be removed.

2. What do I need to do the day before the procedure?

- Change your infusion set, tubing and insulin in your pump the day before

your procedure. Do this at least 4 hours before you go to bed the night before the procedure.

- Make sure your sensor is not set to expire immediately before or during your procedure.
- Test your blood sugar at dinner and bedtime the night before the procedure and first thing in the morning of the procedure. Continue to check your blood sugars every 1-2 hours up to your procedure. Also check your blood sugars whenever you feel that you might be experiencing low blood sugar or very high blood sugar.
- If you have Type 1 diabetes, check your urine for ketones when your blood sugars are greater 250mg/dL. If you have moderate or large ketones, contact your health care provider to manage this condition.

3. How will I set my pump the night before the procedure?

If you **are allowed** to eat or drink the night before your procedure:

Device:	Control IQ – Tandem X2	Automode - Medtronic 670/770G
Device mode:	Continue in Control IQ	Continue in Automode
Instructions:	Give insulin for high blood sugar and food as you normally would.	Give insulin for high blood sugar and food as you normally would.

If you **are not allowed** to eat or drink the night before your procedure:

Device:	Control IQ – Tandem X2	Automode - Medtronic 670/770G
Device mode:	Start exercise activity at bedtime	Continue in Automode
Instructions:	Give half of the suggested correction bolus for high blood sugar.	Give half of the suggested correction bolus for high blood sugar.

4. How will I set my pump the morning of the procedure?

Device:	Control IQ – Tandem X2	Automode - Medtronic 670/770G
Device mode:	Start Exercise Activity	Continue in Automode unless fasting BG is <120. If fasting BG <120 then set temp target for 4 hours. Continue to reset temp target every 4 hours until procedure is complete.
		If fasting BG >120 set temp target for 4 hours when you arrive at pre-op.
Instructions	Give insulin for high blood sugar and food as you normally would.	Give insulin for high blood sugar and food as you normally would.

5. What do I do after the procedure?

Device:	Control IQ – Tandem X2	Automode - Medtronic 670/770G
Device mode:	Exit Exercise Activity when you are able to start eating again.	Turn off temp target when you are able to start eating again.
Instructions:	Give insulin for high blood sugar and food as you normally would.	Give insulin for high blood sugar and food as you normally would.

6. What are the instructions if I have a low blood sugar?

- You **must** treat all low blood sugars. If your blood sugar is less than 70mg/dL, drink ½ cup of clear sugar-sweetened beverage such as apple juice, Sprite or 7UP (all liquids **must** be clear). Recheck your blood sugar in 15 minutes. If your blood sugar is still less than 70mg/dL, drink another ½ cup of clear sugar-sweetened beverage.

- ***If you need to treat a low blood sugar within 2 hours before your procedure, call to inform your procedure team. Your procedure may need to be rescheduled.**
- If your blood sugar is extremely low (less than 40mg/dL), your family or friends should help you by using glucagon and calling 911 if needed. Make sure that you also call ----- ___to notify the procedure team.

7. What are the instructions if I need to do a bowel prep and follow a liquid diet?

Device:	Control IQ – Tandem X2	Automode - Medtronic 670/770G
Device mode:	Turn on Exercise Activity when you start your bowel prep.	Continue in Automode
Instructions:	Give half of the suggested insulin for food and high blood sugar.	Give half of the suggested insulin for food and high blood sugar.

- See **section 3** above for instructions on what to do the night before your procedure.
- When drinking sugared beverages or the bowel prep, you may need less bolus insulin to cover the carbs you are drinking. This is because sugary liquids will leave your system more quickly than solid foods and you will be drinking these liquids slowly throughout the day. Start by giving **half of your usual bolus dose** for the liquids you are drinking that have carbs.

8. What supplies do I need to bring to the hospital/clinic?

- Testing supplies (glucometer, test strips, lancing device.)
- 2 extra infusion sets, tubing, cartridges/reservoirs and tape.

- 1 extra sensor and insertion device for your continuous glucose monitor.
- 1 extra battery or charging cord for your pump.
- Fast acting carbohydrate to treat any hypoglycemia when traveling to and from the procedure.

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