

Cincinnati Children's Hospital Medical Center
Divisions of Endocrinology / Critical Care Medicine
Total Pancreatectomy with Islet Autotransplantation (TPIAT) Guideline for Glycemic control

GOAL: To maintain blood glucose level between 80 – 120 mg/dL.

INITIATION OF INSULIN INFUSION IN OPERATING ROOM: Initiate insulin infusion at 0.03 units/kg/hr

- When blood glucose is >120 mg/dl or
- When pancreas has been surgically removed

INSULIN INFUSION TITRATION:

STEP 1 BLOOD GLUCOSE	STEP 2 AND	STEP 3 RESPONSE
>160 mg/dl		INcrease rate by 30%
131-160 mg/dl	If blood glucose has increased or stayed the same (decreased less than 30 mg/dL) over past hour	INcrease rate by 25 %
	If blood glucose has decreased by 30 mg/dL or more in the past hour	DEcrease rate by 10%
121-130 mg/dl	If blood glucose has increased or stayed the same (decreased less than 30 mg/dL) over past hour	INcrease rate by 10%
	If blood glucose has decreased by 30 mg/dL or more in the past hour	DEcrease rate by 25%
80-120 mg/dl	If blood glucose has increased >30 mg/dL over past hour	INcrease rate by 10%
	If blood glucose change is within 30 mg/dL over past hour	No Change or titration up or down of 5%
	If blood glucose has decreased by >30 mg/dL or more in the past hour	DEcrease rate by 25%
70-79 mg/dl	If blood glucose decreased less than 30 g/dL over past hour Recheck blood glucose every 20 minutes	DEcrease rate by 25%
	If blood glucose has decreased by 30 mg/dL or more in the past hour Recheck blood glucose every 20 minutes	DEcrease rate by 50%
60-69 mg/dl	STOP INSULIN INFUSION Recheck blood glucose every 20 minutes, restart at 50% of prior rate when glucose >80 mg/dl and recheck glucose hourly	

HYPOGLYCEMIA MANAGEMENT GUIDELINES

BLOOD GLUCOSE	RESPONSE
< 60 mg/dl	STOP INSULIN INFUSION Administer 0.15 g/kg of D25W (maximum of 25g); recheck blood glucose in 20 minutes. When BG >80 mg/dl, restart at 50% of the previous rate and check blood glucose hourly

COMMENTS:

- Insulin titration is dependent on the blood glucose value. Monitor blood glucose every hour while on insulin infusion or as directed by the guideline.
- Ensure patient is on a minimum GIR (Glucose Infusion Rate) of 2-3 mg/kg/min while on insulin infusion.
- The Dexcom receiver is set to alarm if the blood glucose is <60 or >140 mg/dl. If the Dexcom receiver alarms please check blood glucose and intervene per guideline.
- The Dexcom receiver glucose value may differ from the actual blood glucose value by 10-20%.
- Dexcom calibration should be performed every 6h. Calibration should be deferred if the Dexcom receiver screen is showing vertical arrows next to the glucose value. Such arrows imply glucose levels are changing rapidly; hence, calibration is not optimal.
- Please review and refer to CCHMC Clinical Practice Policy I-143 in regard to safe and correct use of Dexcom continuous glucose monitoring for patients undergoing TPIAT.