

Example Calculations

Glucomander Intravenous Insulin Downtime Form (for version 3.5 and later)

Patient Sticker

Date: 10/26/22

Step 1: Obtain Target BG range: 120-160 mg/dl

Step 2: Obtain last multiplier 0.025

RAINyday, ADULTIMU

PATIENT DETAILS: NAME: RAINyday, ADULTIMU, MRN: 5321953, DOB: 09/17/1963, HEIGHT: 154.9 cm, WEIGHT: 81.65 kg, BMI: 34, A1C: , FACILITY: UVHIE, UNIT: 4 WEST

DOSING INFORMATION: CURRENT INSULIN: 2.9 units/hr, LAST BG: 175 mg/dL, TARGET RANGE: 120-160 mg/dL, MULTIPLIER: Initial 0.02, Last 0.025

ORDER SET: 59:31, Enter BG, Void BG

If multiplier is unknown, calculate multiplier by using the following formula:

$$\text{Last insulin rate (units/hr)} \div (\text{Last BG value} - 60) = \text{multiplier}$$

$$\text{_____} \div (\text{_____} - 60) = \text{_____}$$

If new start or **multiplier is known**, use multiplier in flowsheet below.

Note Meter Min/Max:

Facility meter max value 600, Meter minimum value 10.

For **Glucose** Meter Max/Min values, use the meter max/min value as the BG in the calculation below.

Check Blood Glucose (BG) every hour:

With each BG check, adjust multiplier:

- If BG is above target range, multiply previous multiplier (PM) by 1.1
- If BG is within target range, no change in multiplier.
- If BG is below target range, multiply previous multiplier (PM) by 0.9

Multiplier should be rounded to 3 decimal places. (Ex. 0.0748 would round to 0.075)

Time	BG	-	60	=		X	(PM X Adjustment = New Multiplier) New Multiplier	=	New rate (units/hr)	Signature
0800	165	-	60	=	105	X	(PM) 0.025 x (adjustment) 1.1 = 0.0275 (New Multiplier)	=	(BG - 60) 105 x 0.028 (NM) = 2.94 units/hr	
		-		=		X		=		
		-	60	=		X		=		
		-	60	=		X		=		
		-	60	=		X		=		
		-	60	=		X		=		
		-	60	=		X		=		
		-	60	=		X		=		
		-	60	=		X		=		
		-	60	=		X		=		
		-	60	=		X		=		

Once Glucommander resumes, edit the multiplier in Glucommander to the last multiplier used on this form.

For BG < 70 mg/dl:

- **Stop insulin infusion**
- Administer D50W according to the table, 15 grams of carbohydrate or 1mg Glucagon IM
- Recheck BG in 15 minutes
- For BG recheck results:
 - BG >80 mg/dl: Multiply previous multiplier (PM) by 0.9, calculate new insulin rate. Resume insulin infusion and hourly BG monitoring
 - BG 70-80 mg/dl: Insulin infusion remains off. Recheck BG in 15 minutes.
 - BG <70 mg/dl: Repeat hypoglycemia treatment and notify provider.

BG (mg/dl)	D50W
60-69	15 ml IV push
50-59	20 ml IV push
30-49	25 ml IV push
<30	30 ml IV push

Time	BG	Hypoglycemia Treatment (carbohydrate, ml D50 or Glucagon)	Signature