

**Mercy San Juan Medical Center**  
**Physician IV Insulin Infusion Orders**  
**(Critical Care)**

Page 1 of 3

**Not for use in DKA patients**

Allergies: \_\_\_\_\_

Physician managing glycemic control: \_\_\_\_\_

- CONSIDERATIONS:**
- Discontinue previous insulin and oral hypoglycemic orders
  - Draw STAT finger stick blood glucose on arrival to ICU
  - If possible, place all IVPB/DRIPS in 0.9% sodium chloride
  - Hgb A1C if not done
  - NPO Patients: Use Regular Insulin for drip titration and IV Regular Insulin for boluses (for glucose > 176)
  - PRANDIAL Patients: Use Regular Insulin for Drip Titration; Use SQ NOVOLOG INSULIN for boluses (Glucose >176)
  - Prime tubing with 30 ml insulin prior to drip initiation (Insulin binds to plastic)

- MONITORING:**
- Check glucose every one hour while on infusion
  - When glucose level 100-150, and insulin remains unchanged x 4 hours, check glucose every 2 hrs
  - If every 2 hours blood glucose remains unchanged x 12 hours, stop insulin drip and start Critical Care Insulin Sliding Scale. CALL MD WHEN ON SLIDING SCALE TO RESTART ORAL HYPOGLYCEMICS OR START LANTUS INSULIN SQ. (See guide on page 4)
  - If Sliding Scale blood glucose above 150 x 3, restart insulin drip.

**INITIAL RATE**

Blood Glucose	IV Regular Insulin Syringe Bolus	Initial Regular Insulin Rate: Units/Hour	
		NIDDM or non-DM	IDDM
110 to 124	0	None	None
125 to 150	0	1 Unit / Hour	2 Units / Hour
151 to 180	4 Units	2 Units / Hour	3 Units / Hour
181 to 240	6 Units	3 Units / Hour	5 Units / Hour
241 to 300	8 Units	5 Units / Hour	6 Units / Hour
301 to 360	10 Units	6 Units / Hour	8 Units / Hour
Greater than 360	12 Units	8 Units / Hour	10 Units / Hour

**ADJUST THE INITIAL INFUSION RATE AS FOLLOWS: (TARGET GLUCOSE 100-150)**

Blood Glucose (BG)	ACTION:
<b>Less Than 70</b>	Stop Insulin: <ul style="list-style-type: none"> <li>• If not alert or if NPO: give 25 mL of D50W IV</li> <li>• If alert and taking PO give 8 ounces of juice PO</li> <li>• Recheck BG in 30 minutes</li> <li>• When BG greater than 100: Restart Insulin rate at 50% of previous rate</li> </ul>
<b>70 to 79</b>	A. If symptomatic from hypoglycemia, or previous BG > 110, STOP INSULIN AND: <ul style="list-style-type: none"> <li>• If NPO, give 15 ml D5W</li> <li>• If alert and taking p.o., give 6 ounces of juice</li> <li>• Recheck BG in 30-60 minutes</li> <li>• Restart drip at 50% previous rate if BG &gt; 100</li> </ul> B. If asymptomatic, or previous BG < 110: <ul style="list-style-type: none"> <li>• Decrease rate by 50%</li> </ul>

**Mercy San Juan Medical Center**  
**Physician IV Insulin Infusion Orders**  
**(Critical Care)**

Page 2 of 3

**Not for use in DKA patients**

Blood Glucose (BG)	ACTION:
80 to 99	<ul style="list-style-type: none"> <li>• If higher than last test: Decrease rate by 0.5 unit/Hour</li> <li>• If lower than last BG by more than 40: Stop drip &amp; recheck BG in 1 hour. If BG greater than 120, restart at 50% previous rate.</li> <li>• If lower than last BG by 15 - 40: Decrease rate by HALF (50%)</li> <li>• If equal to last BG or lower than last BG by less than 15: Decrease rate by 1 Unit/Hour</li> </ul>
<b>100 to 150</b> <b>Target Range</b> <b>EXCELLENT!</b> <b>May titrate</b> <b>drip in ICU to</b> <b>maintain this</b> <b>range.</b>	<ul style="list-style-type: none"> <li>• If higher than last BG by more than 10: Increase rate by 0.5 Unit/Hour</li> <li>• If lower than last BG by more than 40: Stop drip &amp; recheck BG in 1 hour. If BG above 140 restart drip at 50% previous rate.</li> <li>• If lower than last BG by 21-40: Decrease rate by HALF (50%) &amp; recheck BG in 30 minutes</li> <li>• If lower than last BG by 10-20: Decrease rate by 0.5 Unit/Hour</li> <li>• If within 10mg/dl of last BG <u>same rate</u></li> </ul>
151 to 175	<ul style="list-style-type: none"> <li>• If higher than last BG by more than 50: Increase rate by 2 Units/Hour</li> <li>• If higher than last BG by 21 - 50: Increase rate by 1 Unit/Hour</li> <li>• If higher than last BG by 0 - 20: Increase rate by 0.5 Unit/Hour</li> <li>• If lower than last BG by 1 - 20: Same rate</li> <li>• If lower than last BG by 21 - 40: Decrease rate by 1 Unit/Hour</li> <li>• If lower than last BG by 41 - 60: Decrease rate by HALF (50%) and recheck in BG in 30 minutes</li> <li>• If lower than last BG by more than 60: <b>Stop drip &amp; recheck BG in 1 hour.</b> If BG greater than 150 restart 50% of previous rate.</li> </ul>
<b>176 to 200</b> <b>IF EATING,</b> <b>DO NOT GIVE</b> <b>REGULAR</b> <b>INSULIN</b> <b>BOLUS;</b> <b>REFER TO</b> <b>NOVOLOG SQ</b> <b>MEAL SCALE</b> <b>ON PAGE 3</b>	<ul style="list-style-type: none"> <li>• If higher than last BG by more than 30: Increase rate by 2 Units/Hour &amp; bolus with 4 units IV</li> <li>• If higher than last BG by 0 - 30: Increase rate by 1 Unit/Hour &amp; bolus with 2 units IV</li> <li>• If lower than last BG by 1 - 20: Increase rate by 1 Unit/Hour &amp; bolus with 2 units IV</li> <li>• If lower than last BG by 21 to 50: Same rate</li> <li>• If lower than last BG by 51 - 80: Decrease rate by HALF (50%) and recheck in BG in 30 minutes</li> <li>• If lower than last BG by more than 80: <b>Stop drip &amp; recheck BG in 1 hour.</b> If BG greater than 150 restart 50% of previous rate.</li> </ul>
201 to 225	<ul style="list-style-type: none"> <li>• If lower than last BG by more than 80: Decrease rate by HALF (50%)</li> <li>• If lower than last BG by 30 - 80: Continue same rate</li> <li>• If lower than last BG by 0 - 30: Increase Insulin rate by 1 Unit/Hour &amp; bolus with 2 units IV</li> <li>• If higher than last BG by 1 - 20: Increase Insulin rate by 2 Units/Hour &amp; bolus with 4 units IV</li> <li>• If higher than last BG by more than 20: Increase Insulin rate by 3 Units/Hour &amp; bolus 6 units IV</li> </ul>

**Mercy San Juan Medical Center**  
**Physician IV Insulin Infusion Orders**  
**(Critical Care)**

Page 3 of 3

**Not for use in DKA patients**

Blood Glucose (BG)	ACTION:
226 to 275	<ul style="list-style-type: none"> <li>• If lower than last BG by more than 100: Decrease rate by HALF (50%)</li> <li>• If lower than last BG by 50 - 100: Continue same rate</li> <li>• If lower than last BG by less than 50 <u>OR</u> higher than last BG:               <ul style="list-style-type: none"> <li>◦ BOLUS with 6 units Regular Insulin IV <u>AND</u> Increase Insulin rate by 2 Units/Hour</li> </ul> </li> </ul>
Greater than 275	<ul style="list-style-type: none"> <li>• If lower than last BG by more than 150: Decrease rate by HALF (50%)</li> <li>• If lower than last BG by 101-150: Same rate</li> <li>• If lower than last BG by 0-100 <u>OR</u> if higher than last BG:               <ul style="list-style-type: none"> <li>◦ BOLUS with 10 Units Regular Insulin IV <u>AND</u> increase insulin rate by 4 units per hour</li> </ul> </li> </ul>

**IF BG GREATER THAN 300 for 4 CONSECUTIVE READINGS: CALL MD FOR ADDITIONAL IV BOLUS ORDERS**

**MEAL SQ  
 NOVOLOG  
 INSULIN  
 SUPPLEMENT:**

During mealtimes (in addition to insulin infusion), give Novolog SQ 15 minutes **immediately** POST-MEAL. **If glucose > 176** pre-meal, do not give **novolog meal bolus & regular insulin drip bolus** together. Follow the Novolog bolus scale below:

Insulin Infusion Drip Rate	Eats Greater Than 50% of Meal	Eats 25% to 50% of Meal	Snacks or less than 25% of Meal
0 to 1.9 Units / Hour	4 Units	2 Units	1 Units
2 to 3.9 Units / Hour	6 Units	3 Units	2 Units
4 to 5.9 Units / Hour	8 Units	4 Units	3 Units
6 to 7.9 Units / Hour	10 Units	5 Units	4 Units
8 to 10 Units / Hour	12 Units	6 Units	5 Units
Over 10 Units / Hour	14 Units	7 Units	6 Units

**PROTOCOL  
 DURATION:**

Discontinue protocol upon transfer out of ICU, or greater than 2-3 days of ICU stay and eating more than 50% of diet:

Restart pre-admission as follows:

\_\_\_\_\_

Begin new Lantus SQ insulin at \_\_\_\_\_; D/C insulin drip one hour after lantus is given

Suggested formula for Lantus Conversion from Insulin Infusion: Last Insulin Drip Rate x 24 hours x 0.5
---

Initiate SQ Insulin Sliding Scale every AC and HS

Date:	Time:	VO/TO Dr.	
Taken & Read back by:			
Authorization is given for dispensing generic equivalent unless checked here <input type="checkbox"/>			
Authorization is given for dispensing therapeutic equivalent unless checked here <input type="checkbox"/>			
Transcribed By	Verified By	Physician Sign Here/Physician #	Date:
			Time: