

SERVICE	ATTENDING	RESIDENT/ARNP/PA	SEE ORCA FOR ALLERGIES
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## UWMC **HIGH DOSE** Insulin Infusion Protocol

Initiate HIGH DOSE Insulin Infusion Orders **only** after documented failure to achieve glycemic control with Algorithm 4 Standard Insulin Infusion Orders X  $\geq 3$  consecutive hrs

**GOAL Blood Glucose (BG) RANGE – check one box:**

**ACUTE CARE OR ICU:**  100-180 mg/dL                      **ICU ONLY:**  100-140 mg/dL

- Discontinue all previous insulin orders.**
- Start Insulin Infusion:** 100 units insulin/ 100 mL NS given IV infusion, at **Algorithm 5**
  - **ONLY** after documented failure to achieve glycemic control with **Algorithm 4 X 3 or more hours**
- ▶ See back of form for the Algorithms and instructions: "Evaluating Trends and Using Algorithms".
- ▶ Transition to SubQ (Endocrine Consult Strongly Encouraged): Give specified basal SubQ insulin dose, then stop insulin infusion in 2 hours.

**Fluid/Nutrition Orders:**

Recommendations for patients that are not eating:

**DM Type 1** (10 grams glucose/hour)    **DM Type 2** (5 grams glucose/hr)

- D51/2 normal saline with \_\_\_\_\_ mEq/L Potassium chloride IV at \_\_\_\_\_ mL/hr
- D5LR with \_\_\_\_\_ mEq/L Potassium chloride IV at \_\_\_\_\_ mL/hr
- TPN or Enteral Feeds (see separate orders) \_\_\_\_\_ at \_\_\_\_\_ mL/hr
- Other \_\_\_\_\_ at \_\_\_\_\_ mL/hr

**Patient Monitoring:**

- Check BG every 1 hour until it is within **goal** range for 4 hours. Then decrease BG checks to every 2 hours. ALWAYS resume hourly checks if BG exits goal range.
- ▶ Hourly monitoring may be indicated for critically ill patients or patients having medical or surgical procedures even if they have stable BG.

**Notify the Provider:**

- For any BG increase >100 mg/dL from a stable baseline
- For 2 consecutive BG decreases of >100 mg/dL (consider resuming standard insulin infusion protocol)
- For any hypoglycemia which results in loss of consciousness **OR** does not resolve within 20 min of implementing the hypoglycemia protocol below

**Treatment of Hypoglycemia (BG <70 mg/dL) or symptoms of hypoglycemia**

- Turn off** insulin infusion for any BG below goal **AND**
- Give 25 mL (1/2 amp) of 50% dextrose IV if BG 50-69 mg/dL **OR**
- Give 50 mL (1 amp) of 50% dextrose IV if BG < 50 mg/dL.
- Recheck BG every 20 minutes until BG  $\geq 100$  mg/dL
  - IF BG is <70 mg/dL repeat 25 mL (1/2 amp) 50% dextrose
  - WHEN BG is  $\geq 100$  mg/dL, restart the insulin infusion at a lower dose by using one algorithm **LEFT** from previous algorithm (see "Evaluating Trends & Using Algorithms" section).

**TPN/ Enteral feeding:**

- If TPN/ Enteral feeding is stopped or significantly reduced, decrease insulin infusion by 50% for 1 hour. Then, use algorithm table & instructions to determine subsequent rate changes **AND** check BG every 1 hour x 4 hours.

PROVIDER SIGNATURE	PRINT NAME	PAGER	NPI	DATE	TIME
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PT.NO

NAME

DOB

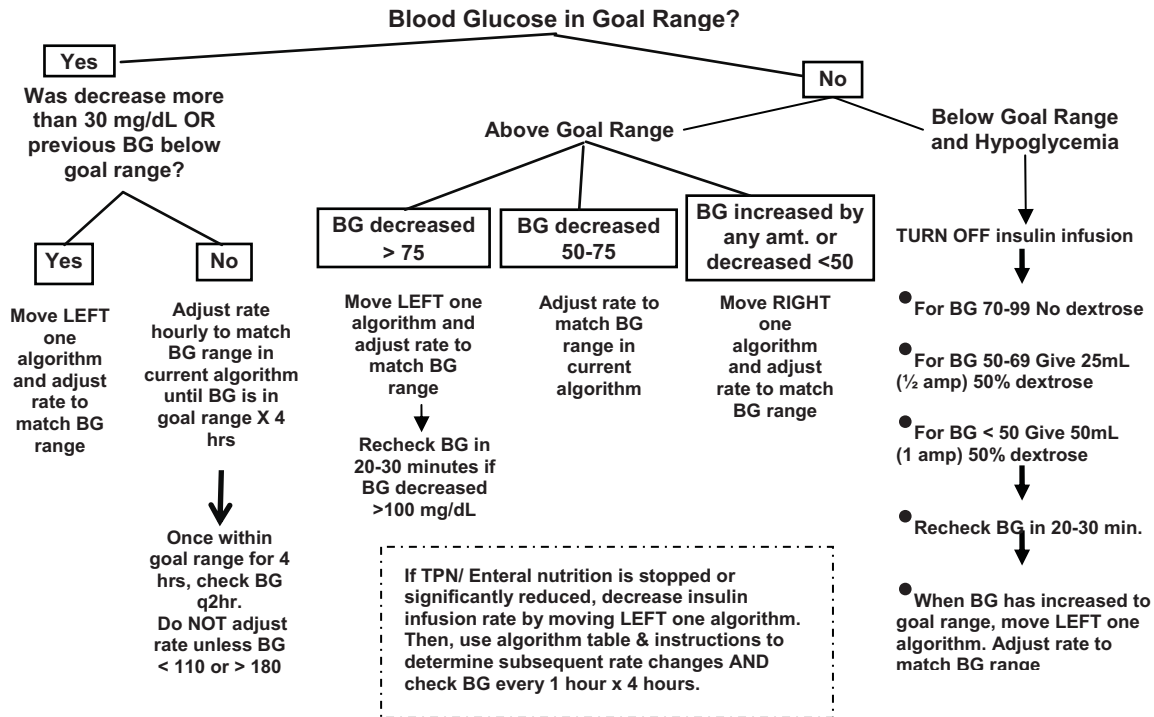
**UW Medicine**  
 Harborview Medical Center – UW Medical Center  
 University of Washington Physicians  
 Seattle, Washington

**UWMC HIGH DOSE INSULIN INFUSION PROTOCOL ORDS**



WHITE - MEDICAL RECORD

## Insulin Infusion Algorithm Decision Tree



Algorithm 5		Algorithm 6		Algorithm 7		Algorithm 8	
BG	Unit/hr	BG	Units/hr	BG	Units/hr	BG	Units/hr
<b>&lt;70 = Hypoglycemia See front of form for treatment</b>							
<b>70-99: Off x 20-30 minutes &amp; recheck BG</b>							
<b>100-110: Recheck BG in 20-30 min, consider moving left one Algorithm</b>							
100-120	3	100-120	4	100-120	5	100-120	6
121-140	5	121-140	6.5	121-140	8.5	121-140	10
141-160	7	141-160	9	141-160	12	141-160	14
161-180	9	161-180	12	161-180	15	161-180	18
181-210	11	181-210	15	181-210	19	181-210	23
211-240	14	211-240	19	211-240	23	211-240	28
241-270	17	241-270	23	241-270	28	241-270	34
271-300	20	271-300	26	271-300	33	271-300	40
301-330	23	301-330	30	301-330	38	301-330	46
331-360	26	331-360	34	331-360	42	331-360	52
>360	29	>360	38	>360	47	>360	57

**General Guidelines:**

- ▶ All patients start with algorithm 5
- ▶ Patients who do not achieve desired control with Algorithm 4 for >3 hours are likely to have increase insulin resistance or high caloric intake.
- ▶ Resume standard insulin infusion protocol if BG drops more than 100 mg/dL in one hour using Algorithm 5
- ▶ Patients may not receive insulin by more than one route (i.e. IV/ SubQ) except at transition off IV insulin or by order of an endocrine consult team.