

## ICU INSULIN ORDERS IV INSULIN INFUSION PROTOCOL

(Not intended for use in patients with DKA or hyperglycemic hyperosmolar states)

- 1) **Start an IV Insulin Flow Sheet and keep with bedside record**
- 2) **Start IV:**    \_\_\_ D5W at 100ml/h  
                   \_\_\_ D5W½NS at \_\_\_\_\_ ml/h  
                   \_\_\_ Other: \_\_\_\_\_
- 3) **Mix standard insulin drip (Circle One):**
  - 100 units Regular insulin or NovoLog in 100 cc NS (1 unit insulin /cc)
- 4) **Give initial insulin bolus:**
  - Bolus units of insulin = BG ÷ 100 (e.g. BG = 240 mg/dL ÷ 100 = 2.5 units)
- 5) **Start insulin infusion:**
  - Initial infusion rate of insulin units/h = BG ÷ 100 ( e.g. from 4, above; 2-2.5 units/h)
- 6) **Target range for BG:**
  - Low Target (circle one) High Target (circle one)  
 70    100    or \_\_\_\_\_ mg/dL                      110    120    140    or \_\_\_\_\_ mg/dL
- 7) **Monitor finger-stick BG every hour:**
  - Get *lab* glucose if finger-stick BG is <40 or >450 mg/dL
- 8) **Adjust the insulin infusion rate each hour starting with Algorithm 1**
  - Begin Algorithm 2 if s/p CABG, transplant, glucocorticoids, or >80 units/d insulin outpatient
  - Advance 1 algorithm if glucose does not change by 60 mg/dL within the *first* hour
  - Decrease 1 algorithm if BG 60-69 mg/dL x 2
  - No patient begins at Algorithm 3 or 4 without endocrine service authorization

Algorithm 1		Algorithm 2		Algorithm 3		Algorithm 4	
BG	units/h	BG	units/h	BG	units/h	BG	units/h
<60 = Hypoglycemia (See below for treatment)							
<70	Off	<70	Off	<70	Off	<70	Off
70–109	0.2	70–109	0.5	70–109	1	70–109	1.5
110–119	0.5	110–119	1	110–119	2	110–119	3
120–149	1	120–149	1.5	120–149	3	120–149	5
150–179	1.5	150–179	2	150–179	4	150–179	7
180–209	2	180–209	3	180–209	5	180–209	9
210–239	2	210–239	4	210–239	6	210–239	12
240–269	3	240–269	5	240–269	8	240–269	16
270–299	3	270–299	6	270–299	10	270–299	20
300–329	4	300–329	7	300–329	12	300–329	24
330–359	4	330–359	8	330–359	14	330–359	28
>360	6	>360	12	>360	16	>360	32

Physician: \_\_\_\_\_ Time: \_\_\_\_\_ Date: \_\_\_\_\_

## ICU INSULIN ORDERS, CONTINUED IV INSULIN INFUSION PROTOCOL

(Not intended for use in patients with DKA or hyperglycemic hyperosmolar states)

9) **Treat for hypoglycemia if BG <60 or \_\_\_\_\_ mg/dL.**

- If BG is 40-59 mg/dL: Give ½ ampule (12.5 grams glucose) D50W by slow IV push over 30 seconds.
- If BG is <40 mg/dL: Give 1 ampule D50W (25 grams glucose) by slow IV push over 30 seconds
- Decrease insulin drip rate by moving-down 1 algorithm; i.e. from Algo 3 to Algo 2, etc.
- Recheck BG in 15 minutes and repeat D50W, as above, if necessary

10) **Call Endocrine Service if:**

- Other physicians make changes to subcutaneous or IV insulin regimen
- TPN, steroids or feedings are started, stopped or changed
- Other physicians turn off the insulin drip for any reason
- Patient does not respond to above pathways for glycemic control

11) **Transition from IV insulin to SC insulin:** *Proceed to the Insulin Transition Pathway*

Physician: \_\_\_\_\_ Time: \_\_\_\_\_ Date: \_\_\_\_\_