

ICU INSULIN ORDERS IV INSULIN INFUSION PROTOCOL

(Not intended for use in patients with type 1 diabetes, DKA or hyperglycemic hyperosmolar states)

- 1) **Start IV Insulin Flow Sheet and keep record at bedside**

- 2) **Start IV:** ___ D5W at 100ml/h
 ___ D5W½NS at _____ ml/h
 ___ Other: _____

- 3) **Mix standard insulin drip:**
 - 100 units Regular, aspart or glulisine insulin in 100 cc NS (1 unit insulin /cc) (Circle one)

- 4) **Give initial insulin bolus:**
 - Bolus units of I.V. insulin = $\text{Glucose} \div 100$ (e.g. if glucose = 240 mg/dL, give 2.5 units)

- 5) **Start insulin infusion:**
 - Initial infusion rate of insulin units/h = $\text{Glucose} \div 100$ (e.g. if glucose=240, begin 2.5 units/h)

- 6) **Target range for glucose:**
 - Low Target (circle one) _____ High Target (circle one) _____
 70 100 or _____ mg/dL 110 120 140 or _____ mg/dL

- 7) **Monitor capillary (finger stick) glucose every hour:**
 - Obtain *lab* glucose if finger stick BG is <40 or >400 mg/dL
 - Change frequency of glucose monitoring to: _____

- 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 to next algorithm if glucose does not change by 60 mg/dL within the *first* hour
 - Decrease 1 algorithm if glucose is 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 #9 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

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- 9) **Treat for hypoglycemia if glucose <60 mg/dL or _____ mg/dL.**
- Glucose 40-59 mg/dL: Give ½ ampule (12.5 grams glucose) D50W by slow IV push over 30 seconds.
 - Glucose <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 glucose 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: _____