

IN-PATIENT HYPERGLYCEMIA MANAGEMENT PROTOCOL-ADULT

INITIATE for patients with FSBS > 140 mg/dL; GOAL FSBS 80-139 mg/dL

For ANY FSBS less than 70 mg/dL, implement Hypoglycemia Standing Orders Discontinue all previous insulin orders

FSBS: QID before meals & bedtime also at 0300 q 4 hours (choose for tube feeds and TPN) _____

STEP 1: BASAL INSULIN (default is 8 units of detemir or glargine subcut at bedtime and adjust according to AM FSBS)

<input type="checkbox"/> detemir (Levemir) <input type="checkbox"/> glargine (Lantus)	<input type="checkbox"/> 8 units subcutaneously at bedtime (DEFAULT) <input type="checkbox"/> _____ units subcutaneous at _____ and _____ units subcutaneous at _____ <div style="text-align: center;">(time) (time)</div>
--	---

Please consult Glucose Management Services* for patients receiving NPH or Mixed insulin

STEP 2: CORRECTIVE INSULIN DOSES: * Do NOT change levels UP at bedtime

- aspart (NovoLog) subcut
- regular insulin (use for TPN & tube feeds) subcut

Use formula:

$$\frac{(\text{FSBS} - 100)}{X} = \# \text{ units insulin}$$

LEVEL	CORRECTION FACTOR	
1. <input type="checkbox"/>	X = 50	(insulin sensitive, TYPE 1)
2. <input type="checkbox"/>	X = 25	DEFAULT
3. <input type="checkbox"/>	X = 20	(mild)
4. <input type="checkbox"/>	X = 15	
5. <input type="checkbox"/>	X = 10	(moderate)
6. <input type="checkbox"/>	X = 5	(severe)
Other <input type="checkbox"/>	X =	

***If FSBS greater than 300 mg/dL, give corrective insulin dose as either subcutaneous aspart OR IV regular insulin, whichever agent is being used for corrective insulin.**
 Repeat FSBS in 4-hours. If still greater than 300mg/dL, notify the physician or call Glucose Management Services* for assistance.

STEP 3: NUTRITIONAL INSULIN DOSES: (add to corrective; subcut after meals or every four hours for next 4 hrs tube feedings OR TPN) (omit dose if patient not receiving carbohydrate-containing nutritional intake by any route)

<input type="checkbox"/> Carb Counting	$\frac{\text{g Carbs per meal or snack}}{Y} = \# \text{ units insulin aspart subcutaneous}$ <p style="text-align: center; font-size: small;">[CONTACT *GLUCOSE MANAGEMENT SVC IF PT ON NPH OR MIXED INSULIN]</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">LEVEL</th> <th style="width: 85%;">1 unit of insulin per:</th> </tr> </thead> <tbody> <tr> <td>1. <input type="checkbox"/></td> <td>Y = 15 g Carbs (sensitive, TYPE I)</td> </tr> <tr> <td>2. <input type="checkbox"/></td> <td>Y = 10 g Carbs DEFAULT (mild resistance)</td> </tr> <tr> <td>3. <input type="checkbox"/></td> <td>Y = 8 g Carbs</td> </tr> <tr> <td>4. <input type="checkbox"/></td> <td>Y = 5 g Carbs (moderate resistance)</td> </tr> <tr> <td>5. <input type="checkbox"/></td> <td>Y = 4 g Carbs</td> </tr> <tr> <td>6. <input type="checkbox"/></td> <td>Y = 3 g Carbs (severe resistance)</td> </tr> <tr> <td>Other <input type="checkbox"/></td> <td>Y = _____ g Carbs</td> </tr> </tbody> </table>	LEVEL	1 unit of insulin per:	1. <input type="checkbox"/>	Y = 15 g Carbs (sensitive, TYPE I)	2. <input type="checkbox"/>	Y = 10 g Carbs DEFAULT (mild resistance)	3. <input type="checkbox"/>	Y = 8 g Carbs	4. <input type="checkbox"/>	Y = 5 g Carbs (moderate resistance)	5. <input type="checkbox"/>	Y = 4 g Carbs	6. <input type="checkbox"/>	Y = 3 g Carbs (severe resistance)	Other <input type="checkbox"/>	Y = _____ g Carbs
LEVEL	1 unit of insulin per:																	
1. <input type="checkbox"/>	Y = 15 g Carbs (sensitive, TYPE I)																	
2. <input type="checkbox"/>	Y = 10 g Carbs DEFAULT (mild resistance)																	
3. <input type="checkbox"/>	Y = 8 g Carbs																	
4. <input type="checkbox"/>	Y = 5 g Carbs (moderate resistance)																	
5. <input type="checkbox"/>	Y = 4 g Carbs																	
6. <input type="checkbox"/>	Y = 3 g Carbs (severe resistance)																	
Other <input type="checkbox"/>	Y = _____ g Carbs																	
<input type="checkbox"/> Continuous tube feeding	$\left[\frac{\text{g Carbs/mL} \times \text{TF rate}}{Y} \right] \times 4 = \# \text{ units insulin regular subcut to give every 4 hours}$ <p style="text-align: center; font-size: small;">[0.15 g/mL for most 1 Cal/mL formulas e.g. Jevity, see page 2 for others]</p>																	
<input type="checkbox"/> TPN	$\left[\frac{(\text{Dextrose \%} \times \text{TPN rate}) / 100}{Y} \right] \times 4 = \# \text{ units insulin regular subcut to give every 4 hours}$																	

- HgA1c (may use blood in lab if available) if not already done; DO NOT run test if patient has received blood products
- Consult Glucose Management Services (GMS) – Diabetes CNS – 647-8214
- Diabetes Education: **Staff Nurse** to begin teaching patient/family about diabetes. Give patient diabetes education notebook and ask them to review videos on channel 85.
- Teach patient to administer own insulin Teach patient to check own FSBS

Physician Signature

Date/Time

HYPERGLY MGT Page 1
 Revised: 4/2009 v2
 CERNER: Hyperglycemia Mgmt Protocol (In-patient adult)

Baptist Medical Center
 3300 Northwest Expressway
 Oklahoma City, OK 73112



IN-PATIENT HYPERGLYCEMIA MANAGEMENT PROTOCOL

Additional Dosing Adjustment Guidelines

Basal Insulin: Choose insulin detemir or glargine 8 units subcutaneous at bedtime and adjust daily as follows:

Daily basal insulin adjustment: Increase 10% for AM FSBS greater than 140mg/dL and \leq 170mg/dL
Increase 20% for AM FSBS greater than 170mg/dL
Decrease 10% for AM FSBS less than 80mg/dL

Corrective and Nutritional insulin: Start at Level 1 for Type 1 patients and Level 2 for all others.
Adjust with each FSBS as follows:

Move to next level if FSBS greater than 140mg/dL after most recent insulin dose.

Move back one level if FSBS less than 80mg/dL, and back two levels if FSBS less than 40mg/dL

****Do NOT adjust corrective insulin level UP at bedtime****

Note: patients receiving NPH or mixed insulins (NovoLog Mix 70/30 or Novolin 70/30) require custom designed nutritional doses or none at all. Please contact Glucose Management Services (647-8214).

Patient NPO: FSBS q4 hour, basal insulin (detemir or glargine) and aspart for corrective insulin.

Patient eating: FSBS QID Meal, basal insulin (detemir or glargine) and aspart for corrective AND nutritional insulin.

Patients on Tube Feeds or TPN: FSBS q 4 hour, regular insulin for corrective and nutritional (for upcoming 4 hours) insulin; may add basal.

0.15 g/mL for most 1 Cal/mL formulas

0.2 g/mL for most formulas above 1Cal/mL

0.3 g/mL for Nutri-Hep

0.1 g/mL for Oxepa, PulmoCare & Glucerna

Patients on once a day corticosteroids: will need higher level for corrective and nutritional insulin at lunch and dinner.

HgbA1C must be done prior to patient receiving blood products.

