

UNIVERSITY HOSPITAL
PHYSICIAN'S CHECKLIST/
ORDER SHEET.

Orders are modified according to the medical condition of the patient. All orders are to be dated, timed and signed by a physician. Additional orders may be entered at the end of the order set. If the orders are transcribed in sessions, the transcriber must date, time, and initial in the section marked order noted. If the entire set of orders is transcribed at one time, make a single slash across the page and enter the date, time, and your initials.

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ALLERGIES: None Known Yes, Drug/Reaction: _____

Intensive Insulin Therapy Protocol (Not for Diabetic Ketoacidosis)

Diagnosis: Uncontrolled Diabetes type 1 Uncontrolled Diabetes type 2 Hyperglycemia/Possible Diabetes type 2

Discontinue all previous insulin orders and antidiabetic medication orders

Make all possible drips in non-dextrose containing solutions

Initiate insulin infusion of Regular Insulin: 100 units/100 mL of NS

Check or indicate Goal Blood Glucose (BG) = 70-110 mg/dL (may use for surgical, mechanically ventilated patients)
 70-140 mg/dL (use for majority of patients)
 70-180 mg/dL (use for floor patients)

Obtain: Blood glucose and potassium prior to initiation if not already done. Obtain phosphate and magnesium for cardiac patients.

Initiating the Infusion: (See reverse side for additional information)

- **Algorithm 1:** Start here for most patients.
- **Algorithm 2:** For patients not controlled with Algorithm 1, or for initiation of patients s/p CABG, s/p solid organ transplant or islet cell transplant, receiving glucocorticoids, or patient with diabetes receiving >80 units/day of insulin as an outpatient.
- **No patient should be initiated on algorithms 3, 4, or 5**

Moving from Algorithm to Algorithm:

- **Moving Up:** An algorithm failure is defined as blood glucose outside the goal range (see above goal) and blood glucose that does not decrease by at least 40mg/dL within 1 hour.
- **Moving Down:** When blood glucose is less than 70 mg/dL X 1 or if blood glucose decreases by greater than 40 mg/dL in an hour. Restart insulin drip when glucose greater than 70 mg/dL and move down an algorithm.

<u>Algorithm 1</u>		<u>Algorithm 2</u>		<u>Algorithm 3</u>		<u>Algorithm 4</u>		<u>Algorithm 5</u>		<u>Algorithm 6</u>	
BG	Units/hr	BG	Units/hr	BG	Units/hr	BG	Units/hr	BG	Units/hr	BG	Units/hr
Less than 60 = Hypoglycemia (see below for treatment)											
<70	Off	<70	OFF	<70	OFF	<70	OFF	<70	OFF	<70	OFF
70-109	0.2	70-109	0.5	70-109	1	70-109	1.5	70-109	3	70-109	5
110-119	0.5	110-119	1	110-119	2	110-119	3	110-119	5	110-119	7
120-149	1	120-149	1.5	120-149	3	120-149	5	120-149	8	120-149	10
150-179	1.5	150-179	2	150-179	4	150-179	7	150-179	10	150-179	12
180-209	2	180-209	3	180-209	5	180-209	9	180-209	13	180-209	15
210-239	2	210-239	4	210-239	6	210-239	12	210-239	16	210-239	18
240-269	3	240-269	5	240-269	8	240-269	16	240-269	19	240-269	21
270-299	3	270-299	6	270-299	10	270-299	20	270-299	25	270-299	27
300-329	4	300-329	7	300-329	12	300-329	24	300-329	30	300-329	32
330-359	4	330-359	8	330-359	14	>330	28	>330	33	>330	35
>360	6	>360	12	>360	16						

Patient Monitoring:

- Check capillary or arterial line blood glucose every hour until it is within indicated goal range for 4 hours, and then decrease to every 2 hours for 4 hours, if blood glucose remains stable, may decrease monitoring to every 4 hours. If patient's blood glucose is within target for 4 hours there is no need to adjust insulin infusion rate, unless the blood glucose falls out of target range.
- Hourly monitoring may be indicated for critically ill patients, patients on vasopressor therapy and patients being operated on even if they have stable blood glucose. In addition, if a patient is eating, hourly blood glucose monitoring is necessary for at least 3 hours after eating.

Decrease insulin infusion rate by 50% if nutritional therapy (e.g. TPN or tube feeds) are discontinued or significantly reduced.

Reinstitute hourly blood glucose checks for 4 hours.

Treatment of Hypoglycemia (Blood glucose less than 60 mg/dL) - **Turn off insulin infusion AND**

- If patient can take PO, give 15 grams of fast acting carbohydrate (4 oz fruit juice/non diet soda)
- If patient cannot take PO; Awake: D₅₀W – 25 mL (1/2 amp) IV push, **Not** awake (i.e. sedated): D₅₀W – 50 mL (1 amp) IV push
- Check finger stick glucose every 15 minutes and repeat above if blood glucose is less than 70 mg/dL, restart infusion once blood glucose is greater than 70 mg/dL for two consecutive checks. Restart infusion with lower algorithm (see moving down section)

Notify the physician:

- For any blood glucose change greater than 100 mg/dL in one hour or for blood glucose greater than 360 mg/dL
- For hypoglycemia which has not resolved within 20 minutes of administering 50 mL of D₅₀W IV and discontinuing the insulin infusion.
- Failure of algorithm 5 (Consider Endocrine consult)

DIET: (For patients requiring enteral tube feeding or diets not listed write separate order)

- Clear liquid, diabetic diet Diabetic Consistent Carbohydrate 1900 - 2100 kcal diet
 Diabetic Consistent Carbohydrate 1900 - 2100 kcal, 4 gram Sodium diet Diabetic Consistent Carbohydrate 2200 – 2500 kcal diet

White--Chart Yellow--Pharmacy

Physician Signature _____

Date _____ Time _____

Nurse Signature _____ Date _____ Time _____