

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 |
| <b>Less than 60 = Hypoglycemia (see below for treatment)</b> |          |                    |          |                    |          |                    |          |                    |          |                    |          |
| <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: D<sub>50</sub>W – 25 mL (1/2 amp) IV push, **Not** awake (i.e. sedated): D<sub>50</sub>W – 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 D<sub>50</sub>W 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 \_\_\_\_\_