

System-wide PROTOCOL:
Hypoglycemia: ADULT Management Protocol
 Reference #: SYS-PC-DEG-001.PR1

Origination Date: 3/2012
 Revised Date:
 Next Review Date: 3/2015
 Effective Date: 3/2013

Approval Date: 4/2012 **Approved By:** Diabetes Expert Group

System-Wide Protocol Ownership Group: Diabetes Expert Group
System Protocol Information Resource: Diabetes Clinical Nurse Specialist

SCOPE:

| Sites, Facilities, Business Units | Departments, Divisions, Operational Areas | People applicable to (Physicians, NP, Administration, Contractors etc.) |
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| All Hospitals, Rehabilitation Center (Inpatient) | Hospital-wide, excluding newborns and pediatrics | Registered Nurses, Licensed Practical Nurses |

*Be sure to paste the **table** of this protocol into the progress notes section of the patient's medical record.*

***This protocol may be implemented without a physician's order per policy
Hypoglycemia: Adult Management Policy #: SYS-PC-DEG-001***

EXCEPTION: See insulin infusion protocols for instructions for treatment and management of hypoglycemia.

ASSESSMENT:

Signs and symptoms of hypoglycemia could include the following:

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| <ul style="list-style-type: none"> • Sweating • Facial pallor • Shakiness/Tremors • Increased appetite • Nausea • Dizziness or light-headedness • Sleepiness • Weakness | <ul style="list-style-type: none"> • Rapid heart rate • Headache • Tingling around mouth and tongue • Change in Level of Consciousness (ranging from confusion to coma) • Seizures |
|---|---|

In any suspected hypoglycemia situation, obtain a STAT finger stick blood glucose level. Treatment should be initiated **prior** to obtaining finger stick blood glucose if patient's symptoms warrant treatment.

TREATMENT/INTERVENTIONS:

If patient on a SUBCUTANEOUS INSULIN PUMP becomes hypoglycemic,

- Suspend the insulin pump until blood glucose > 60 mg/dL. If patient has a change in level of consciousness (ranging from confusion to coma), pull out infusion site to stop insulin administration if unable to suspend infusion pump.
- Follow the treatment for hypoglycemia according to the table below.
- Notify physician for subsequent treatment orders and reassessment of patient's ability to safely self-manage their insulin pump.

Initiate seizure precautions for patients with altered consciousness.

If patient on—

- **FLUID RESTRICTIONS:** recommend glucose gel for treatment
- **RENAL RESTRICTIONS:** recommend glucose gel for treatment. Avoid orange juice, colas, milk, peanut butter or cheese.
- **SWALLOWING PRECAUTIONS OR LEVEL ONE PUREE DIET:** recommend 4 oz of juice with 2 TBSP thickener
- **IF PATIENT ON Precose (Acarbose):** only use glucose gel to treat hypoglycemia. Treatment with sucrose (juice, jelly, pop, sugar) is ineffective.

Hypoglycemia is defined by the American Diabetes Association as a blood glucose less than 70 mg/dL. Some patients have symptoms at higher glucose levels.

| BG less than 70 mg/dL and Patient Unconscious or Uncooperative or NPO | | |
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| Immediate Action/Treatment | Repeat | Follow-up Treatment |
| <p>*Staff to remain with patient</p> <p>DO NOT WAIT FOR LAB CONFIRMATION OF BG BEFORE TREATING</p> <ul style="list-style-type: none"> ▪ If IV access: Give 50 ml (25 grams) D50 IVP over 2-5 minutes ▪ If no IV access AND glucose < 60 mg/dL: Give 1 mg Glucagon SC x1 and start IV access STAT. Patient must be turned on their side to prevent aspiration. Note: Glucagon may be ineffective in patients with inadequate glycogen stores such as children or newly diagnosed adults | <p>Repeat BG and retreat q15 min until BG > 70 mg/dL without symptoms or BG > 80 mg/dL.</p> <p>Glucagon should only be repeated x1</p> <p>Add order to check BG at 0200 one time</p> | <p>If patient NOT NPO or when able to swallow, feed patient carbohydrate to avoid recurrent hypoglycemia.</p> <ul style="list-style-type: none"> • If more than 1 hr until next meal/snack, also give 15 gms of carbohydrate*: <ul style="list-style-type: none"> * 3 graham crackers OR * 6 saltine crackers OR * 8 oz skim milk. • If more than 2 hrs until next meal/snack, also add protein: <ul style="list-style-type: none"> * ½ sandwich OR * 3 graham crackers with one TBSP peanut butter <p>IF NPO OR CONTINUES TO BE UNCONSCIOUS/UNCOOPERATIVE:</p> <ul style="list-style-type: none"> • IF IV ACCESS: Verify IV fluids contain 5% dextrose. Recheck BG in 1 hour. • IF NO IV ACCESS: Obtain MD orders for IV fluids with dextrose. Check BG in 1 hour. Then follow treatment per IV access. <p><i>Notify provider responsible for glucose management ASAP, and certainly PRIOR to administering the next insulin or oral diabetes agent for medication and glucose monitoring orders.</i></p> |

| BG less than 45 mg/dL and Patient Conscious or Cooperative and Able to Swallow | | |
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| Immediate Action/Treatment | Repeat | Follow-up Treatment |
| <p>Staff to remain with patient</p> <p>DO NOT WAIT FOR LAB CONFIRMATION OF BG BEFORE TREATING</p> <p>Give 30 Grams carbohydrate:</p> <ul style="list-style-type: none"> • 8 oz juice or regular pop OR • 2 TBSP jelly or sugar OR • 6 glucose tablets OR • 2 tubes Dextrose Gel | <p>Repeat BG and retreat q15 min until BG > 70 mg/dL without symptoms or BG > 80 mg/dL.</p> <p>Add order to check BG at 0200 one time</p> | <ul style="list-style-type: none"> • If more than 1 hr until next meal/snack, also give 15 gms of carbohydrate*: <ul style="list-style-type: none"> * 3 graham crackers OR * 6 saltine crackers OR * 8 oz skim milk • If more than 2 hrs until next meal/snack, also give 15 gms carbohydrate with protein: <ul style="list-style-type: none"> * ½ sandwich OR * 3 graham crackers with one TBSP peanut butter <p><i>Notify provider responsible for glucose management ASAP and certainly PRIOR to administering the next insulin or oral diabetes agent for medication and glucose monitoring orders</i></p> |
| BG 45-59 mg/dL and Patient Conscious, Cooperative, and Able to Swallow | | |
| Immediate Action/Treatment | Repeat | Follow-up Treatment |
| <p>*Staff to remain with patient</p> <p>DO NOT WAIT FOR LAB CONFIRMATION OF BG BEFORE TREATING</p> <p>Give 20 Grams Carbohydrate:</p> <ul style="list-style-type: none"> • 6 oz juice or regular pop OR • 1 ½ TBSP of jelly or sugar OR • 4 glucose tablets OR • 1 ½ tubes Dextrose Gel | <p>Repeat BG and re-treat q15 min until BG > 70 mg/dL without symptoms or BG > 80 mg/dL.</p> <p>Add order to check BG at 0200 one time</p> | <ul style="list-style-type: none"> • If more than 1 hr until next meal/snack, also give 15 gms of carbohydrate*: <ul style="list-style-type: none"> * 3 graham crackers OR * 6 saltine crackers OR * 8 oz skim milk. • If more than 2 hrs until next meal/snack, also add protein: <ul style="list-style-type: none"> * ½ sandwich OR * 3 graham crackers with one TBSP peanut butter <p><i>Notify provider responsible for glucose management ASAP and certainly PRIOR to administering the next insulin or oral diabetes agent for medication and glucose monitoring orders</i></p> |
| BG 60-100 mg/dL and patient Symptomatic and is Conscious, Cooperative and Able to Swallow | | |
| Immediate Action/Treatment | Repeat | Follow-up Treatment |
| <p>Give 15 Grams carbohydrate:</p> <ul style="list-style-type: none"> • 4 oz juice or regular pop OR • 1 TBSP jelly or sugar OR • 3 glucose tablets OR • 1 tube Dextrose Gel | <p>Repeat BG and re-treat q15 min until BG > 100 OR symptoms resolved</p> <p>Add order to check BG at 0200 one time</p> | <ul style="list-style-type: none"> • If more than 1 hr until next meal/snack, also give 15 gms of carbohydrate*: <ul style="list-style-type: none"> * 3 graham crackers OR * 6 saltine crackers OR * 8 oz skim milk • If more than 2 hrs until next meal/snack, also add protein: <ul style="list-style-type: none"> * ½ sandwich OR * 3 graham crackers with one TBSP peanut butter <p><i>Notify provider responsible for glucose management ASAP and certainly PRIOR to administering the next insulin or oral diabetes agent for medication and glucose monitoring orders</i></p> |

| BG 60-70 mg/dL and patient has NO symptoms and Conscious, Cooperative and Able to Swallow | | |
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| Immediate Action/Treatment | Repeat | Follow-up Treatment |
| No treatment required if scheduled mealtime is within 30 min and patient willing/able to eat. If mealtime is more than 30 min , give 15 Grams carbohydrate: <ul style="list-style-type: none"> • 4 oz juice or regular pop <u>OR</u> • 1 TBSP jelly or sugar <u>OR</u> • 3 glucose tablets <u>OR</u> • 1 tube Dextrose Gel | Repeat BG and re-treat q15 min until BG > 100 OR symptoms resolved Add order to check BG at 0200 one time | <ul style="list-style-type: none"> • If more than 1 hr until next meal/snack, also give 15 gms of carbohydrate*: <ul style="list-style-type: none"> * 3 graham crackers <u>OR</u> * 6 saltine crackers <u>OR</u> * 8 oz skim milk • If more than 2 hrs until next meal/snack. also add protein: <ul style="list-style-type: none"> * ½ sandwich <u>OR</u> * 3 graham crackers with one TBSP peanut butter |
| BG 70 mg/dL and patient has NO symptoms NO TREATMENT REQUIRED | | |

Documentation:

Document the episode, all blood glucose results, and treatment administered.

Reference:

- ACE/ADA. (2009). American College of Endocrinology and American Diabetes Association Consensus on Inpatient Diabetes and Glycemic Control. *Diabetes Care*, 32:1119-1131.
- American Diabetes Association Workgroup on Hypoglycemia. (2005). Defining and reporting hypoglycemia in diabetes. *Diabetes Care*. 28:1245-1249.
- Tomky, Donna. (2005). Detection, Prevention, and Treatment of Hypoglycemia in the Hospital. *Diabetes Spectrum*, 18: 39-44.