

Protocol 3-8

SECTION: Adult General Medical Emergencies

PROTOCOL TITLE: Medical – Diabetic - Hypoglycemia

REVISED: 06/2017

OVERVIEW:

Symptomatic hypoglycemia is defined as a blood glucose level < 60 mg / dL with signs of altered mental status and/or unconsciousness. The many signs and symptoms that are associated with hypoglycemia can be divided into two broad categories: adrenergic and neurologic. Adrenergic stimulation is due to the increased epinephrine levels and neurologic is due to central nervous system dysfunction from the decreased glucose levels.

HPI	Signs and Symptoms	Considerations
<ul style="list-style-type: none"> History of diabetes Onset of symptoms Medications Fever or recent infection Alcohol consumption Last meal 	<ul style="list-style-type: none"> Anxiety, agitation, and / or confusion Cool, clammy skin Diaphoresis Seizure Decreased visual acuity, blindness Abnormal/ hostile behavior Tachycardia Hypertension Dizziness, headache, weakness 	<ul style="list-style-type: none"> Hypoxia Seizure Stroke Brain trauma Alcohol intoxication Toxin / substance abuse Medication effect / overdose

HYPGLYCEMIA

	EMR	EMT	A	I	P
1. Perform general patient management.	•	•	•	•	•
2. Support life-threatening problems.	•	•	•	•	•
3. Assess for signs of trauma. Provide spinal immobilization as necessary.	•	•	•	•	•
4. Administer oxygen to maintain SPO_2 94 - 99%	•	•	•	•	•
5. For altered mental status, perform rapid glucose determination.		•	•	•	•
6. If glucose less than 60 mg / dL or clinical signs and symptoms indicate hypoglycemia and the patient is awake and able to swallow:					
a. If the patient can protect airway, give Oral Glucose 15 grams. Repeat in 15 minutes if necessary.		•	•	•	•
7. If glucose less than 60 mg / dL or clinical signs and symptoms indicate hypoglycemia and oral glucose is contraindicated:					
a. Establish an IV of normal saline at KVO.			•	•	•

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HYPOGLYCEMIA

	EMR	EMT	A	I	P
b. Patient > 40 kg: Give <u>DEXTROSE</u> 10% 100mL bolus. Repeat once in 2 minutes if altered mental status persists.			•	•	•
c. If <u>DEXTROSE</u> 10% is unavailable, administer <u>DEXTROSE</u> 50% 1G / kg up to 25 G IV			•	•	•
d. If unable to establish an IV, alternatively administer <u>GLUCAGON</u> 1 mg IM / IN.		•	•	•	•
8. For signs and symptoms of hypovolemic shock or dehydration, follow the <i>Medical – Hypotension/Shock (Non-trauma)</i> protocol.	•	•	•	•	•
9. Place on cardiac monitor per patient assessment.				•	•
10. Transport and perform ongoing assessment as indicated.		•	•	•	•

POSSIBLE CAUSES OF PULSELESS ARREST

A	Alcohol, Abuse, Acidosis	T	Toxidromes, Trauma, Temperature, Tumor
E	Endocrine, Electrolytes, Encephalopathy	I	Infection, Intussusception
I	Insulin	P	Psychogenic, Porphyria, Pharmacological
O	Oxygenation, Overdose, Opiates	S	Space occupying lesion, Sepsis, Seizure, Shock
U	Uremia		

PEARLS:

1. Use aseptic techniques to draw blood from finger. Allow alcohol to dry completely prior to puncturing finger for blood glucose level. Alcohol may cause inaccurate readings. Do not blow on, or fan site, to dry faster.
2. Blood glucose levels should be taken from extremity opposite IV and medication administration for most accurate reading.
3. After puncturing finger, use only moderate pressure to obtain blood. Excessive pressure may cause rupture of cells causing inaccurate results. Know your specific agency's glucometer parameters for a "HI" and "LO" reading.
4. When administering IV fluids, a minimum amount should be delivered as large amounts may lower blood glucose level and impede original goal of administering Dextrose.
5. An inadequate amount of glucose for heat production, combined with profound diaphoresis, may place a hypoglycemic patient at greater risk for hypothermia. Keep patient warm as needed.
6. Patients who are consuming aspirin, acetaminophen, anti-psychotic drugs, beta-blockers, oral diabetic medications, or antibiotics such as sulfa-based, tetracycline, and amoxicillin that experience a hypoglycemic episode are at a greater risk for relapse. These patients should be strongly encouraged to seek

- additional medical intervention and, as such should be transported. If you (and / or Medical Control) are unable to influence the patient into accepting transport, to, the extent practical, advise the patient to stay with a responsible party who can remain with the patient for several hours.
7. Glucagon causes a breakdown of stored glycogen to glucose. Glucagon may not work if glycogen stores are previously depleted due to liver dysfunction, alcoholism, or malnutrition. Effects of Glucagon may take up to 30 minutes.
 8. Any patient that has been administered Glucagon should be transported for further evaluation.
 9. Any patient, who has had a hypoglycemic episode without clear reason / cause, should be transported for further evaluation.

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HYPOGLYCEMIA

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