



A. Hypoglycemia

Signs and symptoms of acute hypoglycemia (insulin shock) include but are not limited to: altered mental status up to and including unresponsiveness, weakness, dizziness, irritability, nausea, sweating, and combative behavior. Hypoglycemia can also precipitate seizures and display signs and symptoms of a stroke.

If the blood glucose level is < 70 mg/dL with signs/symptoms of hypoglycemia OR < 50 mg/dL without signs/symptoms of hypoglycemia:

BLS

1. Administer **Oral Glucose (Glucose) 15 grams** PO to patients ONLY if the patient is conscious and able to swallow.

DO NOT administer oral glucose to patients younger than 3 years of age.

2. Reassess blood glucose level. If patient is still symptomatic and blood glucose level is < 70mg/dL proceed to ALS care.

ALS

3. Administer **5mL/kg Dextrose 10% 0.5g/kg IV, Max 100 mL**. May be repeated once if blood glucose level remains below 80 mg/dL.
 - a) If unable to establish IV access, administer **Glucagon IM**.
 - i. Patient's less than or equal to 20 kg – **0.5 mg IM**
 - ii. Patient's greater than 20 kg – **1 mg IM**

NOTE: After administering oral glucose and/or Glucagon, blood glucose levels should be reassessed after 15 minutes. After administering Dextrose IV, blood glucose levels should be reassessed after 5 minutes.

4. Transport ALS to the closest appropriate hospital.

B. Hyperglycemia

The signs and symptoms of hyperglycemia have an onset that can range from days to weeks. Hyperglycemia can be divided into two types: **Diabetic Ketoacidosis (DKA)** and **Hyperosmolar Hyperglycemic Non-Ketotic Coma (HHNK)**.

Signs and symptoms can include, but are not limited to: lethargy, dizziness, seizure, nausea, vomiting, "fruity or acetone" breath (DKA), tachypnea or Kussmaul respirations (DKA), polyuria (frequent urination), polydipsia (thirst).

1. If blood glucose level is $\geq 300\text{mg/dL}$, assess ETCO_2
 - a) If ETCO_2 is ≤ 25 mmHg, suspect DKA.

ETCO_2 may be assessed via the "Smart CapnoLine"



- b) Administer a **Normal Saline bolus of 20 mL/kg IV**.
- c) Transport ALS to the closest appropriate hospital.

NOTE: Care should be taken to look for underlying conditions when assessing patients with both DKA and HHNK as triggers can include infection, sepsis, stroke and drug/alcohol ingestion.