

# Protocol M-7

**SECTION: M-7**

**PROTOCOL TITLE: ADULT HYPERGLYCEMIA**

**REVISED: January 11, 2010**

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**GENERAL COMMENTS:** Symptomatic hyperglycemia is defined as BG >250mg/dl with signs of severe dehydration, altered LOC, or shock.

**BLS SPECIFIC CARE:** *See adult General Medical Care Protocol M-1*

- Protect the patient from harm and keep the patient calm
- Aggressively monitor and protect the airway. Administer supplemental oxygen as tolerated by the patient

**ILS SPECIFIC CARE:** *See adult General Medical Care Protocol M-1*

- Treat symptomatic patients aggressively with IV crystalloid up to 1000 cc. Hold for s/s of CHF/pulmonary edema or CHF Hx

**ALS SPECIFIC CARE:** *See adult General Medical Care Protocol M-1*

- Treat unstable dysrhythmias and vital signs as necessary and as per specific protocols
  - In the presence of DKA, continuous EKG monitoring is essential to detect rhythm disturbances and changes associated with accompanying electrolyte imbalances and acidosis
    - Primary electrolyte disturbance is due to hypokalemia
      - T-wave flattening, ST-segment depression, appearance of U-waves and QT prolongation
      - Can precede malignant dysrhythmias
  - Obtain 12-lead EKG
    - Due to possibility of precipitating/accompanying AMI.
  - Re-administer 250-500 ml crystalloid fluid boluses as needed
    - Reassess patient and BGL following each bolus

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**PHYSICIAN PEARLS:**

Hyperglycemic emergencies in patients with diabetes can generally be broken into two categories: Diabetic Ketoacidosis (DKA) and Hyperosmolar Hyperglycemic State (HHS), also known as Hyperosmolar Hyperglycemic Non-ketotic Coma (HHNC). It is estimated that 2-8% of all hospital admissions are for the treatment of DKA.

Mortality for DKA is between 2-10%. Published mortality rates for HHS vary, but the trend is that the older the patient and the higher the osmolality, the greater the risk for death.

Regardless, most pre-hospital care is focused around the treatment of severe dehydration, and support of vital functions.