



# Adrenal Crisis

- History
- Addison's Disease
  - Congenital Adrenal Hyperplasia (CAH)
    - Adrenal tumors
    - Chronic steroid use
  - **\*\*When was last steroid taken? (What, when, dose)\*\***

- Signs and Symptoms
- Pallor
  - Headache
  - Muscle/body aches
  - Weakness/lethargy
    - Dizziness
  - Nausea/vomiting/abdominal pain
    - Hypotension
    - Hypoglycemia
  - Congestive heart failure
  - Altered mental status or LOC
    - Shock

- Differential Dianosis
- Diabetic problem
  - Hypovolemic/septic/cardiogenic shock
    - Gastroenteritis
    - Seizure
  - Toxicological emergency
  - Thyroid storm, thyrotoxisis

Signs and symptoms consistent with adrenal crisis

Blood glucose analysis

Exit to appropriate *Abnormal Blood Glucose Protocol* if indicated

Obtain body temperature and treat as appropriate

ECG monitoring required. 12-lead EKG if patient condition allows (hyperkalemia probable). **Contact Medical Control for hyperkalemia orders if suspected (peaked T-waves, wide QRS).**

500 mL **Normal Saline** bolus, repeat if no signs of pulmonary congestion

4 mg **Zofran** for nausea/vomiting

Steroid administration as follows:

- Adult:
- **Solu-Cortef:** 100mg IV/IO/IM
  - **Solu-Medrol:** 25mg IV/IO/IM
  - **Dexamethasone:** 2.5 mg IV/IM/IO

- Peds:
- **Solu-Cortef:** 2mg/kg IV/IO/IM (max 100 mg)
  - **Solu-Medrol:** 0.5 mg/kg IV/IO/IM (max 25 mg)
  - **Dexamethasone:** 0.05 mg/kg IV/IM/IO (max 2.5 mg)

Notify receiving facility

**PEARLS:**

- Acute adrenal insufficiency can result in refractory shock or death in patients on a maintenance dose of steroids who experience illness or trauma and are not given a stress dose and, as necessary, supplemental doses of hydrocortisone.
- Any patient with an adrenal insufficiency history must be given a stress dose under the following conditions: multi-system trauma, fever >100.4F, vomiting/diarrhea with dehydration, multiple long-bone fractures, hypo/hyperthermia, shock of any cause, drowning, 2nd or 3rd degree burns >5% BSA.
- Illness, injury, or surgery may precipitate an adrenal crisis, even in medication-compliant patients.
- Etomidate may precipitate adrenal crisis. Stress dose all patients receiving Etomidate.
- **Hydrocortisone (Solu-Cortef) is preferred and should be used IF available**