
This protocol is specific to patients that have a known medical history of adrenal insufficiency. Providers should pay particular attention to Medic Alert® bracelets and necklaces if the patient is found unresponsive. Adrenal insufficiency results when the body does not produce the essential life sustaining hormones cortisol and aldosterone, which are vital to maintaining blood pressure, cardiac contractility, and water and salt balance.

Adrenal insufficiency can be caused by a number of medical conditions:

- Congenital or acquired disorders of the adrenal gland
- Congenital or acquired disorders of the pituitary gland
- Long term use of steroids (COPD, asthma, rheumatoid arthritis, and transplant recipients)

Acute adrenal insufficiency can result in refractory shock or death in patients on a maintenance dose hydrocortisone sodium succinate (Solu-Cortef®) or prednisone who experience illness or trauma and are not given supplemental doses hydrocortisone.

A booster dose of hydrocortisone should be given to patients with known adrenal insufficiency who have the following illnesses or injuries:

- Shock/hypoperfusion (any cause)
- Multi-system trauma
- Hyperthermia or hypothermia
- Partial or Full thickness burns > 5% BSA
- Vomiting/Diarrhea with S/Sx of by dehydration
- Drug Assisted Intubation (Etomidate may precipitate an adrenal crisis)
- Fever > 100.4° F and ill-appearing
- Multiple long bone fractures
- Respiratory distress
- Drowning

ALL PROVIDER LEVELS

1. Initiate General Assessment and Universal Patient Care.
2. Support airway and provide supplemental Oxygen per Airway Maintenance and Supplemental Oxygen protocol.

3. Identify and treat the underlying condition per the appropriate protocol.
4. Ensure that a blood glucose reading is obtained.
5. If the patient:
 - is greater than 8 years of age with a blood glucose level of <70 mg/dl.
 - displays signs and symptoms of hypoglycemia
 - is conscious enough to swallow and can maintain their own airway.

Administer **Oral Glucose 24-50 gm SL** or one single dose tube. Advanced-EMTs and ALS providers may proceed directly to intravenous interventions.

6. Establish an IV of Normal Saline KVO. **Advanced EMTs may initiate IV access.**
7. If the patient presents with signs and symptoms of hypoperfusion administer **Normal Saline Boluses:**

<u>Adult</u>	<u>Pediatric</u>
250 mL as needed to maintain or restore perfusion. Maximum total of 2000 mL	20 mL/kg as needed to maintain or restore perfusion. Maximum of 3 boluses

ADVANCED LIFE SUPPORT PROVIDERS

1. Provide continuous EKG and ETCO₂ monitoring.
2. Consider IO access if the patient exhibits altered mental status or is profoundly hypotensive and IV access has not been obtained.
3. Obtain a 12 lead EKG if time and patient condition permit.
4. Administer **Hydrocortisone Sodium Succinate (Solu-Cortef®):**

<u>Adult</u>	<u>Pediatric</u>
Hydrocortisone Sodium Succinate (Solu-Cortef) 100 mg IV/IO, or IM	Hydrocortisone Sodium Succinate (Solu-Cortef) 2 mg/kg IV/IO or IM Maximum dose of 100 mg

- ALS providers are directed to administer the patient's personal **Hydrocortisone Sodium Succinate (Solu-Cortef®) emergency kit** if the

medication is not readily available from DCFEMS ALS medical stores.

5. If blood glucose level less than 70 mg/dl administer **Dextrose**:

Dextrose		
<i>Adult</i> (>12 yrs) <70 mg/dl	<i>Pediatric</i> (1 mo.-12 yrs) <60 mg/dl	<i>Neonate</i> (<1 mo.) <45 mg/dl
50% 25 gm IV/IO	25% 2 mL/kg IV/IO	10% 5 mL/kg IV/IO

Dextrose Dilution Procedures

D₂₅W - Waste 25 mL D₅₀W. Use pre-filled syringe (with remaining 25 mL) to withdraw 25 mL of NS from IV bag. Gently agitate syringe to mix solution.

D₁₀W - Waste 40 mL D₅₀W. Use pre-filled syringe (with remaining 10 mL) to withdraw 40 mL of NS from IV bag. Gently agitate syringe to mix solution.

MEDICAL CONTROL OPTIONS

1. Contact Medical Control for further orders when necessary.