

## **Adrenal Insufficiency and Cortisol Replacement**

**Illness/Stress Dosing:** (40 mg/m<sup>2</sup>/day divided three times daily in hydrocortisone equivalents)

During times of illness and injury, the body requires extra cortisol. This is called stress dosing. As soon as the illness or injury is recognized the stress dose must be given immediately. If necessary, take your child to the family doctor/pediatrician to determine if an illness requires any additional treatment (for example: antibiotic for ear infection).

### **Illness/stress includes:**

- Fever more than 101 F or 38.5 C
- Nausea, vomiting, diarrhea, throat or ear infection
- Lethargy (very tired), pale & clammy skin, lower than normal body temperature, signs of dehydration (dry tongue, thirst, dark circles under eyes, reduced urine)
- Moderate trauma such as injury requiring stitches or a broken bone
- If your child needs an anesthetic

Extra cortisol is not needed for routine immunizations but is needed if your child develops a fever.

Continue the stress dose until the illness is improving, then return to normal daily dosing. If 5 or more days have passed since increasing the dose, contact your family doctor/pediatrician. Contact your Endocrinologist or Endocrine Nurse if you need guidance to return to daily dosing.

## **Emergency Dosing (Solucortef Act-O-Vial 250mg/2ml)**

### **Dosing:**

0-3 years = 25 mg (0.2ml)

3-10 years = 50 mg (0.4ml)

Over 10 years = 100 mg (0.8 ml)

### **Your child will need an injection of cortisol in the following situations:**

- If your child vomits less than ½ an hour after taking a stress dose, then you should give a whole dose again. If vomiting occurs after the repeated dose then your child will need an injection of cortisol.
- Severe diarrhea (child may not absorb the stress dose)
- If your child is unconscious

Anytime your child needs an injection of cortisol it is a medical emergency and s/he should be seen by a doctor in the nearest emergency room

It is important to know that ambulance paramedics are permitted to administer injectable hydrocortisone, if supplied by a patient (they do not stock hydrocortisone on the ambulances).

## **FOR EMERGENCY HEALTH-CARE PROFESSIONAL**

### **EMERGENCY CARE PLAN FOR ADRENAL INSUFFICIENCY**

This patient has adrenal insufficiency and requires glucocorticoid treatment. During illness or injury this patient must be seen by a physician **URGENTLY** because of the risk of life threatening electrolyte disturbances, hypoglycemia, and hypotension which may occur as part of an **ADRENAL CRISIS**.

Signs of impending adrenal crisis could include lethargy, weakness, dizziness, nausea, vomiting, hypotension, hypoglycemia, tachycardia and pallor.

TREATMENT should be started as follows:

1. Treatment of hypoglycemia if present
  
2. IV fluids: D5W with normal saline at maintenance to correct for dehydration (if needed) and to maintain blood glucose levels in the normal range.
  
3. Initial Hydrocortisone (Solu-Cortef) IV bolus (can be administered IM if unable to obtain IV access).
  - 25 mg for children 0-3 years of age
  - 50 mg for children >3-10 years of age
  - 100 mg for children >10 years of age
  
4. Continue Emergency Hydrocortisone dose (Solu-Cortef) IV/IM divided q6h until patient is able to tolerate oral Hydrocortisone (Solu-Cortef), is rehydrated, and has normal electrolytes and glucose levels.
  - 6.25 mg q6h for children 0-3 years of age
  - 12.5 mg q6h for children >3-10 years of age
  - 25 mg q6h for children >10 years of age