

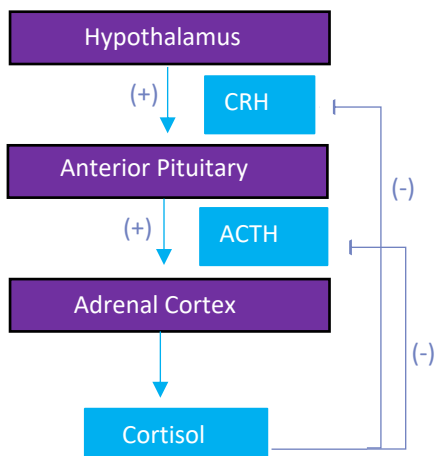


## What is an Adrenal Crisis?

- Acute, life-threatening presentation of adrenal insufficiency
- Requires urgent medical intervention to prevent progression to coma and death

## Adrenal Insufficiency:

- Inadequate synthesis of glucocorticoids (cortisol) +/- mineralocorticoids (aldosterone) depending on the etiology.



CLINICAL PRESENTATION	
ADRENAL INSUFFICIENCY	ADRENAL CRISIS
<ul style="list-style-type: none"> <li>▪ Fatigue</li> <li>▪ Lethargy</li> <li>▪ Nausea</li> <li>▪ Vomiting</li> <li>▪ Abdominal Pain</li> <li>▪ Weight loss</li> <li>▪ Poor Growth</li> <li>▪ Salt Cravings (Primary AI)</li> <li>▪ Hyperpigmentation (Primary AI)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Dehydration</li> <li>▪ Dizziness</li> <li>▪ Syncope</li> <li>▪ Altered Mental Status</li> <li>▪ Seizures</li> <li>▪ Hypotension</li> <li>▪ Tachycardia</li> <li>▪ Coma</li> <li>▪ Hypoglycemia</li> </ul>



## COMMON ETIOLOGIES

ADRENAL INSUFFICIENCY	ADRENAL CRISIS
<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>▪ Decreased cortisol production in the adrenal gland</li> <li>▪ Examples: Addison's Disease, Congenital Adrenal Hyperplasia (CAH)</li> </ul> <p><b>Secondary/Tertiary:</b></p> <ul style="list-style-type: none"> <li>▪ Decreased ACTH or CRH secretion (leading to low cortisol)</li> <li>▪ Examples: acquired/congenital hypopituitarism, excessive glucocorticoid use</li> </ul>	<ul style="list-style-type: none"> <li>▪ First presentation of a patient with Adrenal Insufficiency (AI)</li> <li>▪ Insufficient Glucocorticoid replacement in patient with known AI</li> <li>▪ Inadequate Stress Dosing in a patient with known AI in the context of stressors such as: surgery, physical trauma, infection</li> <li>▪ Abrupt discontinuation of exogenous steroids</li> </ul>

## MANAGEMENT

ACUTE	PREVENTATIVE
<ul style="list-style-type: none"> <li>▪ IV Isotonic Fluid bolus, 20ml/kg</li> <li>▪ IV Hydrocortisone 50-100 mg/m<sup>2</sup> bolus followed by 50-100 mg/m<sup>2</sup>/day div q6h</li> <li>▪ Dextrose bolus if hypoglycemic</li> <li>▪ Treat underlying cause if crisis is triggered by infection or trauma</li> </ul>	<ul style="list-style-type: none"> <li>▪ Maintenance hydrocortisone +/- mineralocorticoid replacement</li> <li>▪ Stress Dose teaching to patient/families</li> <li>▪ Medical Alert Bracelet</li> <li>▪ IM Hydrocortisone injection for emergencies</li> <li>▪ Detailed emergency action plan</li> <li>▪ Monitor for ongoing electrolyte disturbances</li> </ul>



## WHAT IS STRESS DOSING?

- In a patient with AI, the body requires extra cortisol during times of stress/illness
- Cortisol replacement doses are increased temporarily during this time period
- Common indications: fever, vomiting, diarrhea, fractures

