

# Adrenal Crisis

## General Notes

Adrenal crisis is a life-threatening emergency, which occurs when there is insufficient glucocorticoid for the body to cope with major stress. This usually occurs in the context of adrenal insufficiency, a condition in which the adrenal glands do not produce sufficient cortisol (glucocorticoid) for the body's needs.

Synthetic glucocorticoids (corticosteroids) include hydrocortisone, prednisolone and dexamethasone, and hydrocortisone is most commonly used to treat adrenal insufficiency.

### Types of adrenal insufficiency:

- **Primary** – caused by diseases of the adrenal gland, including Addison's disease, congenital adrenal hyperplasia (CAH), adrenoleukodystrophy. Usually involves both glucocorticoid and mineralocorticoid insufficiency.
- **Secondary** – caused by deficiency of adrenocorticotrophic hormone secretion by the pituitary gland, e.g. hypopituitarism, craniopharyngioma or other suprasellar tumours, head injuries.
- **Iatrogenic** – caused by suppression of the hypothalamic-pituitary-adrenal axis due to chronic corticosteroid use, e.g. autoimmune disease, nephrotic syndrome, asthma, oncology patients, transplant patients.

⚠ Paramedics should not discount a request for hydrocortisone (238) administration from a patient with adrenal insufficiency as signs and symptoms of adrenal crisis may vary from patient to patient.

## Clinical Features

### Potential precipitants of adrenal crisis

- Any significant illness, trauma or stress, including:
  - Febrile illness, infection, gastroenteritis.
  - Respiratory distress, abdominal pathology, labour.
  - Injury, trauma, environmental exposure.
  - Severe psychological stress.
  - Non-compliance with regular hydrocortisone.

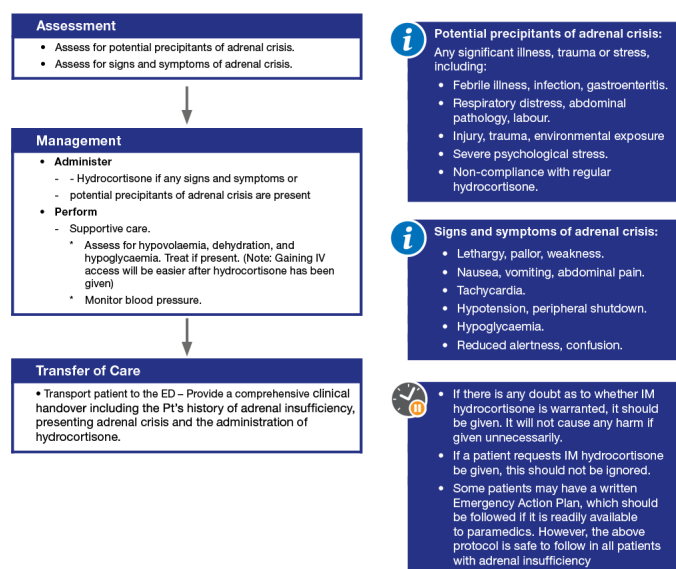
### Signs and symptoms of adrenal crisis

- Lethargy, pallor, weakness.
- Nausea, vomiting, abdominal pain.

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- Tachycardia.
- Hypotension, peripheral shutdown.
- Hypoglycaemia.
- Reduced alertness, confusion.

## Clinical Management



## CPG Specific Pharmacology

Pharmacology	Route	Authorised Clinical Level
Hydrocortisone	IM/IV	Paramedic and above

## Pharmacology

Hydrocortisone		
<b>Reconstitution:</b> Hydrocortisone (100mg vial) reconstituted with 2mL sodium chloride 0.9% (50mg:1mL).		
6 years of age and above	IM/IV	Initial Dose: <b>100mg</b> Repeat: Once after 15 minutes Maximum Total Dose: <b>200mg</b>
1 - 5 years of age	IM/IV	Initial Dose: <b>50mg</b> Repeat: Once after 15 minutes Maximum Total Dose: <b>100mg</b>
< 1 year of age	IM/IV	Initial Dose: <b>25mg</b> Repeat: Once after 15 minutes Maximum Total Dose: <b>50mg</b>