

TREATMENT

An Adrenal Crisis is a potentially life-threatening situation and requires immediate emergency treatment. Treatment should not be delayed under any circumstances.

Hydrocortisone or dexamethasone should be given IM (intramuscular) or IV (intravenous).

Dosing	Hydrocortisone or	Dexamethasone
Adult	100 mg	4 mg
Child	2 mg/kg *	0.03 – 0.15 mg/kg *
	max of 100 mg *	max. of 4 mg

* 1 kg = 2.2lbs

The injection usually brings rapid improvement but possibly needs to be combined with intravenous fluids for rehydration and treatment of the underlying precipitating factors.

Following injection patients should contact their physician or go to the nearest emergency department

Reference

B. Allolio:

EXTENSIVE EXPERTISE IN ENDOCRINOLOGY: Adrenal crisis.

European Journal of Endocrinology, 2015. 172 (3): R115–R124

<https://doi.org/10.1530/EJE-14-0824>

PREVENTION

People with diagnosed adrenal insufficiency should

- never stop taking their medication,
- recognize the symptoms of a beginning adrenal crisis,
- know how and when to give an emergency injection.

To ensure that emergency personnel recognizes the condition as quickly as possible, they should:

- wear a medical alert bracelet,
- carry a medical treatment letter from their endocrinologist,
- carry an emergency kit incl. syringes and needles.

For more information about Adrenal Insufficiency including research papers, published guidelines, and compilations of information, visit:

www.adrenalinsufficiency.org



Adrenal Insufficiency Coalition
Working together to promote change.

P.O. Box 354

Smith Center, KS 66967

USA

www.adrenalinsufficiency.org



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ADRENAL CRISIS

Symptoms, Treatment
and Prevention



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ADRENAL CRISIS

What is an Adrenal Crisis?

An Adrenal Crisis (also called Acute Adrenal Insufficiency or Addisonian Crisis) is a potentially life-threatening situation and requires immediate emergency treatment. It occurs when the body can't make enough cortisol to maintain homeostasis. Losing homeostasis causes the body to go into shock and may even cause death.

Who is at risk?

Anyone unable to produce cortisone as a response to stress can develop an adrenal crisis, including people

- with autoimmune diseases, head injuries, or symptoms severe enough to interfere with daily function,
- under long term steroid treatment for another condition, such as asthma or cancer,
- with diagnosed adrenal insufficiency under hormone replacement therapy.

While a fixed daily dose of hydrocortisone should be sufficient to maintain all bodily functions under normal circumstances, it may not be high enough to cover acute stress situations. Therefore, any stress that, for a healthy person, seems minor or easily manageable requires taking additional hydrocortisone (also called "stress dosing") or may otherwise lead to an Adrenal Crisis.

What causes an Adrenal Crisis?

The most frequent cause of an Adrenal Crisis is an infection such as the "stomach flu" with diarrhea and vomiting, pneumonia, or respiratory / urinary tract infections. It also occurs due to extreme or sudden physical or emotional stress such as surgery, trauma or an accident.

How quickly does an Adrenal Crisis develop?

The threshold to progressing to an adrenal crisis differs from person to person and situation to situation. On average, an Adrenal Crisis develops over a few hours, but there are substantial variations from minutes (for instance if caused by an accident or acute trauma) to days (infection).

There is also an uneven distribution in the occurrence of crises, as some people do not experience a single adrenal crisis for decades, while others do so recurrently. However, the incidence increases with age, especially above 50 years of age.

Patients taking steroids for any condition should discuss the possibility of an adrenal crisis with their physicians

SYMPTOMS

What are the symptoms of an Adrenal Crisis?

In addition to the symptoms of the triggering cause (e.g. stomach or respiratory flu, accident), the symptoms are non-specific and patients may present some or all of them. In general, three or more of the following symptoms may indicate an impending adrenal crisis:

Acute symptoms

- extreme fatigue
- nausea,
- dizziness / low blood pressure,
- body aches, abdominal pain,
- depression and/or brain fog

Chronic symptoms

- weight loss,
- new menstrual or sex hormone abnormalities (changes in hair or sexual function).

Patients are advised to monitor their blood pressure and contact their physicians if it drops below 100/60 mmHg.

It is possible to have an atypical crisis. Blood pressure can rise instead of fall. This may be from comorbidities or from the body's attempt to maintain homeostasis. The patient must be stabilized with steroids to avoid a cardiac event before addressing the precipitating cause.

Important facts about Adrenal Insufficiency

Learn more at www.adrenalinsufficiency.org

1. Recognition of Adrenal Insufficiency is often delayed as the symptoms are similar to other illnesses.
2. Approximately 6% of patients with Adrenal Insufficiency die of Adrenal Crisis without being diagnosed.
3. Recognizing populations at risk can help get treatment in time and reduce deaths.
4. At-risk categories include patients taking steroids for another condition and people with hormone deficiencies, autoimmune diseases, or head injuries.

