

What is Acute Adrenal Insufficiency?

Rare, but important to be aware of.

If your child does not have enough cortisol, then blood pressure and blood sugar can become quite low, causing acute adrenal insufficiency.

Acute adrenal insufficiency is a medical emergency.

Signs and symptoms of acute adrenal insufficiency include:

- nausea or vomiting
- cold, clammy skin
- fast heart rate and breathing rate
- weakness, very tired
- dizzy, confused
- pale face, dark circles under the eyes
- signs of dehydration (dry tongue, thirst)
- lower body temperature
- severe pains in the stomach, legs and back
- loss of consciousness

If your child has any of these signs and symptoms, seek medical attention right away. Make sure you tell medical providers that your child might be susceptible to adrenal insufficiency.

Acute adrenal insufficiency is managed by the prompt administration of high doses of cortisol.

Safety

In Children

At Risk of Cortisol

Deficiency

This information is provided by the Endocrine Clinic at Alberta Children's Hospital

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What is cortisol?

Cortisol is a hormone that helps the body keep:

- blood pressure normal
- blood sugar normal

Cortisol is especially important when the body must cope with:

- infection
- an injury or illness
- an operation or surgical procedure

What is cortisol deficiency?

Cortisol deficiency occurs when the body does not make enough cortisol to meet its needs.

What causes cortisol deficiency?

Cortisol is released by the adrenal glands that sit on top of the kidneys. There are many reasons for cortisol deficiency. The most common cause occurs when a child has, **out of necessity**, been treated with larger doses of corticosteroids (inhaled, oral, creams, or any other form) for long periods of time

If treatment has gone on for a long time, a child's adrenal glands may turn down their own cortisol making abilities. This is appropriate, but can cause problems if there is a sudden need by the body for more cortisol. This can happen when the body is stressed or fighting an illness or infection.

How do I know if my child might be susceptible to low cortisol levels?

Your doctor or nurse will tell you if the dose and length of time corticosteroid medication is prescribed might make your child susceptible.

What are *possible* signs and symptoms that a child's body is not making enough cortisol?

- tired
- no interest in usual activities
- nausea, particularly in morning
- vomiting
- weight loss/hard to gain weight
- stomach or back pain
- pale colour
- fainting
- fever

How is cortisol deficiency diagnosed?

It is challenging to diagnose cortisol deficiency and a few different tests may be required. The best way is to be aware of the signs and symptoms of cortisol deficiency so you can call for advice or visit a doctor in a timely fashion.

IMPORTANT NOTE: Your child's corticosteroid dose should only be changed after a discussion with your doctor. Decreasing or stopping corticosteroids too abruptly may actually make your child feel worse.

How is cortisol deficiency treated?

A doctor may prescribe extra cortisol in the form of a cortisol-type medicine to help your child fight an illness or infection. This is sometimes done as a precaution when the child's true cortisol state is not known, but deficiency is suspected.

Cortisol deficiency is usually treatable. If the dose of corticosteroids can be reduced and kept down over a period of several months, the adrenal glands should begin to work normally again and produce enough cortisol for the body's needs.

What special situations might require cortisol treatment?

Illness and injury create stress in the body. During times of stress, your body needs extra cortisol. Stress includes:

- fever of 38.5 °C or higher
- illness causing lethargy (very tired), vomiting or diarrhea
- any infection
- any injury requiring stitches or a broken bone
- an anesthetic for a medical or dental treatment, special x-rays or surgery