

Adrenal Insufficiency

What causes adrenal insufficiency?

Adrenal insufficiency is where the adrenal glands can no longer produce a normal amount of hormones, specifically cortisol. Adrenal insufficiency occurs when the adrenal glands are damaged in the following ways:

- An infection
- Your immune system
- Cancer
- Removed during surgery

This is called primary adrenal insufficiency. Your pituitary gland secretes a hormone called adrenocorticotropic hormone (ACTH). The adrenal glands also make cortisol in response to this hormone. When ACTH is no longer present because of a pituitary disorder then it's called secondary adrenal insufficiency. Some people develop this condition when they have been taking steroids for a long time and then stop quickly.

Having adrenal insufficiency is a life-long condition. Most people with adrenal insufficiency live very normal and active lives with prescribed medications. If you are not properly treated for this condition, you may be at risk for very serious health issues.

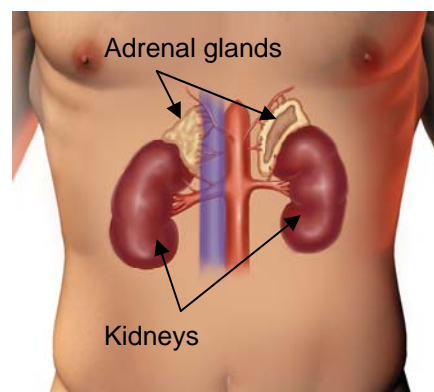
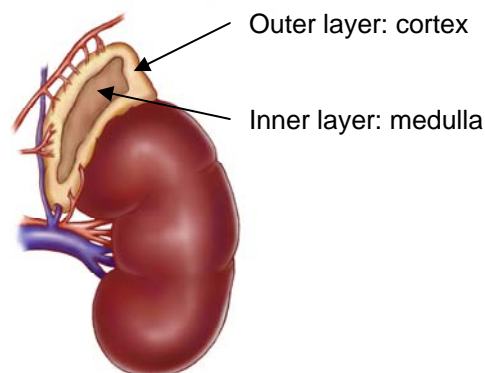
What are the adrenal glands?

Your body has two adrenal glands. Each gland is located above each kidney. The adrenal glands produce hormones that your body needs to function properly.

Glucocorticoid (cortisol) is a hormone produced by the adrenal gland. It is used to:

- Fight stress
- Maintain blood pressure
- Maintain sugar levels
- Appetite control
- Help with muscle strength

If you do not have enough cortisol you may become tired, weak, lose weight or have an upset stomach. Not having enough of this hormone is very serious; if you are not



treated it can cause death.

Mineralocorticoid (aldosterone) is also a hormone produced by the adrenal gland. Its main purpose is to help maintain the salt in your body. Without this hormone, you can become dehydrated. That can lead to low blood pressure. If left untreated you can develop low salt and high potassium in your blood which can cause fatigue, drowsiness and changes in your heart rhythm.

What are the symptoms of adrenal insufficiency?

Symptoms of adrenal insufficiency are:

- Nausea
- Vomiting
- Weakness
- Poor appetite
- Weight loss
- Muscle aches
- Dizziness when you stand

There are tests that can determine if you have adrenal insufficiency. Your doctor will decide if you need to have these tests done.

How is adrenal insufficiency treated?

This condition is generally treated with medications. A cortisol replacement is taken by mouth once or twice a day. You may be prescribed hydrocortisone, prednisone, or dexamethasone. If you are deficient of the hormone aldosterone, you may take a medication called fludrocortisone. Once the proper dose of medicine is taken, you can expect to feel much better. These medications are steroids and there are side effects involved with their use. Taking too much can cause weight gain, difficulty sleeping, acne or high blood pressure.

Your medication(s) is (are):

What do I need to do if I get sick or have a medical procedure?

Normally when you're sick your body will make cortisol in order to maintain normal blood pressure and sustain normal body functions. When you have adrenal insufficiency your body cannot do this for you. You will need to increase your medication.

You should double the dose of your medication in these circumstances:

- A fever over 101 degrees

- A severe cold
- The flu
- Vomiting
- Diarrhea
- Minor physical injuries



Always contact your doctor for treatment of your illness. If you have a more serious injury or illness, call your endocrinologist. Not doing so can have severe implications.

Continue the increased dosage of medication until the worst of the illness is gone. After that you can return to the normal dose. Call your endocrinologist if you do not start to feel better after a few days and you feel you need a higher dose of medicine.

If you are taking fludrocortisones, you **do not** need to increase your dose. Continue to take the fludrocortisones regularly.



If you are unable to take your medication by mouth for any reason, it is **extremely important** to take the emergency injection supplied to you. If you cannot take the emergency injection, have a family member give it to you. If that is not an option, call 911. If you use the emergency injection contact your physician immediately and go to your nearest emergency center.

Extra medication is not generally required for X-rays and other tests like that. If you have other procedures like a colonoscopy or dental work, be sure to contact your endocrinologist.

Should I wear medical identification?

It is a good idea to wear a medical alert bracelet or tag and carry an emergency ID card. It should read that you have “Adrenal Insufficiency” or “Steroid Dependent”. Be sure to include any other conditions you may have, like diabetes. Your ID card should have emergency contact information, your doctor and a current list of medications. You can buy a bracelet from www.medicalert.org.

What should I do when I travel?

You should carry extra medication when you travel in case in you are delayed. It is strongly recommended that you also have your Solu-Cortef[®] Act-O-Vial with syringes in case you become severely ill or hurt and are not near a hospital. Keep in mind, these should be clearly labeled with your doctor’s prescription.