

Addison's Disease

(Adrenal Insufficiency; Adrenocortical Hypofunction; Chronic Adrenocortical Insufficiency)

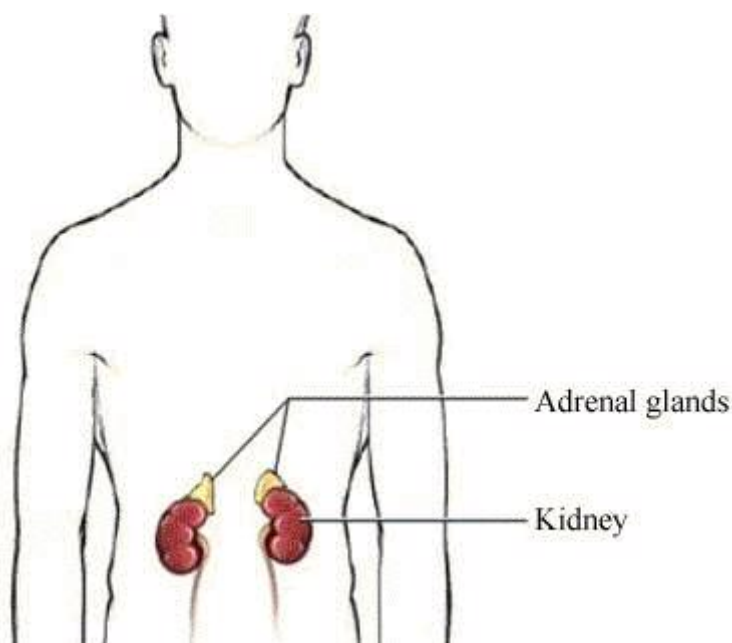
by Michelle Badash, MS

En Español (Spanish Version)

Definition

Addison's disease is a rare disorder of the adrenal glands, in which they do not produce enough of the hormones cortisol and aldosterone. The adrenal glands are two small glands that sit on top of each kidney.

Adrenal Glands



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Causes

Addison's disease is the result of gradual damage to the adrenal cortex, the outer layer of the adrenal gland. This damage may be caused by:

- The body's immune system attacking the gland (autoimmune disease)
- Tuberculosis
- Bleeding within the adrenal glands (related to use of anticoagulant medications and shock)
- Surgical complication
- Congenital or genetic factors (enzyme defects, familial glucocorticoid insufficiency)
- Cytomegalovirus (CMV) associated with AIDS
- Fungal infections, including:
 - Blastomycosis

- Histoplasmosis
- Coccidioidomycosis
- Cancer including metastases from:
 - Breast, lung, kidney, or colon cancer
 - Lymphoma
 - Kaposi's sarcoma
- Long-term corticosteroid treatment
- Bleeding within the adrenal glands (related to use of anticoagulant medications and shock)
- Medications (such as ketoconazole or etomidate)
- Radiation treatment
- Chronic illness, including:
 - Sarcoidosis
 - Hemochromatosis
 - Amyloidosis
 - Adrenoleukodystrophy
 - Adrenomyelodystrophy

Risk Factors

A risk factor is something that increases your chance of getting a disease or condition.

Risk factors include:

- Having the following autoimmune diseases can be a risk for an associated autoimmune-based Addison's disease:
 - Type 1 diabetes
 - Pernicious anemia
 - Hypoparathyroidism
 - Hypopituitarism
 - Gonadal collapse
 - Hyperthyroidism (Grave's disease) or hypothyroidism (Hashimoto's disease)
 - Myasthenia gravis
- Stress
- Anticoagulant medications
- Abdominal injury
- Family members with autoimmune-caused Addison's disease
- Long-term steroid medication treatment, followed by:
 - Severe stress
 - Infection
 - Surgery
 - Trauma
- Previous surgery on adrenal glands

Symptoms

Symptoms may include:

- Extreme weakness, fatigue
- Weight loss
- Nausea or vomiting
- Chronic diarrhea
- Muscle weakness
- Darkening of freckles, nipples, scars, skin creases, gums, mouth, nail beds, and vaginal lining

- Emotional changes, especially depression
- Craving for salty foods
- Abdominal pain
- Headache
- Sweating
- Painful joints or muscle

A severe complication of Addison's disease is Addison's crisis or adrenal crisis. Symptoms include:

- Severe abdominal, back, or leg pain
- Fainting
- Severe low blood pressure
- Dehydration
- Nausea, vomiting, and diarrhea
- Low blood sugar

Diagnosis

The doctor will ask about your symptoms and medical history, and perform a physical exam.

Tests may include:

- **Blood and urine tests** – to see if you have low levels of cortisol and aldosterone, high level of ACTH, and to measure level of:
 - Antiadrenal antibody
 - Sodium
 - Potassium
 - Bicarbonate
 - Blood urea nitrogen levels
- **ACTH stimulation test** – measures cortisol in the blood and/or urine before and after an injection of ACTH (ACTH is a hormone that stimulates the adrenal glands.)
- **Insulin-induced hypoglycemia test** – measures glucose and cortisol levels in the blood before and after an injection of insulin
- **X-rays** – pictures of the abdomen to see if the adrenal glands have signs of calcium deposits
- **CT scan** – a series of x-ray pictures of the adrenal glands

Treatment

Symptoms of Addison's disease can be controlled with medications that replace the hormones that are missing. Medication needs to be taken for the rest of your life, and may be increased in times of stress.

Medications may include:

- Cortisone acetate
- Hydrocortisone tablets
- Fludrocortisone acetate (Florinef)

Immediate treatment of adrenal crisis includes:

- Hydrocortisone
- Saltwater
- Sugar

Maintenance: See your doctor regularly for blood tests to monitor your response to medication. Wear a medical alert bracelet in case of an emergency.

Prevention

There are no guidelines for preventing Addison's disease. If you think you are at risk for Addison's disease, talk to your doctor about how to diagnose and manage your symptoms.

RESOURCES:

National Institute of Diabetes and Digestive and Kidney Diseases
<http://www.niddk.nih.gov>

Ten S, New M, Maclaren N. Clinical Review 130: Addison's disease. *J Clin Endo Metabol* .2001;86:2909-922.

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