



Adrenal Incidentaloma

WHAT IS AN ADRENAL INCIDENTALOMA?

An adrenal incidentaloma is an unsuspected tumor in one or both of your adrenal glands. This type of tumor is usually found by chance during an imaging test, such as an ultrasound or CT scan, for another condition. A tumor can be benign (non-cancerous) or malignant (cancerous).

WHAT ARE THE ADRENAL GLANDS AND WHAT DO THEY DO?

You have two adrenal glands—one on top of each of your kidneys. Your adrenal glands make several important hormones. If your adrenal glands make too little or too much of these hormones, you can get sick.

DID YOU KNOW?

Your risk for an adrenal incidentaloma increases as you get older.

WHAT CAUSES AN ADRENAL INCIDENTALOMA?

There are a number of causes. Some causes can make your adrenal glands produce too much of a hormone. This type of tumor is called a hormonally active or functional tumor. Hormonally active causes include

- Cushing syndrome or subclinical hypercortisolism: conditions caused by too much cortisol
- Hyperaldosteronism: too much aldosterone

- A pheochromocytoma: a rare tumor in the adrenal glands that leads to too much epinephrine and norepinephrine
- Congenital adrenal hyperplasia: an inherited condition in which the adrenal glands make too little cortisol and aldosterone, and too much androgen
- Cancer of the adrenal gland with too much cortisol, adrenal androgens, and/or aldosterone

Other types of causes do not result in excess hormone production. This type of tumor is called a non-functional tumor. Causes include

- An adenoma (a non-cancerous tumor in the adrenal glands)
- Cancer of the adrenal gland or spread of cancer from elsewhere in the body

ADRENAL HORMONES AND WHAT THEY DO

Name	Function
Cortisol	Helps the body cope with stress, illness, and injury. Helps regulate blood sugar (glucose) and blood pressure levels.
Aldosterone	Helps keep a proper balance of salt and water in the body. Regulates blood volume, blood pressure, and levels of potassium in the blood.
Adrenal androgens	Contribute to pubic and armpit hair growth and body odor in men and women.
Epinephrine (adrenaline)	In response to fear, stress, or excitement, raises blood pressure, increases heart rate, helps the body take in oxygen, and increases blood supply to the muscles.
Norepinephrine (noradrenaline)	Helps with body function for regular activities.

- Cysts in or on the adrenal glands
- Other less common conditions, such as tumors filled with fat and blood cells

WHAT ARE THE SYMPTOMS OF AN ADRENAL INCIDENTALOMA?

Symptoms vary depending on whether the tumor is non-functional or functional, and which, if any, hormones are produced in excess.

Symptoms of too much cortisol can include

- Weight loss or weight gain (especially around the face and abdomen)
- Purplish skin stretch marks or skin that's easily bruised
- Acne
- Muscle weakness
- Depression, anxiety, fatigue, and sleep disturbances
- In women, excess facial and body hair and/or irregular periods

High levels of cortisol can also cause high blood pressure, high blood sugar, and low bone density (when the tissue inside your bones starts to thin).

Symptoms of too much norepinephrine or epinephrine can include

- Fast or irregular heartbeat
- Sweating
- Severe headaches
- Shakiness
- Pale face

High levels of these hormones can also cause high blood pressure.

High levels of aldosterone can cause high blood pressure, which can be life-threatening if not treated, and sometimes muscle weakness.

HOW IS AN ADRENAL INCIDENTALOMA EVALUATED?

Your doctor will evaluate your tumor to identify its cause and hormone production. This may include

- Your medical history
- A review of your symptoms
- A physical exam: a check of your blood pressure, pulse rate, body weight, and other signs
- Blood and/or urine tests to check hormone levels and to rule out pheochromocytomas
- Results of genetic tests (as needed)

Your doctor also will need to know your family history of adrenal tumors, other kinds of tumors, syndromes that come with tumors, high blood pressure, or Cushing syndrome.

WHAT IS THE TREATMENT FOR AN ADRENAL INCIDENTALOMA?

About 85 percent of adrenal tumors are non-functioning and may not need treatment. Sometimes surgery is needed to remove the tumor, or one or both adrenal glands. Your medical team will decide whether you need surgery based on your type of tumor (benign or cancerous) and whether it is producing hormones. Some people may need hormone treatment. If you have an inherited tumor syndrome, you may need genetic counseling.

If you've had an adrenal incidentaloma, you may need regular follow-up, perhaps for several years.

Questions to ask your doctor

- What caused my tumor?
- What tests do I need?
- What are my options for treatment?
- What are the risks and benefits of each treatment option?
- How long will I need treatment?
- How often will I need check-ups?
- Should I see an endocrinologist?

RESOURCES

- Find-an-Endocrinologist (Hormone Health Network): www.hormone.org/contact-a-health-professional/find-an-endocrinologist or call 1-800-HORMONE (1-800-467-6663)
- MedlinePlus (National Institutes of Health): www.nlm.nih.gov/medlineplus/adrenalglanddisorders.html#cat1
- The Urology Care Foundation: www.urologyhealth.org/urology/index.cfm?article=89

EDITORS

Lynnette Nieman, MD
Phyllis Speiser, MD
William F. Young, Jr., MD

The Hormone Health Network offers free, online resources based on the most advanced clinical and scientific knowledge from The Endocrine Society (www.endo-society.org). The Network's goal is to move patients from educated to engaged, from informed to active partners in their health care. This fact sheet is also available in Spanish at www.hormone.org/Spanish.

