

Hyperthyroidism

The thyroid gland is located at the base of the neck, in front of the trachea (windpipe) and esophagus (tube that connects the mouth with the stomach). The thyroid produces thyroid hormone, which helps regulate many body functions. In hyperthyroidism, the thyroid is overactive and produces more thyroid hormone than the body needs. Women are more likely than men to have hyperthyroidism, and it affects younger persons more than elderly persons. This Patient Page is based on one published in the July 6, 2005, issue of JAMA.

CAUSES

More than 70% of cases of hyperthyroidism are related to **Graves disease**, an **autoimmune** disorder in which the body produces antibodies to its own tissues. These antibodies cause the thyroid to make too much thyroid hormone. Some persons with Graves disease develop an eye condition called **exophthalmos**, in which the eyes begin to protrude because of swelling of tissues behind the eye. Smoking cigarettes greatly increases the risk of a more severe eye problem among persons with Graves disease. Other medical problems that can cause hyperthyroidism are **toxic nodular goiter** (areas of the thyroid enlarge and make too much thyroid hormone), **subacute thyroiditis** (inflammation of the thyroid), exposure to iodine in medications or x-ray dyes, and **postpartum thyroiditis** (inflammation of the thyroid after a pregnancy).

SYMPTOMS

- Weight loss without eating less or exercising more
- **Palpitations** (rapid heart rate) or abnormal heart rhythms
- Heat intolerance and sweating
- Nervousness
- Tremors (shakiness of the hands)
- Eyes that appear to protrude

Symptoms may be less severe or even absent in older persons with hyperthyroidism.

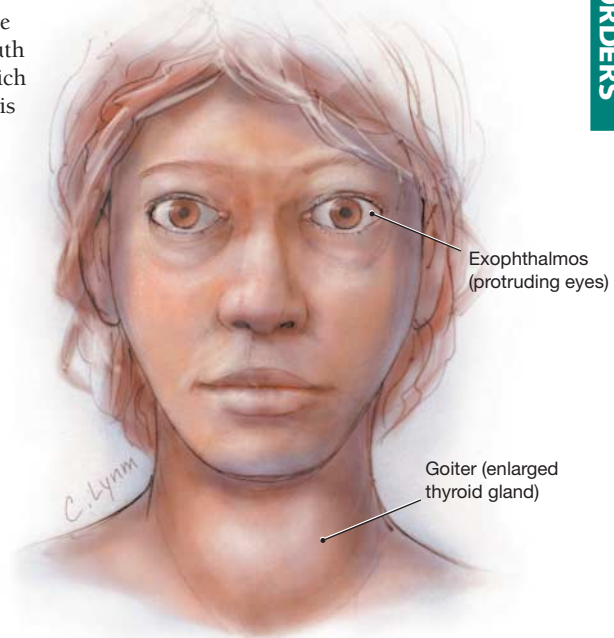
DIAGNOSIS

Your medical history and a physical examination may indicate the possibility of hyperthyroidism. Simple blood tests show the presence of too much thyroid hormone as well as an abnormally low level of the hormone called **TSH (thyroid-stimulating hormone)**. A thyroid scan may be performed using an injection or pill containing a small amount of radioactive material. This test looks for areas of abnormal function within the thyroid gland.

TREATMENT

Treatment of hyperthyroidism depends on the cause. Graves disease may be treated with medications known as antithyroid drugs, radioactive iodine, or surgery to remove the thyroid gland.

Hyperthyroidism in Graves disease



FOR MORE INFORMATION

- The Hormone Foundation
www.hormone.org
- American Thyroid Association
www.thyroid.org
- Graves' Disease Foundation
www.ngdf.org/

INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page link on JAMA's Web site at www.jama.com. A Patient Page on subclinical hypothyroidism was published in the September 22/29, 2010, issue and one on thyroid nodules was published in the December 1, 2004, issue.

Sources: The Hormone Foundation, American Thyroid Association, Thyroid Foundation of America

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