

Hyperthyroidism (Overactive Thyroid)

Hyperthyroidism is a condition in which an excessive amount of thyroid hormone is secreted by the thyroid gland, a butterfly-shaped gland located at the base of the neck. The primary function of thyroid hormone is to regulate metabolism of the body. When too much thyroid hormone is produced, the body's metabolism speeds up.

Causes of Hyperthyroidism

- **Grave's disease**- an autoimmune disease that stimulates the thyroid gland to overproduce thyroid hormone. This disease is usually hereditary and occurs more often in females.
- **Toxic nodular or multinodular goiter**- nodules or benign lumps in the thyroid gland gradually increase in size and overproduce thyroid hormone.
- **Thyroiditis** – inflammation of the thyroid gland causing excess stored thyroid hormone to leak into the bloodstream.

Signs and Symptoms of Hyperthyroidism

- Weight loss (despite an increase in appetite and food intake)
- Anxiety, nervousness and irritability
- Rapid or irregular heart rate
- Muscle weakness
- Difficulty sleeping
- Intolerance to heat and increased sweating
- Irregular menstrual periods in women
- Bulging eyeballs
- Swelling of the front of the neck

Hyperthyroidism can mimic other underlying health conditions. In the elderly, symptoms may be subtle or absent.

Diagnosis of Hyperthyroidism

- A physical exam to check for an enlarged thyroid gland, a rapid pulse, tremors, reflexes, eye changes.
- A blood test to measure the amount of thyroid hormones in the blood. A high level of

T-3 and T-4 hormones and a low level of Thyroid Stimulating Hormone (TSH) indicate hyperthyroidism.

- A radioactive iodine uptake test to determine how much iodine is absorbed by the thyroid gland. A high uptake indicates hyperthyroidism.
- A thyroid scan to obtain an image of the thyroid gland.

Treatment for Hyperthyroidism

1. **Anti-thyroid medications** to block the production of new thyroid hormone in the body.
2. **Beta blocker drugs** to block the action of thyroid hormone, and reduce rapid heart rate and palpitations.
3. **Radioactive iodine** taken orally, in a small capsule, to shrink and destroy the thyroid gland. The cells in the thyroid gland need iodine to make thyroid hormone. The radioactive iodine is quickly taken up by the overactive thyroid cells and begins to slowly damage the cells. Since this treatment can lead to hypothyroidism (underactive thyroid), most individuals need to take replacement thyroid hormone for the rest of their lives.
4. **Thyroidectomy** to surgically remove the thyroid gland when anti-thyroid drugs are not tolerated. Lifelong treatment with thyroid hormone pills is necessary after surgery.

Untreated hyperthyroidism can lead to problems of the heart, eye, skin and bones. If you are experiencing any of the described symptoms, be sure to meet with your primary care physician to obtain a proper diagnosis of the problem.

For more information on thyroid diseases:
American Thyroid Association
www.thyroid.org