



Hyperthyroidism

What is hyperthyroidism?

The term hyperthyroidism (also known as an overactive thyroid gland) refers to any condition in which too much thyroid hormone is produced in the body. Hyperthyroidism is quite common and affects women more commonly than men. If hyperthyroidism is very mild, you may not have any symptoms; however most often patients are symptomatic. Sometimes hyperthyroidism is confused with *hypothyroidism*, a condition where not enough thyroid hormone is being produced.

What are the symptoms of hyperthyroidism?

- Enlargement of your thyroid gland
- Weight loss despite unchanged eating or exercise habits
- Fast heart rate
- Increased nervousness or irritability
- Heat intolerance or increased sweating
- Hair loss and rapid growth of nails
- Changes in your menstrual periods
- Increased appetite or more frequent bowel movements
- Visual changes (redness, dryness, and/or blurry vision)
- Protrusion of the eyes (in some patients with Graves' disease)

What are the causes of hyperthyroidism?

- Graves' disease (named after Irish doctor Robert Graves) is an autoimmune disorder where the body makes antibodies that attack the thyroid gland. This usually results in an enlarged thyroid gland and hyperthyroidism. Please see our separate educational piece on *Graves' hyperthyroidism*
- Toxic nodule or toxic multi-nodular goiter: a disorder where a single nodule [lump or mass] or multiple nodules in the thyroid gland produce excess (toxic) amounts of thyroid hormone
- Thyroiditis: an inflammatory process in the thyroid gland leading to release of excess amounts of thyroid hormone into the blood stream. This condition can be caused by a disorder of the immune system, a viral infection or can occur within several months of giving birth
- Excessive iodine ingestion or overmedication with thyroid hormone: taking excessive amounts of iodine (in the form of sea kelp, thyroid helper tablets or certain heart medications) or taking excessive amounts of thyroid medication can also lead to high thyroid hormone levels in the bloodstream



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How is hyperthyroidism diagnosed?

Your physician will look for characteristic symptoms and signs of an overactive thyroid gland. Tests can be used to confirm the diagnosis and determine the cause. Blood tests measure the amount of thyroid hormones (thyroxine-T4, triiodothyronine-T3, and thyroid hormone stimulating hormone-TSH) in the blood stream. Sometimes a radioactive iodine uptake and scan of your thyroid, which is a measurement and image of how much iodine is taken up into your thyroid gland and how the iodine is distributed, is needed to determine the cause of hyperthyroidism.

How is hyperthyroidism treated?

You and your endocrinologist will determine what is best in your case, but treatment can include one or more of the following:

- Antithyroid medications lower the amount of thyroid hormone being produced in your thyroid gland. Two antithyroid medications are commonly used: Methimazole (Tapazole or MMI) or Propylthiouracil (PTU).
- Beta blockers (Propranolol, Metoprolol or others) reduce the symptoms of hyperthyroidism and make patients more comfortable but do not treat the underlying disorder.
- Radioactive Iodine (I-131) treatment uses a small and safe amount of radiation to destroy your thyroid gland, thereby curing your hyperthyroidism. This treatment usually results in hypothyroidism that is easily treated with life-long thyroid hormone replacement. See our educational piece on *Radioactive Iodine for Hyperthyroidism*.
- Surgery (thyroidectomy) also leads to cure as most or all of the thyroid is removed. This also leads to hypothyroidism, and thyroid hormone replacement is needed for the rest of your life. See our educational piece on *Thyroid Surgery*.