

Definition: **hyperthyroidism** from *Collins English Dictionary*

n

1 overproduction of thyroid hormone by the thyroid gland, causing nervousness, insomnia, sweating, palpitation, and sensitivity to heat Also called: **thyrotoxicosis** See exophthalmic goitre

> ,hyper'thyroid *adj, n*

Summary Article: **Hyperthyroidism**

From *Health Reference Series: Endocrine & Metabolic Disorders Source Book*

What Is Hyperthyroidism?

¹Hyperthyroidism, also called overactive thyroid, is when the thyroid gland makes more thyroid hormones than your body needs. The thyroid is a small, butterfly-shaped gland in the front of your neck. Thyroid hormones control the way the body uses energy, so they affect nearly every organ in your body, even the way your heart beats.

If left untreated, hyperthyroidism can cause serious problems with the heart, bones, muscles, menstrual cycle, and fertility. During pregnancy, untreated hyperthyroidism can lead to health problems for the mother and baby.

How Common Is Hyperthyroidism?

About 1.2 percent of people in the United States have hyperthyroidism. That's a little more than 1 person out of 100.

Who Is More Likely to Develop Hyperthyroidism?

Women are 2 to 10 times more likely than men to develop hyperthyroidism. You are more likely to have hyperthyroidism if you

- have a family history of thyroid disease
- have other health problems, including
 - type 1 diabetes
 - pernicious anemia, a condition caused by a vitamin B12 deficiency
 - primary adrenal insufficiency, a hormonal disorder
- eat large amounts of food containing iodine, such as kelp, or use medicines that contain iodine, such as amiodarone, a heart medicine
- are older than age 60, especially if you are a woman
- were pregnant within the past 6 months

Is Hyperthyroidism during Pregnancy a Problem?

Thyroid hormone levels that are just a little high are usually not a problem in pregnancy. However, more severe hyperthyroidism that isn't treated can affect both the mother and the baby. If you have hyperthyroidism, be sure your disease is under control before becoming pregnant.

What Other Health Problems Could I Have Because of Hyperthyroidism?

If hyperthyroidism isn't treated, it can cause some serious health problems, including

- an irregular heartbeat that can lead to blood clots, stroke, heart failure, and other heart-related problems
- an eye disease called Graves ophthalmopathy that can cause double vision, light sensitivity, and eye pain, and rarely can lead to vision loss
- thinning bones and osteoporosis

What Are the Symptoms of Hyperthyroidism?

Symptoms of hyperthyroidism can vary from person to person and may include:

- Fatigue or muscle weakness
- Frequent bowel movements or diarrhea
- Goiter
- Mood swings
- Nervousness or irritability
- Rapid and irregular heartbeat
- Shaky hands
- Trouble sleeping
- Trouble tolerating heat
- Weight loss

In people over age 60, hyperthyroidism is sometimes mistaken for depression or dementia. Older adults may have different symptoms, such as loss of appetite or withdrawal from people, than younger adults with hyperthyroidism. You may want to ask your healthcare provider about hyperthyroidism if you or your loved one show these symptoms.

What Causes Hyperthyroidism?

Hyperthyroidism has several causes, including Graves disease, thyroid nodules, and thyroiditis— inflammation of the thyroid. Rarely, hyperthyroidism is caused by a noncancerous tumor of the pituitary gland located at the base of the brain. Consuming too much iodine or taking too much thyroid hormone medicine also may raise your thyroid hormone levels.

Graves Disease

Graves disease is the most common cause of hyperthyroidism. Graves disease is an autoimmune disorder. With this disease, your immune system attacks the thyroid and causes it to make too much thyroid hormone.

Overactive Thyroid Nodules

Thyroid nodules are lumps in your thyroid. Thyroid nodules are common and usually benign, meaning they are not cancerous. However, one or more nodules may become overactive and produce too much thyroid hormone. The presence of many overactive nodules occurs most often in older adults.

Thyroiditis

Thyroiditis is inflammation of your thyroid that causes stored thyroid hormone to leak out of your thyroid gland. The hyperthyroidism may last for up to 3 months, after which your thyroid may become underactive, a condition called hypothyroidism. The hypothyroidism usually lasts 12 to 18 months, but sometimes is permanent.

Several types of thyroiditis can cause hyperthyroidism and then cause hypothyroidism:

- Silent thyroiditis
- Subacute thyroiditis
- Postpartum thyroiditis

Too Much Iodine

Your thyroid uses iodine to make thyroid hormone. The amount of iodine you consume affects the amount of thyroid hormone your thyroid makes. In some people, consuming large amounts of iodine may cause the thyroid to make too much thyroid hormone.

Some medicines and cough syrups may contain a lot of iodine. One example is the heart medicine amiodarone. Seaweed and seaweed-based supplements also contain a lot of iodine.

Too Much Thyroid Hormone Medicine

Some people who take thyroid hormone medicine for hypothyroidism may take too much. If you take thyroid hormone medicine, you should see your doctor at least once a year to have your thyroid hormone levels checked. You may need to adjust your dose if your thyroid hormone level is too high.

Some other medicines may also interact with thyroid hormone medicine to raise hormone levels. If you take thyroid hormone medicine, ask your doctor about interactions when starting new medicines.

How Do Doctors Diagnose Hyperthyroidism?

Your doctor will take a medical history and do a physical exam, but also will need to do some tests to confirm a diagnosis of hyperthyroidism. Many symptoms of hyperthyroidism are the same as those of other diseases, so doctors usually can't diagnose hyperthyroidism based on symptoms alone.

Because hypothyroidism can cause fertility problems, women who have trouble getting pregnant often get tested for thyroid problems.

Your doctor may use several blood tests to confirm a diagnosis of hyperthyroidism and find its cause. Imaging tests, such as a thyroid scan, can also help diagnose and find the cause of hyperthyroidism.

What Are My Hyperthyroidism Treatment Options?

You may receive medicines, radioiodine therapy, or thyroid surgery to treat your hyperthyroidism. The aim of treatment is to bring thyroid hormone levels back to normal to prevent long-term health problems and to relieve uncomfortable symptoms. No single treatment works for everyone.

Treatment depends on the cause of your hyperthyroidism and how severe it is. When recommending a treatment, your doctor will consider your age, possible allergies to or side effects of the medicines, other conditions such as pregnancy or heart disease, and whether you have access to an experienced thyroid surgeon.

Medicines

Beta blockers.

Beta blockers do not stop thyroid hormone production, but can reduce symptoms until other treatments take effect. Beta blockers act quickly to relieve many of the symptoms of hyperthyroidism, such as tremors, rapid heartbeat, and nervousness. Most people feel better within hours of taking beta blockers.

Antithyroid medicines.

Antithyroid therapy is the simplest way to treat hyperthyroidism. Antithyroid medicines cause the thyroid to make less thyroid hormone. These medicines usually don't provide a permanent cure. Healthcare providers most often use the antithyroid medicine methimazole. Healthcare providers more often treat pregnant women with propylthiouracil during the first 3 months of pregnancy, however, because methimazole can harm the fetus, although this happens rarely.

Once treatment with antithyroid medicine begins, your thyroid hormone levels may not move into the normal range for several weeks or months. The total average treatment time is about 1 to 2 years, but treatment can continue for many years. Antithyroid medicines are not used to treat hyperthyroidism caused by thyroiditis.

Antithyroid medicines can cause side effects in some people, including

- a decrease in the number of white blood cells in your body, which can lower resistance to infection
- allergic reactions such as rashes and itching
- liver failure, in rare cases

Call your doctor right away if you have any of the following symptoms:

- constant sore throat
- dull pain in your abdomen
- easy bruising
- fatigue
- fever
- loss of appetite

- skin rash or itching
- weakness
- yellowing of your skin or whites of your eyes, called jaundice

Doctors usually treat pregnant and breastfeeding women with antithyroid medicine, since this treatment may be safer for the baby than other treatments.

Radioiodine Therapy

Radioactive iodine is a common and effective treatment for hyperthyroidism. In radioiodine therapy, you take radioactive iodine-131 by mouth as a capsule or liquid. The radioactive iodine slowly destroys the cells of the thyroid gland that produce thyroid hormone. Radioactive iodine does not affect other body tissues.

You may need more than one radioiodine treatment to bring your thyroid hormone levels into the normal range. In the meantime, treatment with beta blockers can control your symptoms.

Almost everyone who has radioactive iodine treatment later develops hypothyroidism because the thyroid hormone-producing cells have been destroyed. However, hypothyroidism is easier to treat and causes fewer long-term health problems than hyperthyroidism. People with hypothyroidism can completely control the condition with daily thyroid hormone medicine.

Doctors don't use radioiodine therapy in pregnant women or in women who are breastfeeding. Radioactive iodine can harm the fetus' thyroid and can be passed from mother to child in breast milk.

Thyroid Surgery

The least-used treatment for hyperthyroidism is surgery to remove part or most of the thyroid gland. Sometimes doctors use surgery to treat people with large goiters or pregnant women who cannot take antithyroid medicines.

Before surgery, your doctor may prescribe antithyroid medicines to bring your thyroid hormone levels into the normal range. This treatment prevents a condition called thyroid storm—a sudden, severe worsening of symptoms—that can occur when people with hyperthyroidism have general anesthesia.

When part of your thyroid is removed, your thyroid hormone levels may return to normal. You may still develop hypothyroidism after surgery and need to take thyroid hormone medicine. If your whole thyroid is removed, you will need to take thyroid hormone medicine for life. After surgery, your doctor will continue to check your thyroid hormone levels.

What Should I Avoid Eating If I Have Hyperthyroidism?

People with Graves disease or other type of autoimmune thyroid disorder may be sensitive to harmful side effects from iodine. Eating foods that have large amounts of iodine—such as kelp, dulse, or other kinds of seaweed—may cause or worsen hyperthyroidism. Taking iodine supplements can have the same effect. Talk with members of your healthcare team about what foods you should limit or avoid, and let them know if you take iodine supplements. Also, share information about any cough syrups or multivitamins that you take because they may contain iodine.

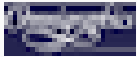
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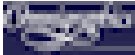
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