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TDD: 1-888-220-5446

# Thyroid Disease: Overview

## Q: What is thyroid disease?

**A:** The thyroid gland is located in the base of the neck on both sides of the lower part of the voice box and upper part of the wind pipe. A hormone from the pituitary gland stimulates the thyroid, causing it to make thyroid hormone. A thyroid that is working as it should will maintain the right amount of hormones needed to keep the body's metabolism working at a rate that is not too fast or too slow.

Thyroid disease occurs when the thyroid gland makes too much or too little thyroid hormone. Thyroid disease is divided into two categories (Note: These are not the only forms of thyroid disease—there is also thyroid enlargement which can accompany either of these or be associated with normal thyroid function):

- Hyperthyroidism - Overproduction of thyroid hormone
- Hypothyroidism - Underproduction of thyroid hormone

## Q: What causes Hyperthyroidism and Hypothyroidism?

**A:** **Hyperthyroidism** occurs when the thyroid makes too much thyroid over a short or long period of time. Many

diseases and conditions can cause this problem, including:

- Graves' disease
- Noncancerous growths of the thyroid gland or pituitary gland
- Irritation and swelling of the thyroid due to inflammation or infection (thyroiditis)

Graves' disease accounts for 85 percent of all cases of hyperthyroidism.

Hypothyroidism occurs when the thyroid gland fails to produce enough thyroid hormone. The most common cause of hypothyroidism is Hashimoto's thyroiditis, a disease of the thyroid gland where the body's immune system attacks the gland. Other causes include:

- Surgical removal of the thyroid
- Radiation to the neck, chest or brain or treatment with radioactive iodine
- Birth defects
- Inflammation of the gland due to a viral infection
- Inadequate production of the pituitary hormone that stimulates the thyroid
- Too much or too little iodine in the diet
- Some medications such as lithium or amiodarone

## Q: What are the symptoms of Hyperthyroidism and Hypothyroidism?

**Hyperthyroidism** symptoms include:

- Weight loss
- Increased appetite
- Nervousness



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- Restlessness
- Heat intolerance
- Increased sweating
- Fatigue
- Frequent bowel movements
- Menstrual irregularities
- Enlarged thyroid
- Palpitations or irregular heartbeat

**Hypothyroidism** symptoms include:  
(Early)

- Weakness
- Fatigue
- Cold intolerance
- Constipation
- Weight gain
- Depression
- Joint or muscle pain
- Thin, brittle fingernails
- Thin and brittle hair
- Paleness

(Late)

- Slow speech
- Dry, flaky skin
- Thickening of the skin
- Puffy face, hands, and feet
- Decreased taste and smell
- Thinning of eyebrows
- Hoarseness
- Abnormal menstrual periods

In addition to symptoms people with hypothyroidism may have increased cholesterol levels.

**Q: Should I get a Thyroid test?**

**A:** “Yes,” says the American Thyroid Association (ATA). It recommends thyroid testing in all adults beginning at age 35, with follow-up testing every five years. Routine thyroid testing is advised because thyroid disease is very common. If detected early, it can be treated without delay.

According to the ATA, half of the people with thyroid problems do not they have them. Women are more likely than men to have thyroid disorders. Women on thyroid hormones should check thyroid hormone levels annually and more frequently during pregnancy. Excessive use of thyroid hormone can contribute to bone loss (osteoporosis).

If you have a family history of autoimmune disease, you are also more likely to have thyroid problems. In such a case, regular checkup of the thyroid gland is highly recommended.

**Q: How is thyroid disease diagnosed?**

**A:** Thyroid disease can be difficult to diagnose because symptoms are shared with other common conditions. A diagnosis is usually made by taking a medical history and a physical exam. Your doctor will check your neck and ask you to lift up your chin. You may be asked to swallow during the exam, which helps to feel the thyroid and any mass in it. Other tests your doctor may include:

1. A blood test of thyroid function
2. A radioactive thyroid scan
3. A test to measure iodine uptake by the thyroid



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A simple blood test measuring thyroid stimulating hormone (TSH) test can identify thyroid disorders even before symptoms begin. TSH screening is routinely performed in the United States on newborns as part of each state's newborn screening program. When thyroid disease is caught early, treatment can control the disorder even before symptoms begin.

**Q: What is the treatment of Hyperthyroidism and Hypothyroidism?**

**A:** Treatment for **Hyperthyroidism** depends on the cause of the condition and the severity of symptoms. It is usually treated with antithyroid medications, radioactive iodine (which destroys the thyroid and stops the excess production of hormones), or surgery to remove the thyroid.

If the thyroid must be removed with radiation or surgery, replacement thyroid hormones are taken for the rest of your life. Beta-blockers are used to treat some of the symptoms including rapid heart rate, sweating, and anxiety.

The purpose of treatment for **Hypothyroidism** is to supply the body with the extra thyroid hormone it needs to function properly.

Levothyroxine is the most commonly used medication. The lowest dose effective in relieving symptoms and normalizing the TSH is used. Medication must be continued even when symptoms stop. Thyroid hormone levels should be watched yearly after the correct dose of medication is determined. Life-long therapy is needed. ■

### *For More Information . . .*

For more information about thyroid disease, contact the National Women's Health Information Center at 1-800-994-9662 or the following organizations:

**The American Thyroid Association**

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**Thyroid Foundation of America, Inc.**

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The Thyroid Disease FAQ has been reviewed by Dr. Judith Fradkin, Director, Division of Diabetes, Endocrinology and Metabolic Diseases, NIDDK.