

Thyroid Disease

The thyroid is a gland that controls key functions of your body. Disease of the thyroid gland can affect nearly every organ in your body and harm your health. Thyroid disease is eight times more likely to occur in women than in men. In some women it occurs during or after pregnancy. In most cases, treatment of thyroid disease is safe and simple.

This pamphlet will tell you more about:

- Symptoms of thyroid disease
- Some causes of this disease
- How it is treated
- The effects of thyroid disease during pregnancy

The Thyroid Gland

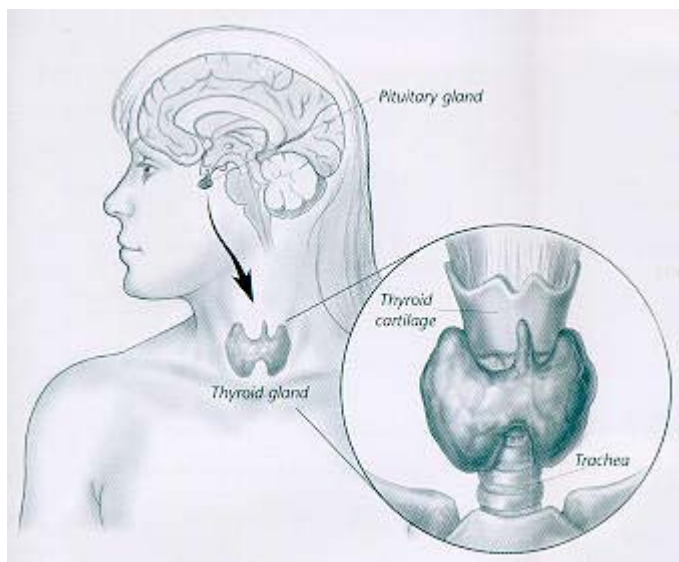
The thyroid gland is located at the base of your neck in front of your trachea (or windpipe). It has two sides and is shaped like a butterfly.

Women are more likely than men to have thyroid problems.

The thyroid gland makes, stores, and releases two hormones—T4 (thyroxine) and T3 (triiodothyronine). Thyroid hormones control the rate at which every part of your body works. This is called your metabolism. Your metabolism controls whether you feel hot or cold or tired or rested. When your thyroid gland is working the way it should, your metabolism stays at a steady pace—not too fast or too slow.

The thyroid gland is controlled by the pituitary gland (a gland in your brain). The pituitary gland makes **thyroid-stimulating hormone (TSH)**. TSH tells the thyroid gland to make more hormone if needed.

If there is not enough thyroid hormone in the bloodstream, the body's metabolism slows down. This is called **hypothyroidism** (underactive thyroid). If there is too much thyroid hormone, your metabolism speeds up. This is called **hyperthyroidism** (overactive thyroid). Certain disorders can cause the thyroid gland to make too much or



too little hormone. Women at risk include those who have or have had an autoimmune disease (such as diabetes). These women may need to be tested regularly for thyroid disease.

Diagnosing Thyroid Disease

Thyroid disease is diagnosed by your symptoms, an exam, and tests. Symptoms of thyroid disease can be much like symptoms of other health problems.

Your doctor will examine your neck while you swallow. The thyroid gland moves when you swallow. This makes it easier to feel. Your doctor also may examine your skin and eyes and check your weight and temperature.

Your doctor will use tests to help find the exact cause of the problem. You may have:

- Blood tests
- **Ultrasound** exam (during pregnancy)
- Thyroid scan

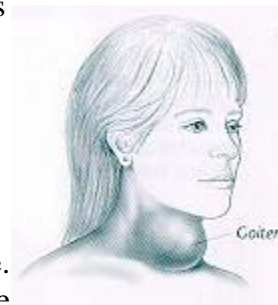
During a thyroid scan, you must drink a small amount of radioactive iodine. A special camera then detects the areas of thyroid gland that absorb the radioactive iodine. These are the problem areas. This will not be done if you are pregnant.

Hypothyroidism

Hypothyroidism occurs when the thyroid gland is not working hard enough. It is not making enough of the thyroid hormones to maintain your normal body metabolism.

Causes

The most common cause of hypothyroidism is a disorder known as thyroiditis—an inflammation of the thyroid gland. This also is called Hashimoto's disease. This disease causes the immune system—your body's natural defense against disease—to mistake cells in the thyroid gland for harmful invaders. Your body sends out white blood cells to destroy them. The pituitary gland then releases TSH to tell the thyroid gland to make more thyroid hormone. This demand on the thyroid gland can cause it to enlarge. This enlargement is called a **goiter**. Over time, Hashimoto's disease may decrease the thyroid's ability to produce hormones.



Hypothyroidism also can result from a diet that does not have enough iodine. The diet of most Americans is thought to have enough iodine because of the use of iodized salt. Other food sources of iodine include:

- Spinach
- Shrimp
- Oysters
- Lobster

Taking too much medication to treat hyperthyroidism can lead to hypothyroidism, too.

Symptoms

The symptoms of hypothyroidism are slow to develop. You may have the condition but not have any symptoms for months or years. Common symptoms of hypothyroidism are:

- Fatigue or weakness
- Weight gain
- Decreased appetite
- Change in menstrual periods
- Loss of sex drive
- Feeling cold when others don't
- Constipation
- Muscle aches
- Puffiness around the eyes
- Brittle nails
- Hair loss

If your lab tests show that the hormone levels are normal, some other condition may be causing your symptoms.

Treatment

In most cases, hypothyroidism is treated with medication that contains thyroid hormone. The dose of the medication is increased slowly until a normal level has been reached in the blood.

Most people with hypothyroidism have to take the hormone for the rest of their lives. The dose may need to be changed from time to time. The level of the hormone in the blood is checked regularly.

Hyperthyroidism

Hyperthyroidism results when the thyroid gland is making too much thyroid hormone. This causes your metabolism to speed up.

Causes

The most common cause of hyperthyroidism is a disorder known as Graves' disease. It most often affects women between the ages of 20 and 40 years. A late sign of Graves' disease is often a wide-eyed stare or bulging eyes.

Hyperthyroidism also may result from medication. Taking too much of thyroid hormone when being treated for hypothyroidism can lead to symptoms of an overactive thyroid. Lumps in the thyroid called hot nodules are another cause. These lumps produce excess thyroid hormone.

Symptoms

The more common symptoms of hyperthyroidism are:

- Fatigue
- Weight loss
- Nervousness
- Rapid heart beat
- Increased sweating
- Feeling hot when others don't
- Changes in menstrual periods
- More frequent bowel movements
- Tremors

Sometimes a condition called thyroid storm may develop in women with hyperthyroidism who also have another health problem (such as a major infection). Thyroid storm is a condition that can cause fever, rapid heart rate, and changes in the way your brain works (such as confusion, seizures, restlessness, and coma).

Treatment

Treatment for hyperthyroidism will lower the amount of thyroid hormone and relieve your symptoms. Antithyroid medication can be used to reduce the amount of thyroid hormone your body is making. Medications known as beta blockers control rapid heart beat.

If these medications don't help, your doctor may suggest treatment with high-dose radioactive iodine to destroy parts of the thyroid gland. In some cases, surgery may be needed to remove the thyroid gland.

Thyroid Nodules

A nodule is a lump in the thyroid gland. You may notice the lump on your own, or your doctor may detect the lump during a routine exam. When a thyroid nodule is found, it will be checked to see if it is benign (not cancer) or malignant (cancer).

Your doctor also may use ultrasound to examine the nodule. Nodules may be further examined by a procedure known as *fine needle aspiration* or biopsy.

If no cancer cells are found, your doctor may either prescribe a thyroid hormone to decrease the size of your nodule or suggest surgery to remove it. If cancer cells are found, further treatment will be needed. Thyroid cancer usually can be treated with success.

Thyroid Disease During Pregnancy

Thyroid disease can pose a risk to both the woman and baby during pregnancy (see box). With treatment, however, most pregnant women with thyroid disease can have healthy babies. The chance of problems during pregnancy is greatest when thyroid disease is not treated and controlled.

Treatment with medication and close monitoring by your doctor can decrease the risk of problems. Your doctor will check the levels of thyroid hormone in your body at regular intervals during your pregnancy to be sure they are at healthy levels.

Many medications used to treat thyroid disease in pregnancy are safe for your unborn child. However, your doctor may monitor you closely while you are being treated. Radioactive iodine, which is sometimes used to treat hyperthyroidism, cannot be taken during pregnancy. It may injure the thyroid gland of the fetus. This may cause the baby to have hypothyroidism.

Some women may not have thyroid problems during pregnancy, but develop problems after birth. This is called

Risks of Thyroid Disease During Pregnancy

Risks of Hypothyroidism

Baby

- Smaller than normal
- Preterm birth (born before 37 weeks of pregnancy)
- Decreased mental ability

Woman

- Preeclampsia—A condition of pregnancy in which there is high blood pressure, swelling due to fluid retention, and abnormal kidney function
- Placental abruption—A condition in which the placenta has begun to separate from the inner wall of the uterus before the baby is born.

Risks of Hyperthyroidism

Baby

- Smaller than normal
- Preterm birth
- Possible death
- Hyperthyroidism that requires treatment with medications for a short time after birth

Woman

- An irregular heartbeat or heart failure
- Thyroid storm

postpartum thyroiditis. This often is a short-term problem and hormone levels quickly return to normal. Sometimes this condition can lead to long-term hypothyroidism, which will require treatment.

If you have a history or symptoms of thyroid disease and are thinking of becoming pregnant or are pregnant already, talk to your doctor. Testing the function of the thyroid gland is not a routine part of prenatal care.

Finally...

Women are more likely than men to have thyroid problems. If you have symptoms of thyroid disease, you should see your doctor and be tested. Once thyroid disease is diagnosed, it almost always can be treated with success.

Glossary

Fine Needle Aspiration: A procedure in which a needle and syringe are used to withdraw a small amount of tissue. The tissue sample is then examined under a microscope to look for cancer cells.

Goiter: An enlarged thyroid gland that causes a lump on the neck.

Hyperthyroidism: A condition in which the thyroid gland makes too much thyroid hormone.

Hypothyroidism: A condition in which the thyroid gland makes too little thyroid hormone.

Thyroid-Stimulating Hormone (TSH): A hormone made by the pituitary gland that encourages the thyroid gland to make more thyroid hormone.

Ultrasound: A test in which sound waves are used to create pictures of the internal organs.