Thyroidectomy

Surgery for Thyroid Problems
Your Thyroid Gland

The **thyroid** is a small organ in your neck that plays a big role in how your body functions. It impacts everything from your heart rate to your energy level. So, when there is a problem with the thyroid, it affects your entire body. Thyroid problems are very common. But most can be treated. Read on to learn more about thyroid problems and their treatment.

Who Gets Thyroid Problems?

Anyone can have a thyroid problem, but some people are at higher risk. If you are a woman, you are more than twice as likely as a man to have a thyroid condition. Getting older and having a family history of thyroid issues also add to your chance of having a thyroid problem. In addition, you are at increased risk of having thyroid problems if you have had radiation therapy to your head or neck.

Do You Have a Thyroid Problem?

Symptoms of thyroid problems vary from person to person. They also vary depending on the problem itself. Some problems make you feel tired, be forgetful, or get cold easily. Others cause you to feel anxious, have an irregular heartbeat, or get a lump in your neck. And some problems have no symptoms at all. Thyroid symptoms can be easy to confuse with symptoms of other conditions. For this reason, it can take a long time to suspect thyroid problems.

Some people have symptoms, such as extreme tiredness, for months or even years without knowing they have a thyroid problem.
What You Can Do
A thyroid problem should be treated even if you don’t have symptoms. This is because without proper care, it could lead to other health concerns. These include heart problems, bone loss, cholesterol problems, or infertility. In rare cases, a thyroid problem could even be due to cancer. Work with your healthcare provider and follow your treatment plan. This can help you manage your condition and prevent other problems from developing.

Evaluation
Your first step is to see your primary care doctor. He or she is likely to take your medical history, do a physical exam, and order blood tests. Other diagnostic tests may also be done. Depending on your needs, you may be referred to a thyroid specialist.

Treatment
Treatment for thyroid problems varies. According to the type of problem, treatment ranges from medication to surgery. Many people only need to take daily medication to manage their thyroid condition.
The Role of the Thyroid

The thyroid is an endocrine gland located in the neck, just below the voicebox. Endocrine glands produce hormones. These are chemicals that carry messages through the bloodstream to other parts of the body. The thyroid gland produces **thyroid hormone**. It does this with help from a gland in the brain called the **pituitary**.

Keeping the Body Working Right

Thyroid hormone helps keep all the cells in the body working right. It does this by controlling the **metabolism**. This is the rate at which every part of the body functions. Thyroid hormone keeps the metabolism at a healthy pace, not too fast and not too slow. On the inside of the body, this helps the brain, heart, muscles, bones, digestive tract, and other organs work well. On the outside, it helps maintain the skin, hair, and nails. A balanced metabolism also helps ensure a healthy temperature, heart rate, energy level, and growth rate.
The Thyroid Cycle

Because of its important role in the body, thyroid hormone must be kept at a healthy level. A complex cycle maintains this level. The cycle starts with the pituitary. This gland monitors the level of thyroid hormone in the blood. Depending on the level, the pituitary sends **TSH** (thyroid stimulating hormone) through the bloodstream to the thyroid gland. TSH tells the thyroid how much thyroid hormone to make. In response to TSH, the thyroid takes iodine from the blood and uses it to make thyroid hormone. The thyroid then sends the thyroid hormone into the bloodstream to the rest of the body. The pituitary senses the hormone level, adjusts the TSH level, and the cycle continues.
Problems with the Thyroid

There are different types of thyroid problems. Some result from changes in how the thyroid functions. Others involve changes in the structure of the thyroid. The most common thyroid problems are described here.

Functional Thyroid Problems

Most thyroid problems are related to issues with thyroid function. These problems involve an imbalance with the body’s levels of TSH and thyroid hormone. This imbalance typically causes symptoms.

With hypothyroidism, the thyroid gland makes too little thyroid hormone. The pituitary gland responds by making more TSH. This results in a high level of TSH and a low level of thyroid hormone.

With hyperthyroidism, the thyroid gland makes too much thyroid hormone. The pituitary gland responds by making less TSH. This results in a low level of TSH and a high level of thyroid hormone.

Hypothyroidism

This is the most common type of thyroid problem. The primary cause of hypothyroidism is Hashimoto disease. With this condition, the body’s own disease-fighting cells, or immune system, destroy part or all of the thyroid gland. Hypothyroidism can also be caused by surgical removal of the thyroid or by radiation therapy. Other causes include a lack of iodine in the body (rare) and damage to the pituitary gland. The condition’s low level of thyroid hormone slows the metabolism. This can cause a variety of symptoms, including:

- Tiredness, loss of energy
- Mild weight gain
- Feeling cold
- Puffiness in the face, hands, ankles, or feet
- Longer or heavier menstrual periods
- Dry skin
- Depression
- Constipation

Hyperthyroidism

The most common cause of hyperthyroidism is Graves disease. This occurs when the body’s immune system causes the thyroid to grow and increase thyroid hormone output. People may also become hyperthyroid if they have a nodule or goiter (see page 7). The condition’s high level of thyroid hormone speeds up the metabolism. This can lead to a variety of symptoms, including:

- Anxiety, feeling shaky
- Irregular heart rate
- Weight loss
- Feeling hot and sweaty
- Shortness of breath
- Tiredness or sleeplessness
- A change in vision, or bulging of the eyes (exophthalmos)
Structural Thyroid Problems
A thyroid gland with changes in size or shape may still function normally. So, obvious symptoms may not occur. But if functional problems are also present, symptoms from the functional problems may occur.

Nodules
A nodule is a lump in the thyroid gland. You can have one or several nodules. A nodule can be a solid mass, a cyst filled with fluid, or both. Nodules are very common, but their cause is largely unknown. Most nodules are benign (not cancer). Sometimes, benign nodules are linked with hyperthyroidism or hypothyroidism. Malignant nodules (cancer) may be linked with previous exposure to radiation. When symptoms caused by nodules occur, they can include:

- Neck lumps that can be seen or felt
- Pain or pressure in the neck
- Trouble swallowing
- Trouble breathing

Goiter
A goiter is a thyroid gland that is enlarged. Goiters can range in size. Some goiters are large and visible, and others are hard to see or even feel. A goiter may be caused by hyperthyroidism or hypothyroidism, or neither. A common type of goiter is made up of nodules (multinodular goiter). When symptoms caused by a goiter occur, they can include:

- A neck lump that can be seen or felt
- Trouble swallowing
- Trouble breathing
Your Evaluation

Once suspected, thyroid problems can be fairly easy to diagnose. Your doctor is likely to take a medical history, do a physical exam, and order blood tests. You may also have further testing. Based on the results, your doctor may refer you to an endocrinologist (thyroid specialist) or a surgeon.

Medical History

Your doctor will ask about symptoms you’ve noticed, such as changes in body temperature, weight, and energy level. He or she will also take your medical history. Tell your doctor about all medications you’re taking and if you’ve ever had thyroid surgery. And mention if you have a family history of thyroid problems, or if you are pregnant or plan to become pregnant. Also tell your doctor if you’ve ever been treated with radiation to the head or neck.

Physical Exam

After the medical history, your doctor will examine you. He or she will feel your neck to check your thyroid gland for changes in size or shape. Your doctor may also look for changes in heart rate, reflexes, muscle strength, or skin texture.

Blood Tests

Your doctor will order blood tests. They may include the following:

- **A TSH test** helps determine how much TSH is being produced by the pituitary gland. This test is simple and accurate. It is used to help diagnose or evaluate most thyroid problems.
- **A T4 test** helps determine how much thyroid hormone (T4) is available in the blood. This test is most often used to help diagnose hyperthyroidism.

A TSH test measures the level of TSH in your blood. This level can indicate whether a thyroid problem exists (see page 6).
Other Diagnostic Tests
Based on the results of your exam and blood tests, you may have other diagnostic tests. They may include the following:

- **Thyroid antibody tests** are blood tests that look for problems with the immune system, such as Hashimoto disease or Graves disease. These tests are most often used if hypothyroidism or hyperthyroidism is suspected.

- **An ultrasound** uses sound waves to create an image showing the size and shape of the thyroid gland. It is most often used if a nodule or goiter is suspected.

- **A radioactive iodine uptake test** measures how much iodine the thyroid gland takes in. It is most often used if hyperthyroidism is suspected.

- **A thyroid scan** is an imaging test that can show if certain areas of the thyroid gland are working too hard and making too much thyroid hormone. It is most often used if hyperthyroidism is suspected.

**Fine Needle Aspiration (FNA)**
If you have a nodule, you may have a fine needle aspiration done. This is a biopsy, which is a procedure to remove a sample of cells. An FNA is the best test to find out if thyroid cells are cancerous. A needle is used to take cells from the thyroid. The cells are then analyzed under a microscope. If cancer is suspected, other tests may also be done to help determine the type of cancer.

**Risks and complications of FNA:** These are rare but include mild discomfort, bleeding, and skin infection.

During an ultrasound, sound waves from a probe moved over the neck create a picture of the thyroid gland.

Ultrasound probe

Ultrasound is often used during an FNA to help the doctor guide the needle.
Treatment for Thyroid Problems

After diagnosis, your doctor or thyroid specialist will work with you to create a treatment plan. Even if you don’t have symptoms, getting proper care is important. The most common types of treatment are covered here. If you have a goiter, your care could include any of these treatments.

Treating Hypothyroidism

There is no cure for hypothyroidism. But treatment can relieve most or all of your symptoms. Treatment for hypothyroidism involves taking thyroid hormone pills daily.

- **Thyroid hormone pills** replace the hormone your thyroid doesn’t make. Chances are, you will need to take a daily hormone pill for the rest of your life. Your doctor will prescribe a starting dosage. Then you’ll have a TSH test several weeks later. At that time, your dosage may be adjusted. Afterward, you’ll need to have routine blood tests to make sure the dosage remains right for you.

**Side effects:** There are minimal side effects if the dosage is correct. However, if the dosage is too high, you may have hyperthyroid symptoms. If it is too low, you may have hypothyroid symptoms. Be sure to tell your doctor if you notice any symptoms of thyroid problems.
Treating Hyperthyroidism

The three main treatments used for hyperthyroidism are discussed below. They may be used alone or in combination with beta-blockers (drugs that can reduce symptoms caused by too much thyroid hormone).

- **Antithyroid medication** can reduce the amount of thyroid hormone made by the thyroid gland. It is sometimes used before other treatments to help reduce hyperthyroid symptoms.

  **Side effects:** Reactions are rare. Talk with your doctor for more information.

- **Radioiodine ablation** is the most common treatment for hyperthyroidism. It involves taking a pill or liquid dose of radioactive iodine. Once absorbed by the thyroid gland, the iodine destroys the thyroid cells that are making too much hormone.

  **Side effects:** May result in the need for daily thyroid hormone pills.

- **Surgery** can be an effective treatment for hyperthyroidism. It involves removing part or all of the thyroid gland.

  **Side effects:** May result in the need for daily thyroid hormone pills.

Treating Nodules

If you have benign nodules, you may not need treatment right away. Instead, your doctor may suggest regular exams and ultrasound tests to see if the nodules grow. If treatment for nodules is needed, it may include the following:

- **Surgery** may be used to treat malignant nodules or those that grow or cause symptoms, such as trouble swallowing. Surgery involves removing part or all of your thyroid gland. It may be followed by radioiodine ablation (see left).

  **Side effects:** May result in the need for daily thyroid hormone pills.

- **Thyroid hormone pills** may be used to help treat and prevent benign nodules. This treatment is used less often than surgery.

  **Side effects:** May cause hyperthyroid symptoms, such as bone loss or heart problems.

Radioiodine Ablation: Things to Know

This is a very safe treatment. Your doctor will talk with you about any risks and possible complications.

- You will likely receive the iodine at the hospital and go home the same day.

- The risk from the radiation to yourself and others is very small. However, you may need to stay away from other people for several days. It is most important to avoid children and pregnant women during this time.
If You Need Surgery

Surgery can help treat some thyroid problems, such as hyperthyroidism or cancer. It is also sometimes used to help diagnose certain thyroid problems. Thyroid surgery is safe and typically has very good results. Before your procedure, your surgeon will talk with you about the type of thyroid surgery you will have and any risks and possible complications.

Your Surgery Experience

Before surgery, you will have a physical exam. Tests may be done, such as a chest x-ray or blood work. And your anesthesia care provider may meet with you. He or she can tell you how pain will be managed during surgery. If general anesthesia is used, you will be asleep during the procedure. Below you’ll find how to prepare for surgery and what to expect afterward. The next page explains what happens during surgery.

Preparing for Surgery

Be sure to follow all instructions your surgeon gives you. Unless told otherwise, don’t eat or drink for at least 8 hours before surgery. It’s a good idea to pack an overnight bag. You may be able to go home the day of surgery, but many people need to stay overnight in the hospital.

After Surgery

You’re likely to spend a few hours in the recovery room. Then, you’ll be sent home or moved into another room to stay overnight. In the recovery room, your surgeon may check your calcium levels. This is to find out if the parathyroid glands were affected during surgery. You may have a drain that was placed at the wound site during surgery to help collect fluid. If you have a sore throat or hoarseness after your procedure, don’t worry. This is common and should go away within a week or two.
During Surgery
The surgery takes from 2 to 3 hours. The length of time is determined by the amount of thyroid gland being removed. This amount varies based on what thyroid problem you have. Your surgeon may not be able to tell exactly how much thyroid gland needs to be removed until surgery begins.

Removing Part of the Thyroid
Procedures such as a lobectomy and a hemithyroidectomy may be used to treat benign nodules. They remove one section of the thyroid gland. This leaves some thyroid tissue in place to continue functioning.

Removing Most or All of the Thyroid
Some procedures are used to treat hyperthyroidism, multinodular goiter, or cancer. A subtotal thyroidectomy and a near total thyroidectomy remove most of the thyroid gland. A total thyroidectomy removes the entire thyroid gland. With these procedures, little or no thyroid tissue is left behind.

Risks and Complications
Thyroid surgery of every type has certain risks and possible complications. These are rare but include:

- Bleeding
- Infection
- Injury to nearby structures, such as the laryngeal nerve. Nerve injury can lead to temporary or permanent hoarseness.
- Damage to the parathyroid glands. These glands control the amount of calcium in the bloodstream. If they are damaged, temporary or lifelong calcium supplements may be needed.
Recovering at Home After Surgery

You should be able to return to a normal life in a few weeks. Shortly after your procedure, you will have a follow-up appointment with your surgeon. After this visit, your primary care doctor or thyroid specialist will monitor your recovery.

Self-Care

For the first few days after surgery, you may need to keep your incision dry. Within a week, you should be able to resume most low-key activities. However, wait for your doctor’s okay before doing anything strenuous, such as heavy lifting (10 to 15 pounds or more). After surgery, you may need to take medications. These may include pain medication, thyroid hormone, calcium supplements, or antibiotics (if you go home with a drain in place). Your incision should flatten out and the scar should fade in about 6 months. Be sure to use sunblock on the scar for the first year after surgery.

Follow-up Appointments

You’ll likely have a follow-up appointment with your surgeon within a week of the procedure. He or she will check the wound, take out stitches and remove the drain if necessary, and discuss your condition. Several weeks after surgery, a TSH test will be ordered. The results will help determine if you need to take thyroid hormone pills.

When to Call the Surgeon

During the first week after surgery, call your surgeon if you have any of the following:

- Bleeding
- Fever
- Increasing pain
- Redness, swelling, or drainage at your incision site
- Trouble breathing or swallowing
- Muscle cramps, numbness or tingling in the fingers, or twitching in the face (signs of a low blood calcium level)
In the Years to Come

For all thyroid problems, it’s important to monitor your condition and watch for returning symptoms. Keep working closely with your doctor. Let him or her know of any problems you have, and follow all instructions carefully. With proper follow-up care, you can feel good and stay healthy.

Staying Healthy

Be sure to follow these tips and any instructions your doctor gives you. They can help keep your thyroid problem under control.

- **Hypothyroidism.** Be sure to take your thyroid hormone pills daily. Also, keep regular appointments with your doctor. Get blood tests as directed to make sure you’re on the right hormone dosage. If you have symptoms between blood tests, tell your doctor.

- **Hyperthyroidism.** If you are taking antithyroid medications, watch for returning hyperthyroid symptoms and tell your doctor. If treatment caused you to need thyroid hormone pills, be sure to take them as instructed.

- **Nodules and goiter.** If your doctor is following your condition with regular exams and ultrasounds, keep all appointments. Tell your doctor if the size of the nodule or goiter changes, or if any new nodules appear. If you’ve had surgery, watch for these same changes. And if thyroid hormone is prescribed, be sure to take it as instructed.

- **Cancer.** If you had treatment for cancer, have regular doctor exams. Also, have thyroglobulin tests or other tests as instructed.

The Importance of Taking Thyroid Hormone Pills

If you are hypothyroid, no matter the cause, you need to make a lifelong commitment to taking thyroid hormone pills. The simple act of taking these pills daily will help you control your condition. Keep these tips in mind when taking your pills:

- Take them at the same time every day. This might be first thing in the morning or at bedtime.

- Consider using a pillbox to keep track of when you take your pills.

- Always take your pills on an empty stomach. Food can keep thyroid hormone from being absorbed fully by your body. After taking your pills, wait at least 30 minutes to 1 hour before eating.

- Also wait 4 hours after taking your pills before taking any supplements. Iron and calcium can affect how thyroid hormone is absorbed by your body. And ask your doctor if you should avoid soybean products or certain medications after taking your pills.

- Stick to one brand of thyroid hormone. Different brands are absorbed differently by the body. And some brands, especially generics, contain slightly different amounts of hormone. If your brand is switched, ask your doctor if you need a TSH test.
Endocrine gland: Any gland that produces hormones and secretes them into the bloodstream.

Fine needle aspiration (FNA): A biopsy that uses a very thin needle to collect cells from the thyroid gland. The cell sample is used to detect cancer in the thyroid.

Goiter: An enlarged thyroid gland, sometimes resulting in a visible neck lump.

Graves disease: The most common cause of hyperthyroidism.

Hashimoto disease: The most common cause of hypothyroidism.

Hormones: Chemicals, produced by endocrine glands, that carry messages through the bloodstream to other parts of the body.

Hyperthyroidism: Occurs when the thyroid gland produces too much thyroid hormone.

Hypothyroidism: Occurs when the thyroid gland produces too little thyroid hormone.

Nodule: A lump on the thyroid gland. Thyroid nodules can be single or multiple.

Parathyroid glands: Four small glands behind the thyroid. They produce a hormone that controls the amount of calcium in the bloodstream.

Pituitary gland: A small endocrine gland at the base of the brain. When thyroid function is normal, the pituitary controls the amount of thyroid hormone made by the thyroid gland.

Thyroid stimulating hormone (TSH): A hormone produced by the pituitary gland. It tells the thyroid gland to make more thyroid hormone.

Thyroidectomy: Surgical removal of some or all of the thyroid gland.

Thyroglobulin test: A blood test that can be used to monitor for thyroid cancer.