



Thyroid Disorders and Surgery

Insight into complications and treatment

- What is a thyroid disorder?
- What treatment may be recommended?
- What is thyroid surgery?
- and more...

Your thyroid gland is one of the endocrine glands that makes hormones to regulate physiological functions in your body, like metabolism. Other endocrine glands are the pancreas, the pituitary, the adrenal glands, and the parathyroid glands.

The thyroid gland is located in the middle of the lower neck, below the larynx (voice box) and wraps around the front half of the trachea (windpipe). It is shaped like a bow tie, just above the collarbones, having two halves (lobes) which are joined by a small tissue bar (isthmus.). You can't always feel a normal thyroid gland.

What is a thyroid disorder?

Diseases of the thyroid gland are very common, affecting millions of Americans. The most common thyroid problems are:

- An overactive gland, called hyperthyroidism (e.g., Graves' disease, toxic adenoma or toxic nodular goiter)
- An underactive gland, called hypothyroidism (e.g., Hashimoto's thyroiditis)
- Thyroid enlargement due to overactivity (as in Graves' disease) or from under-activity (as in hypothyroidism). An enlarged thyroid gland is often called a "goiter".

Patients with a family history or who had radiation therapy to the head or neck as children for acne, adenoids, or other reasons are more prone to develop thyroid malignancy.

If you develop significant swelling in your neck or difficulty breathing or swallowing, you should call your surgeon or be seen in the emergency room.

What treatment may be recommended?

Depending on the nature of your condition, treatment may include the following:

Hypothyroidism treatment:

- Thyroid hormone replacement pills

Hyperthyroidism treatment:

- Medication to block the effects of excessive production of thyroid hormone
- Radioactive iodine to destroy the thyroid gland
- Surgical removal of the thyroid gland

Goiters (lumps):

If you experience this condition, your doctor will propose a treatment plan based on the examination and your test results. He may recommend:

- A fine needle aspiration biopsy—a safe, relatively painless procedure. With this procedure, a hypodermic needle is passed into the lump, often after administration of local anesthesia into the skin, and tissue fluid samples containing cells are taken. Often several passes with the needle are required. Sometimes ultrasound may be used to guide the needle into the nodule. There is little pain afterward and very few complications from the procedure occur. This test gives the doctor more information on the nature of the lump in your thyroid gland and specifically may help to differentiate a benign from a malignant thyroid mass.
- Thyroid surgery—may be required when:
 - the fine needle aspiration is reported as suspicious for or suggestive of cancer
 - the trachea (windpipe) or esophagus are compressed because both lobes are very large

Historically, some malignant thyroid nodules have shown a reduction in size with the administration of thyroid hormone. However, this treatment, known as medical “suppression” therapy, has proven to be an unreliable treatment method.

What is thyroid surgery?

Thyroid surgery is an operation to remove part or all of the thyroid gland. It is performed in the hospital, and general anesthesia is usually required. Typically the operation removes the lobe of the thyroid gland containing the lump and possibly the isthmus. A frozen section (an immediate microscopic reading) may or may not be used to determine if the rest of the thyroid gland should be removed.

Sometimes, based on the result of the frozen section, the surgeon may decide not to remove any additional thyroid tissue, or proceed to remove the entire thyroid gland, and/or other tissue in the neck. This is a decision usually made in the operating room by the surgeon, based on findings at the time of surgery. Your surgeon will discuss these options with you preoperatively.



There may be times when the definite microscopic answer cannot be determined until several days after surgery. If a malignancy is identified in this way, your surgeon may recommend that the remaining lobe of the thyroid be removed at a second procedure. If you have specific questions about thyroid surgery, ask your otolaryngologist and he or she will answer them in detail.

What happens after thyroid surgery?

During the first 24 hours:

After surgery, you may have a drain (a tiny piece of plastic tubing), which prevents fluid and blood from building up in the wound. This is removed after the fluid accumulation has stabilized, usually within 24 hours after surgery. Most patients are discharged later the same day or the day following the procedure.

Complications are rare but may include:

- Bleeding
- A hoarse voice
- Difficulty swallowing
- Numbness of the skin on the neck
- Vocal cord paralysis
- Low blood calcium

At home:

Following the procedure, if it is determined that you need to take any medication, your surgeon will discuss this with you, prior to your discharge.

Medications may include:

- Thyroid hormone replacement
- Calcium and/or vitamin D replacement

Some symptoms may not become evident for two or three days after surgery. If you experience any of the following, call your surgeon:

- Numbness and tingling around the lips and hands
- Increasing pain
- Fever
- Swelling
- Wound discharge



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If a malignancy is identified, thyroid replacement medication may be withheld for several weeks. This allows a radioactive scan to better detect any remaining microscopic thyroid tissue, or spread of malignant cells to lymph nodes or other sites in the body.

How is a diagnosis made?

The diagnosis of a thyroid function abnormality or a thyroid mass is made by taking a medical history and a physical examination. Specifically, your doctor will examine your neck and ask you to lift up your chin to make your thyroid gland more prominent. You may be asked to swallow during the examination, which helps to feel the thyroid and any mass in it. Other tests your doctor may order include:

- Evaluation of the larynx/vocal cords with a mirror or a fiberoptic telescope
- An ultrasound examination of your neck and thyroid
- Blood tests of thyroid function
- A radioactive thyroid scan
- A fine needle aspiration biopsy
- A chest X-ray
- A CT or MRI scan



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