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Thyroidectomy

Thyroidectomy is the surgical removal of the thyroid gland. This important gland, located in the lower front portion of the neck, produces thyroid hormone, which regulates the body's production of energy. A healthy thyroid gland is shaped like a butterfly with right and left lobes connected by a bridge called the thyroid isthmus. Depending on the reason for a thyroidectomy, all or part of the thyroid gland will be removed. The various types of thyroidectomy include:

- **Partial thyroid lobectomy (a rare procedure)** — Only part of one thyroid lobe is removed.
- **Thyroid lobectomy** — All of one thyroid lobe is removed.
- **Thyroid lobectomy with isthmusectomy** — All of one thyroid lobe is removed, together with the thyroid isthmus.
- **Subtotal thyroidectomy** — One thyroid lobe, the isthmus and part of the second lobe are removed.
- **Total thyroidectomy** — The entire thyroid gland is removed.

A thyroidectomy may be performed by using a conventional surgical approach or a newer endoscopic method done through very small incisions.

What It's Used For

Conventional thyroidectomy is done for the following reasons:

- To remove malignant (cancerous) or benign (noncancerous) thyroid tumors
- To treat thyrotoxicosis, a condition in which an overactive thyroid gland produces extremely high levels of thyroid hormone
- To remove all or part of a goiter (an enlarged thyroid gland) that is pressing on neighboring structures in the neck, especially if this pressure interferes with swallowing or breathing
- To remove and evaluate an undiagnosed thyroid mass

In some people, as an alternative to a conventional thyroidectomy, an endoscopic thyroidectomy can be performed to remove small thyroid cysts or small benign thyroid nodules (less than 4 centimeters, or about 1½ inches). Endoscopic thyroidectomy is not used to treat multiple thyroid nodules, thyroid cancer or thyrotoxicosis.

Preparation

About one week before surgery, you will be told to stop taking aspirin and other blood-thinning medications. To reduce the risk of vomiting during surgery, you will be told not to eat or drink anything after midnight the night before surgery. As part of the general preparations for surgery, your doctor will review your allergies and your medical and surgical histories. If you might be pregnant, you must tell your doctor before surgery. Because you will be having a procedure that involves an area above your shoulders, you will be asked to remove all necklaces and earrings before you are taken to the operating room.

How It's Done

Both types of thyroidectomy are performed under general anesthesia. However, if general anesthesia is too risky for a patient, local or regional anesthesia may be used to permit the patient to remain awake during the procedure. An intravenous (IV) line will be inserted into one of your veins to deliver fluids and medications.

- **Conventional thyroidectomy** — In a conventional thyroidectomy, a 3- to 4-inch incision will be made through the skin in the low collar area of your neck (the lower front portion of your neck, above the collarbones and breast bone). Next, a vertical cut will be made through the straplike muscles located just below the skin, and these muscles will be spread aside to reveal the thyroid gland and other deeper structures. Then, all or part of your thyroid gland will be removed, after first being cut free from surrounding tissues. During the entire procedure, the surgeon will be very careful to preserve your parathyroid glands (two pairs of small glands located near the thyroid) and to avoid damaging important nerves and blood vessels in your neck. After your thyroid gland is removed, one or two stitches will be used to bring your neck muscles together again. Then the deeper layer of your incision will be closed with sutures, and your skin will be closed with sterile paper tapes. A small suction catheter (tube) will be inserted near the area of your incision to drain any blood accumulated inside your neck. Following surgery, you will be taken to a recovery room, where you will be monitored for several hours until you are stable enough to return to your hospital room. After about 24 hours, the suction catheter will be removed from your neck. Most patients go home one or two days after the surgery.

- **Endoscopic thyroidectomy** — A viewing instrument called an endoscope and small surgical instruments will be inserted into your neck through three or four small incisions. Each incision is about 3 millimeters to 5 millimeters long (less than ¼ inch). Then the surgeon will use a tiny camera on the endoscope to guide the instruments and remove your thyroid tissue. At the end of the procedure, your neck incisions will be closed with tiny stitches or surgical tape.

Follow-Up

About one week after you return home from the hospital, you will visit your doctor for follow-up. At this visit, your doctor will check the healing of your incision or incisions. After thyroid surgery, you may need periodic blood tests to measure your thyroid hormone levels. Calcium and phosphorus levels are checked to evaluate the function of your parathyroid glands, which sometimes are damaged during thyroid surgery. If all of your thyroid gland was removed, you can expect to take thyroid supplements for the rest of your life. You will have more pain after surgery if you had a conventional thyroidectomy than if you had an endoscopic thyroidectomy. Endoscopic thyroidectomy also allows a quicker recovery with less-obvious scarring. Unfortunately, many patients are not good candidates for this procedure because of the type or extent of their thyroid disease.

Risks

Thyroidectomy is generally a very safe surgical procedure. However, some patients have major or minor complications. Possible complications include:

- **Hemorrhage (bleeding) beneath the neck wound** — If this occurs, the wound bulges and the neck swells, possibly compressing structures inside the neck and interfering with breathing. This is an emergency.

- **Thyroid storm** — This is a life-threatening surge of thyroid hormones into the blood. Only certain patients are at risk of this complication, and it rarely occurs if preventive medications are given before surgery.

- **Injury to the recurrent laryngeal nerve** — Because this nerve supplies the vocal cords, injury can lead to vocal cord paralysis and can produce a husky voice. In rare cases, if both vocal cords are paralyzed, the opening of the throat may be obstructed, causing breathing problems.

- **Injury to a portion of the superior laryngeal nerve** — If this occurs, patients who sing may not be able to hit high notes, and the voice may lose some projection.

- **Hypoparathyroidism** — If the parathyroid glands are mistakenly removed or unintentionally damaged during a thyroidectomy, the patient may suffer from hypoparathyroidism, a condition in which the levels of parathyroid hormone (a hormone that helps regulate body calcium) are abnormally low.

- **Wound infection**

When To Call A Professional

Once you return home from the hospital, call your doctor immediately if:

- You develop a fever.
- Your incision or any part of your neck becomes red, tender or swollen.
- Your voice seems to be hoarse, husky or weak.
- You develop symptoms of hypoparathyroidism, including numbness around your mouth, tingling in your extremities or spasms in your feet, hands or face.