

## ADDITIONAL PATIENT RESOURCES [WWW.THYROID.ORG](http://WWW.THYROID.ORG)

For further details on this and other thyroid-related topics, please visit the patient resources section on the American Thyroid Association website at [www.thyroid.org](http://www.thyroid.org)

## 1 GENERAL INFORMATION

Thyroid operations are used for patients who have a variety of thyroid conditions, including both cancerous and benign (non-cancerous) thyroid nodules, large thyroid glands (goiters), and overactive thyroid glands. There are several thyroid operations that a surgeon may perform, including: 1) *biopsy or lumpectomy* - removing a small part of the thyroid gland; 2) *lobectomy* - removing half of the thyroid gland; 3) removing nearly all of the thyroid gland (*subtotal thyroidectomy* - leaving a small amount of thyroid tissue bilaterally or *near-total thyroidectomy* - leaving about one gm or cm of thyroid tissue on one side); or 4) *total thyroidectomy*, which removes all identifiable thyroid tissue. There are specific indications for each of these operations. The main risks of a thyroid operation involve possible damage to important anatomical structures near the thyroid, primarily the parathyroid glands (which regulate calcium levels) and the recurrent and external laryngeal nerves (which control the vocal cords).

When thyroid surgery is recommended, patients should ask several questions regarding thyroid operations, including: (1) Why do I need an operation? (2) Are there other means of treatment? (3) How should I be evaluated prior to the operation? (4) How do I select a surgeon? (5) What are the risks of the operation? (6) How much of my thyroid gland needs to be removed? (7) What can I expect once I decide to proceed with surgery? (8) Will I be normal after surgery?

### Why do I need an operation?

The most common reason patients are referred for thyroid surgery is after an evaluation for a thyroid nodule, which usually includes a fine needle aspiration biopsy (see [Thyroid Nodule brochure](#)). Surgery may be recommended for the following biopsy results: 1) cancer (papillary cancer); 2) possible cancer (follicular neoplasm); or 3) benign. Surgery may be recommended for nodules with benign biopsy results if the nodule is large, if it continues to increase in size or if it is causing symptoms (pain, difficulty swallowing, etc.). Surgery is also an option for the treatment of hyperthyroidism (see [Hyperthyroidism brochure](#)), for large and multinodular goiters and for any goiter that may be causing symptoms.

## 2 QUESTIONS AND CONSIDERATIONS

### Are there other means of treatment?

Surgery is definitely required for a diagnosis of thyroid cancer or the possibility of thyroid cancer (see [Thyroid Cancer brochure](#)). In the absence of a possibility of thyroid cancer, there may be non-surgical options of therapy depending on the diagnosis. You should discuss other options for therapy with your physician.

### How should I be evaluated prior to the operation?

As for other operations, all patients considering thyroid surgery should be evaluated preoperatively with a thorough and comprehensive medical history and physical exam, including cardiopulmonary (heart) evaluation. Ordering an EKG and a chest x-ray prior to thyroidectomy for patients over 45 years of age or who are symptomatic from cardiac disease is often recommended. Blood tests are performed to determine if a bleeding disorder is present. Any patients who has had any change in voice or who have had a previous neck operation should have their vocal cord function evaluated preoperatively. This is necessary to determine whether the recurrent laryngeal nerve that supplies the vocal cord muscles is functioning normally. Finally, if the thyroid cancer diagnosis is the rare medullary thyroid cancer, it is important to evaluate patients with coexisting adrenal tumors (pheochromocytomas) and for hypercalcemia and hyperparathyroidism (see [Thyroid Cancer brochure](#)).

### How do I select a surgeon?

In general, thyroid surgery is best performed by a surgeon who has received special training and who performs thyroid surgery on a regular basis. Patients should ask their referring physician where he or she would go to have a thyroid operation or where he or she would send a family member, since the complication rate of thyroid operations is lower when the operation is done by a surgeon who does a considerable number of thyroid operations each year.

### What are the risks of the operation?

The most serious possible risks of thyroid surgery include: 1) bleeding that can cause acute respiratory distress, 2) injury to the recurrent laryngeal nerve that can cause permanent hoarseness, and 3) damage to the parathyroid glands that control calcium levels in the body, causing hypoparathyroidism. These complications occur more frequently in

## QUESTIONS & CONSIDERATIONS CONTINUED

patients with extensive lymph node involvement and invasive tumors, in patients requiring a second thyroid surgery, and in patients with large goiters that go below the collarbone. Complications occur more frequently when the surgeon is not very experienced doing thyroid operations. Overall the risk of any serious complication should be less than 2%. However, the risk of complications discussed with the patient should be the particular surgeon's risks rather than that quoted in the literature. Prior to surgery, patients should receive informed consent from the surgeon about the reasons for the operation, the alternative methods of treatment, and the potential risks and benefits of the operation.

### How much of my thyroid gland needs to be removed?

Patients should discuss with the surgeon what operation on the thyroid is to be performed, such as lobectomy or total thyroidectomy, and the reasons why such a procedure is recommended. For patients with papillary or follicular thyroid cancer many, but not all, surgeons recommend total or near-total thyroidectomy when they believe that subsequent treatment such as that with radioactive iodine might be beneficial (see [Thyroid Cancer brochure](#)). For patients with large (>1.5 cm) primary tumors and for any medullary thyroid cancer, more extensive lymph node dissection is necessary to remove possibly involved lymph node metastases.

Thyroidectomy is an excellent method to treat patients with multiple benign thyroid nodules and/or large goiters, whether overactive or functioning normally. For patients with one-sided nodules, whether overactive or functioning normally, thyroid lobectomy successfully corrects these problems. For patients with hyperthyroidism due to Graves' disease or multinodular goiters (see [Hyperthyroidism brochure](#)), many surgeons recommend a total thyroid lobectomy on the side with the largest nodules or goiter and a subtotal or near total resection of the opposite lobe.

### What can I expect once I decide to proceed with surgery?

Once you have met with the surgeon and decided to proceed with surgery, you will be scheduled for your pre-op evaluation (see above) and will meet with the anesthesiologist (the person who will put you to sleep during the surgery). You should have nothing to eat or drink after midnight on the day before surgery and should leave valuables and jewelry at home. The surgery usually takes 2-2½ hours, after which time you will slowly wake up in the recovery room. There may be a surgical drain in the incision in your neck (which will be removed the morning after the surgery) and your throat may be sore because of the breathing tube placed during the operation. Once you are fully awake, you will be moved to a bed in a hospital room where you will be able to eat and drink as you wish. Most patients having thyroid operations are hospitalized for about 24 hours and can be discharged on the morning following the operation. Normal activity can begin on the first postoperative day. Vigorous sports, such as swimming, and activities that include heavy lifting should be delayed for at least ten days.

### Will I be normal after surgery?

Yes. Once you have recovered from the effects of thyroid surgery, you will usually be able to do anything that you could do prior to surgery. Many patients become hypothyroid following thyroid surgery, requiring treatment with thyroid hormone (see [Hypothyroidism brochure](#)). This is especially true if you had surgery for thyroid cancer. In addition, your doctor may recommend follow-up therapy with radioactive iodine if you have thyroid cancer prior to starting thyroid hormone therapy (see [Thyroid Cancer brochure](#)).

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