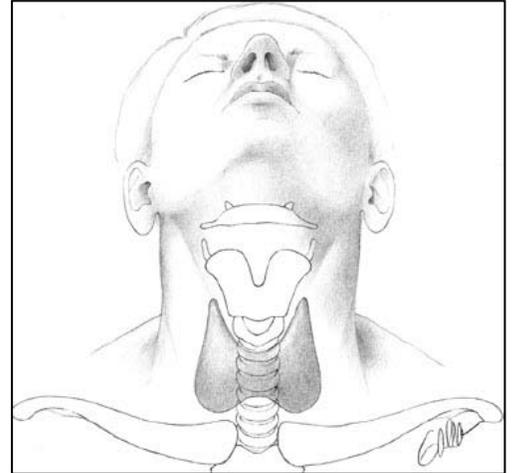




## Thyroid Surgery at Massachusetts General Hospital Frequently Asked Questions

### Q: What is the thyroid gland?

**A:** The thyroid is a butterfly-shaped gland located in the front of the neck. It is one of the most remarkable glands in the human body. Enlargement of the thyroid, lumps or tumors of the thyroid gland will often be noticed by the patient or the examining physician. The neck is a narrow channel through which lots of important structures pass to the rest of the body such as the food pipe (esophagus), the windpipe (trachea), the arteries supplying blood to the brain (carotid arteries) and veins bringing blood back from the brain (jugular veins) as well as the spinal cord, the voice box and many important nerves. The thyroid is intricately placed among these structures right on top of the windpipe and next to the food pipe. If the thyroid enlarges it can squeeze these important structures and cause problems with breathing or swallowing.



The thyroid only has one function in life – to produce thyroid hormone at just the right amounts for proper function of each person. This seemingly simple task is actually quite complex and has been the topic of intense research for over 50 years. Thyroid hormone affects almost every organ system. For example, thyroid hormones regulate heart rate, blood pressure, and body temperature, and control the rate at which food is converted into energy. They affect the nervous system, muscles, and other organs. Each person's thyroid hormone level is regulated to a level that is comfortable and just right for them and keeps all the machinery in the body working well. If there is a problem with your home's thermostat or furnace the house can become too hot or too cold. The same is true for the thyroid.

### Q: Why is thyroid surgery performed?

**A:** The most common reason for thyroid surgery is the presence of abnormal growths, or nodules, on the thyroid. Thyroid nodules are lumps found in the thyroid gland (a gland located in the neck). Nodules range in size from several millimeters to several centimeters. Very large nodules may replace nearly half the thyroid and are visible to the naked eye. Very small thyroid nodules detected on a neck ultrasound are unlikely to be of any clinical significance.

Sometimes, these nodules can be cancerous and the most common thyroid cancer seen is papillary thyroid cancer. But not every patient with thyroid nodules needs surgery. The decision to operate is made after careful consideration of the patient's history and the results of tests that have been done to evaluate the nodules and the functioning of the thyroid gland. Your doctor can tell you why surgery has been recommended in your case and which type of surgery you will be having.

**Q: How long will I be in the hospital for thyroid surgery?**

**A:** You will be admitted to the hospital on the morning of your surgery. Some patients are able to go home the same day after about 4-8 hours in the recovery room, depending on the extent and timing of the surgery. Others stay for one night in the hospital. A bed is reserved for you to spend the night in case it is needed.

**Q: What is done during thyroid surgery?**

**A:** There are several different procedures that may be done during thyroid surgery, as listed here. Your surgeon can tell you what your operation will involve.

- Thyroid lobectomy – one half of the thyroid is removed
- Total thyroidectomy – the entire thyroid gland is removed
- Lymph node dissection – removal of some of some lymph nodes around the thyroid gland

**Q: What type of anesthesia will I have?**

**A:** Most patients have a light form of general anesthesia for thyroid surgery. With general anesthesia, you are completely asleep during the operation, but once you wake up you are quiet awake. You will have experienced anesthesia staff monitoring you carefully while you are asleep and under anesthesia. You will meet with an anesthesiologist before your surgery, who will talk with you, it is important that you mention any previous anesthetics you have had and whether you had any problems or issues.

Occasionally thyroid surgery can be done using a local anesthetic. With this approach, you are awake but very sleepy from sedatives given through an intravenous (IV) line. Local anesthetic (similar to Novocaine used at the dentist) is injected into the neck so that you do not feel any pain during the surgery.

**Q: What must I do to prepare for surgery?**

**A:** Most patients who are young and/or relatively healthy will be scheduled for a pre-operative phone interview with a nurse from the preoperative anesthesia staff. In some cases, you will have to come to the hospital for this interview and for any other tests that may be necessary, such as blood tests, X-rays, or an EKG. In other cases, the interview can be done over the phone. Your surgeon's office will give you more information about your pre-operative interview. If you are coming to the hospital for the interview, you will meet an anesthesiologist at that time. If your interview is over the phone, you will meet the particular anesthesiologist that will help your surgeon on the morning of your surgery. Be prepared to give any information about your previous anesthetic experiences to your anesthesiologist. This information is critical to them.

During your preoperative interview, the nurse will explain what you need to do in order to prepare for your surgery. Make sure you understand all of the instructions you are given. Some of the most important instructions will be:

- Do not eat or drink anything after midnight on the night before surgery. You may take your routine medicines (such as heart, blood pressure, or asthma medicine) on the morning of surgery with a small sip of water

- Stop taking aspirin and other blood-thinning products (such as Coumadin and Plavix) 7-10 days before surgery, unless otherwise directed by the nurse, your doctor or your cardiologist
- If you take medicine for diabetes, make sure you understand how to adjust your medicine on the day of surgery when you will not be eating

You will be given more detailed instructions about preparing for surgery during your preoperative interview.

**Q: Will I have pain after the operation?**

**A:** You will have some pain, but this can be treated very effectively with small doses of pain medicine. As you recover, you may have a sore throat, difficulty swallowing, or a hoarse voice. These things will get better fairly quickly and you will not need to be on long term pain medicines for thyroid surgery.

**Q: What medicines will I have to take at home after surgery?**

**A:** In most cases, you will go back to taking any daily medicines you were on before surgery. As noted above, pain medicine will be added for a few days.

Sometimes, additional medicines are needed, including:

- Calcium and Vitamin D. Your blood calcium level is controlled by the parathyroid glands, which sit behind the thyroid and share a delicate blood supply with the thyroid. Sometimes, these glands do not work properly after surgery because they feel stunned and thus your calcium levels may become abnormally low. Your surgeon may recommend that you take calcium and vitamin D supplements after surgery. Usually, these can be stopped after a short period of 2-4 weeks. Rarely, they must be taken permanently
- Thyroid hormone. If the entire thyroid gland has been removed, you will have to take thyroid hormone for the rest of your life. If you had a thyroid lobectomy, you may or may not have to take hormones. If you took thyroid hormone before the surgery, it is likely that you will continue to take it and sometimes the dose may need to be increased from your previous dose. Your surgeon will be able to tell you whether or not you can expect to take thyroid hormone following your operation.

**Q: What is done with the thyroid tissue that is removed?**

**A:** The tissue is sent to the pathology lab for careful examination. A pathologist will look at the tissue under a microscope to see if there are any abnormalities, including cancer. It takes about 5-7 business days to get these results after your operation. It is important not to rush the pathologist so they can make a clear and important diagnosis on your tissue. Frozen sections done during thyroid surgery are generally not very accurate for thyroid surgery and thus are rarely performed on your removed thyroid. Your surgeon will go over the results in detail with you when you come back for your follow up appointment.

**Q: If the removed thyroid tissue shows thyroid cancer, what does that mean?**

**A:** Being diagnosed with thyroid cancer is probably very scary but you must remember that most thyroid cancers are very slow growing tumors and most can be removed surgically. Thyroid cancer is a rare disease; only 33,000 cases are diagnosed each year in the United States. Papillary thyroid cancer is the most common type, making up about 70% to 80% of all thyroid cancers. Papillary thyroid cancer can occur at any age, and has been increasing in incidence in the last decade, and is now ranked as the 8th most common cancer in women in the US. There are only about 25,000 new cases of papillary cancer in the United States each year, but because these patients have such a long life expectancy, we estimate that 1 in a 1000 people in the United States have or have had this form of cancer. Most people diagnosed with papillary thyroid cancer will not die from their papillary thyroid cancer. Papillary cancer can sometimes spread to lymph glands in the neck. Unlike some other tumors, the generally excellent outlook for papillary cancer is usually not affected by spread of the cancer to the lymph nodes. Depending on your particular type of thyroid cancer your surgeon may recommend additional therapies, but you must discuss details with your surgeon and endocrinologist.

**Q: How will I feel after the surgery?**

**A:** You will be somewhat sore and will have trouble moving your neck normally for about a week. As noted above, pain medication is effective in controlling this discomfort. You may have some minor muscle spasms in the upper back and neck. It will be important for you to keep these muscles relaxed, and to maintain normal posture as much as possible to reduce these spasms. Gentle stretching of the neck is important so you do not become stiff.

You should feel better every day. Most patients can return to work 1-2 weeks after surgery. You should be able to drive in about a week - as long as you can turn your head comfortably and are not taking pain medicine. You can swim and return to non-strenuous exercise (i.e. tennis, golf, walking, or treadmill) after 2 weeks. You can return to all your normal activities by 3-4 weeks after surgery.

**Q: Will I lose my voice after thyroid surgery?**

**A:** Your voice will sound different for a while after the surgery. Some patients are hoarse and some have "voice fatigue," meaning their voice is "tired" at the end of the day. In most cases, these changes go away in 6-8 weeks.

In a small number of patients (about 1-2%), changes in the voice are permanent. If this happens, treatments are available that may help improve the quality of the voice. Please talk to your surgeon if you feel that you are experiencing significant voice changes after your thyroid surgery.

**Q: Are there other side effects of surgery?**

**A:** As noted above, in some cases the parathyroid glands do not work properly after thyroid surgery, causing blood calcium levels to drop. You may be asked to watch for signs of low calcium, which include numbness and tingling in the fingers and around the mouth or muscle cramps. Your surgeon will tell you what to do if low calcium becomes a problem. You may also experience some symptoms that are common after almost any operation, such as loss of appetite, constipation, feeling tired, needing to take extra naps or having trouble sleeping

or concentrating. These are normal reactions to surgery and should pass in a short time. If they do not, please tell your surgeon.

**Q: Will I have a scar in my neck?**

**A:** You will have scar, but your surgeon will take great care to make sure it is as small as possible. The incision is placed in the lower neck. Lots of care will be taken by your surgeon to minimize scarring, and plastic surgery techniques will be used to close your incision. Ultimately the type of scar formed depends mostly on your own body. Your incision will be closed with stitches placed under your skin that are not visible. These stitches dissolve after a period of time and do not need to be removed. Strips (Steristrips or butterfly strips) may be placed on your incision to help healing and for protection. It is best if you do not peel these off. Once these strips fall off or are removed by your surgeon, you can apply a small amount of vitamin E containing lotion over the incision. In the early weeks and months following your surgery, the scar will be much more noticeable than it will be later. It is natural to get some swelling around the scar, and to see a healing "ridge" form above and below the area. A small amount of bruising is normal as well. Over time, the scar will fade. It may take up to 6 months, but in most cases the scar lightens to where it is barely noticeable. The majority of people having thyroid surgery are very pleased with the minimal scar present at 6 months after surgery.