

Shalamar Hospital is striving to provide our patients quality health care, at lowest possible costs. Our hospital is continually active in pioneering new treatments and therapies to improve the lives of people in our community.

## 7. Will I require thyroid medication post-surgery?

It is possible that you may need to take thyroid medication after thyroid surgery, but this will depend on the extent of the thyroid gland removal and the reason for the surgery. If only a portion of the thyroid gland is removed (a lobectomy or partial thyroidectomy), it is possible that the remaining thyroid tissue will be able to produce enough thyroid hormone to maintain normal levels in the body. In this case, you may not need to take thyroid medication after surgery.

However, if the entire thyroid gland is removed (a total thyroidectomy), you will need to take thyroid hormone replacement medication for the rest of your life to replace the thyroid hormone that your body can no longer produce. Your doctor will monitor your thyroid hormone levels and adjust your medication dosage as needed to ensure that your levels remain within the normal range.

## 8. What can I expect after deciding to proceed with the surgery?

After deciding to proceed with thyroid surgery, you can expect a preoperative evaluation, which may include blood tests, imaging studies, and possibly an evaluation of your vocal cord function. On the day of surgery, you will be given anesthesia, and the operation will take place, typically lasting between 1-3 hours. After the surgery, you will spend several hours in the recovery room before being transferred to a hospital room or discharged home. You may experience some pain, swelling, and discomfort in the neck area, but this can be managed with pain medication.

You may also experience some temporary hoarseness or difficulty swallowing, which usually resolves within a few days to weeks. Depending on the extent of the surgery and your overall health, you may be able to return to work or other normal activities within 1-2 weeks or may need more time to recover.

After surgery, you will be closely monitored by your doctor, and may need to take thyroid hormone replacement medication if your thyroid gland was partially or completely removed. Your doctor will provide you with specific instructions on how to take your medication and monitor your thyroid hormone levels to ensure they are in the appropriate range. It is important to attend all follow-up appointments with your doctor to ensure proper healing and to monitor for any potential complications.

## 9. What are the limitations on my physical activity following surgery?

After thyroid surgery, it is common for patients to experience some level

of discomfort or pain in the neck area for several days to a week. The amount of physical activity that is safe to resume after surgery will depend on the individual and the extent of the surgery. In general, patients are advised to avoid any strenuous activity, heavy lifting, or exercise that involves straining for at least two weeks after surgery to allow for proper healing.

After the initial healing period, patients can gradually resume normal activities, but it is important to listen to your body and avoid overexertion. It is also important to avoid activities that could put strain on the neck or cause injury, such as contact sports or activities that involve sudden movements.

Your surgeon will provide specific recommendations for activity restrictions and advise you on when it is safe to resume normal activities. It is important to follow these instructions to ensure proper healing and avoid complications.

## 10. Will I be able to lead a normal life after the surgery?

In general, patients who undergo thyroid surgery can lead a normal life after recovery. Most patients are able to resume their normal activities within a few weeks after surgery, and many are able to return to work or school within a week or two. However, some patients may experience temporary changes in their voice or difficulty swallowing after surgery, which can impact their daily activities. Additionally, patients who have had their entire thyroid gland removed will need to take thyroid hormone replacement medication for the rest of their lives to maintain normal thyroid hormone levels in their body. It is important for patients to follow their surgeon's post-operative instructions and attend all follow-up appointments to ensure a smooth and successful recovery.

## ENDOCRINE SURGERY CLINIC

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# Thyroid Surgery:

## What you Need to Know?

## WHAT IS THE THYROID GLAND?

The thyroid gland is a vital endocrine gland shaped like a butterfly that produces thyroid hormone, which is secreted into the bloodstream and affects every tissue in the body, including energy use, temperature regulation, and organ function. The surgery's extent depends on the reason, and your endocrinologist and surgeon should help you make the decision.

When thyroid surgery is recommended, you should ask questions such as why you need an operation, if there are alternatives, how you should be evaluated before the surgery, what the risks are, how much of your thyroid gland needs to be removed, whether you'll need thyroid medication, and what to expect after the surgery.

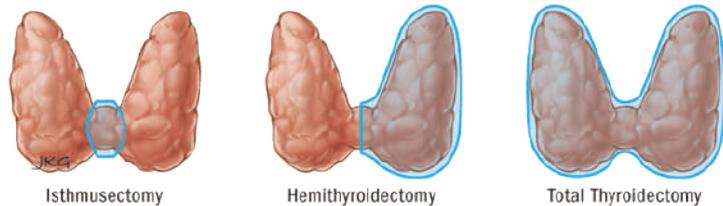
## GENERAL INFORMATION

Your doctor may recommend that you consider thyroid surgery for following reasons:

- You have a nodule that might be thyroid cancer.
- You have a diagnosis of thyroid cancer.
- You have a nodule or goiter that is causing local symptoms – compression of the trachea, difficulty swallowing or a visible or unsightly mass.
- You have a nodule or goiter that is causing symptoms due to the production and release of excess thyroid hormone – either a toxic nodule, a toxic multinodular goiter or Graves' disease.

It is recommended that you have a discussion with your thyroid surgeon regarding the scope of your thyroid surgery, which can be broadly categorized as either a partial thyroidectomy or a total thyroidectomy. When only a portion of the thyroid gland is removed, it is referred to as a partial thyroidectomy. Surgery is usually recommended for following reason:

- An open thyroid biopsy – a rarely used operation where a nodule is excised directly;
- A hemi-thyroidectomy or thyroid lobectomy – where one lobe (one half) of the thyroid is removed;
- An isthmusectomy – removal of just the bridge of thyroid tissue between the two lobes; used specifically for small tumors that are located in the isthmus.
- Finally, a total or near-total thyroidectomy is removal of all or most of the thyroid tissue. (See Figure)



The decision on the extent of thyroid surgery to be performed is based on the underlying reason for the surgery. A hemithyroidectomy may be recommended for a nodule limited to one side of the thyroid. Conversely, a total thyroidectomy may be recommended for a large bilateral goiter or thyroid cancer. It is crucial to note that determining the extent of surgery is both a medically and personally complex decision that must be made collaboratively with your endocrinologist and surgeon.

## QUESTIONS AND CONSIDERATIONS

Consider the following questions when thyroid surgery is recommended:

1. What is the reason for the operation?
2. Are there other treatment options available?
3. How should I prepare for the surgery?
4. How do I choose a surgeon?
5. What are the potential risks of the surgery?
6. What is the recommended extent of thyroid gland removal?
7. Will I require thyroid medication post-surgery?
8. What can I expect after deciding to proceed with the surgery?
9. What are the limitations on my physical activity following surgery?
10. Will I be able to lead a normal life after the surgery?

### 1. What is the reason for the operation?

Thyroid surgery is typically carried out to remove a suspicious thyroid nodule detected by a fine needle aspiration biopsy. The following biopsy results may indicate the need for surgery: papillary cancer, inconclusive biopsy, follicular neoplasm or atypical findings, or molecular marker testing of biopsy specimen showing a risk for malignancy. Additionally, surgery may be recommended for benign nodules that are large, increasing in size, or causing symptoms such as difficulty swallowing or discomfort. Surgery is also a viable option for treating hyperthyroidism such as Grave's disease or a "toxic nodule", large and multinodular goiters, and any goiter that causes symptoms.

### 2. Are there other treatment options available?

If there is suspicion of thyroid cancer, surgery is a necessary course of action to remove nodules. However, if there is no indication of cancer, there may be alternative non-surgical treatments available depending on the diagnosis. It is important to consult with a physician who specializes in thyroid diseases to discuss other treatment options.

### 3. How should I prepare for the surgery?

Prior to thyroid surgery, all patients should undergo a comprehensive medical history and physical examination, including an assessment of their heart and lung function. Patients who are over 45 years of age or symptomatic from heart disease may be recommended to undergo an electrocardiogram and chest x-ray prior to surgery. Blood tests may be performed to rule out any bleeding disorders. Patients who have experienced changes in their voice or have undergone previous neck operations (such as thyroid surgery, parathyroid surgery, spine surgery, or carotid artery surgery), as well as those suspected of having invasive thyroid

cancer, should have their vocal cord function evaluated before surgery. This will help determine if the nerves controlling the vocal cords are functioning normally. Additionally, patients suspected of having medullary thyroid cancer should be evaluated for endocrine tumors that may be associated with familial syndromes, such as adrenal tumors (pheochromocytomas) and enlarged parathyroid glands that produce excess parathyroid hormone (hyperparathyroidism), albeit this is a rare scenario.

### 4. How do I choose a surgeon?

Ideally, thyroid surgery should be carried out by a specialized surgeon who performs this type of surgery frequently and has received appropriate training. Studies suggest that the risk of complications is lower when the surgery is performed by a surgeon who has extensive experience in thyroid surgery. Patients may want to inquire with their primary care physician about recommendations for a qualified thyroid surgeon or where they would personally choose to have the surgery done.

### 5. What are the risks associated with surgery?

Thyroid surgery is considered very safe in the hands of experienced surgeons. While complications are rare, the most serious potential risks include bleeding in the hours immediately following surgery which may lead to acute respiratory distress, injury to a recurrent laryngeal nerve that can cause temporary or permanent hoarseness and, in rare cases, acute respiratory distress if both nerves are injured, and damage to the parathyroid glands that control calcium levels in the blood leading to temporary or, more rarely, permanent hypoparathyroidism and hypocalcemia. Patients with invasive tumors, extensive lymph node involvement, undergoing a second thyroid surgery, or with large goiters that extend into the chest (substernal goiter) are at a higher risk for complications. However, the risk of any serious complication should be less than 2%. Patients should be fully informed of the reasons for the operation, alternative treatment options, and the potential risks and benefits of the surgery prior to giving informed consent. It's important to note that these risks should be discussed with the patient by their particular surgeon rather than relying solely on literature.

### 6. What is the recommended extent of thyroid gland removal?

The recommended extent of thyroid gland removal in thyroid surgery depends on the reason for the surgery. In cases where thyroid cancer is suspected or confirmed, the recommended extent of removal may vary based on factors such as the type and stage of cancer. Generally, for papillary thyroid cancer, a total thyroidectomy (removal of the entire thyroid gland) may be recommended, while for follicular or Hurthle cell thyroid cancer, a lobectomy (removal of one lobe of the thyroid gland) may be sufficient. For benign conditions such as large goiters or Graves' disease, the extent of removal may also vary depending on the specific case. Ultimately, the extent of thyroid gland removal should be determined by the patient's individual case and discussed with their surgeon.