

EAR, NOSE & THROAT

## Removing the thyroid

One in 20 people with a thyroid problem will have a noticeable nodule in the neck. In many cases, partial or total removal of the thyroid — known as a thyroidectomy — is required.



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The thyroid is a small, butterfly-shaped gland located in the lower front part of the neck, just below the voice box. The thyroid gland converts iodine that is consumed in our diet into the hormones thyroxine (also called T4) and triiodothyronine (also known as T3), which regulate metabolism. The thyroid sometimes produces too much T3 and T4 (hyperthyroidism); it may also cause structural problems (swelling, growth of cysts or nodules). Surgery to remove the thyroid may be necessary when these problems occur.

#### **When removal is required**

There are several indications for thyroidectomy, which can be used to treat patients who have thyroid cancer, thyroid nodules, or hyperthyroidism.

The procedure is used to treat the patient if thyroid cancer is proven or suspected, or if a non-cancerous (benign) nodule is large enough to cause problems with breathing or swallowing. Sometimes a fluid-filled (cystic) nodule recurs after being drained and may need to be removed by surgery.

People with nodules larger than 1–1.5cm should consult a doctor. The nodules can be evaluated by ultrasound and supplemented

with the use of fine needle aspiration cytology (FNAC), whereby cells can be extracted from the nodule and examined under the microscope.

Patients with hyperthyroidism who are unresponsive to drugs or radioactive iodine are best treated with surgery. Graves' disease is the most common cause of hyperthyroidism, affecting about 70% of people with an overactive thyroid gland. Toxic nodular goitre or multinodular goitre can also cause the thyroid to overproduce its hormones.

#### **Partial and total removal**

Thyroid surgery doesn't always involve the complete removal of the organ.

If only one side of the thyroid is affected by nodules or growths, there is the option of removing only that half of the thyroid gland in a procedure known as a lobectomy. The remaining lobe should still have sufficient function and the patient will not need to have thyroid hormone replacement in most cases.

In subtotal thyroidectomy, a small amount of thyroid tissue is left behind to preserve some thyroid function.



size, extent and type of disease that is being dealt with.

#### After-care protocols

Most patients leave the hospital a day or two after surgery. This also depends on the age and general health of the patient as well as extent of the surgery. Those who undergo a total thyroidectomy will need to have their calcium levels checked and corrected — if necessary — before discharge.

Patients can resume most routine daily activities the day after the surgery. It is advisable to wait for at least 10–14 days before performing strenuous activities, such as heavy lifting or sports.

Patients may experience some pain for a few days after the surgery; usually mild analgesics such as paracetamol will be sufficient to control it. Those with more severe pain can take stronger pain medications; narcotic analgesics are occasionally required.

Most surgical incisions in the neck should

heal well and may not be noticeable a few months after surgery. However, some patients do develop thickened scars — an injection of steroid into the scars can reduce them.

#### Complications

As with every major surgery, thyroid surgery carries the risk of bleeding, infection and an adverse reaction to the anaesthetic. As mentioned, there is also a possibility of hypothyroidism developing after the surgery. More serious complications that can occur include:

- Damage to the recurrent laryngeal nerves (nerves that control the function of the vocal cords). The voice may be hoarse if injury or stretching of this nerve occurs during surgery.
- Damage to or inadvertent removal of the parathyroid glands (glands that control the calcium levels in the body). The calcium in the body will fall below normal levels and replacement of calcium is required. [🔗](#)



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One thing to note is that hypothyroidism (underproduction of thyroid hormones) can occur after any of these three procedures. It will certainly occur in patients who have total thyroidectomy and may happen in patients who have either of the other two types of surgeries. When hypothyroidism does develop, the patient will be required to take oral thyroid medication (hormone replacement) for the rest of his life.

#### Types of thyroidectomy

There are several approaches that can be used for the removal of the thyroid gland. The most commonly used method is the conventional approach, where an incision is made to the front of the neck directly over the location of the thyroid gland.

Other methods of thyroid surgery include endoscopic, robotic, transoral and minimally invasive video assisted thyroid surgery (MIVAT). Appropriate selection of patients is important in the decision to use non-conventional approaches, and is based on the

