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THYROIDECTOMY for THYROTOXICOSIS

This document is an information sheet I have prepared about your thyroid operation to help you to make an informed decision. It describes the benefits and risks of surgery so you can decide whether to go ahead with the operation or not. If you have any further questions please let me know or consult my website at www.endocrinesurgery.net.au

What is the thyroid gland?

The thyroid is a large butterfly-shaped gland in the neck that sits like a bow tie just below the voicebox (Figure 1). It comprises two lobes that sit on either side of the windpipe.

The thyroid releases a hormone into the bloodstream called thyroxine that regulates the body's metabolism. Too much or too little thyroxine leads to a number of different symptoms affecting many parts of the body.

Thyroid activity is controlled by a hormone called thyroid stimulating hormone (TSH), which is released from the pituitary gland in the brain. Thyroid blood tests measure this hormone as well as those released by the thyroid itself.

What has gone wrong with my thyroid gland?

The thyroid can become overactive (producing excessive amounts of thyroid hormone without regard to the body's need) due to a variety of causes. This results in a condition called *thyrotoxicosis*, which causes a variety of symptoms such as heat intolerance, anxiety, tremor, palpitations and excessive sweating.

The most common cause of thyrotoxicosis is a condition called Graves' disease. The thyroid may also become enlarged (goitre) which can cause problems with swallowing or breathing, and an unsightly bulge in the neck. Almost all thyrotoxic goitres are benign (not a cancer). Of course, any part of the thyroid gland removed will be examined by the pathologist under the microscope.

Why should I have the surgery?

You have been advised to have an operation on the thyroid to remove the overactive goitre. In order to do this safely it generally means completely removing the thyroid gland (a total thyroidectomy) rather than just part of the thyroid. All patients will then need to take thyroid supplements for the rest of their lives, but the risk of the thyrotoxicosis recurring is eliminated.

Although you may have already been taking antithyroid drugs, such as carbimazole or propylthiouracil, these are not ideal long term choices for control. Definitive treatment with radioactive iodine will be appropriate in many people, although not in pregnant or breast feeding women. Surgery can be required when the toxic goitre is large, there is a suspicion of cancer, there is uncontrolled thyrotoxicosis in pregnancy or an allergy to the antithyroid drugs, and also in patients with severe eye disease. Some patients just prefer surgery rather than radioactive iodine, and it is the quickest way of curing the problem.

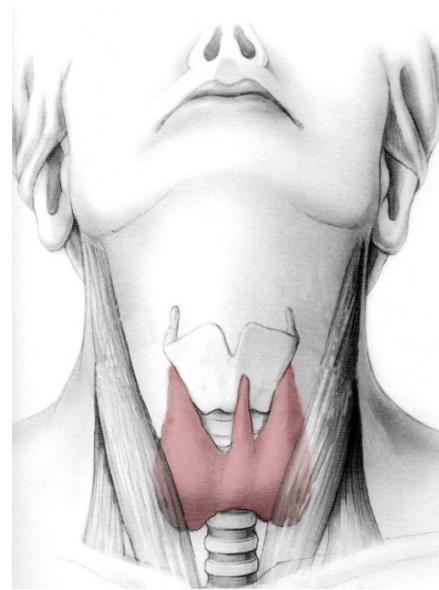


Figure 1: Anatomy of the thyroid gland, which is situated in the neck, just below the voice box.

How is the operation done?

Most patients with a goitre in the thyroid can still have a minimally invasive (small cut) operation to remove it. When the goitre is larger or extends into the chest however, a larger cut may be necessary. The operation is performed under a general anaesthetic and usually takes about an hour to two hours.

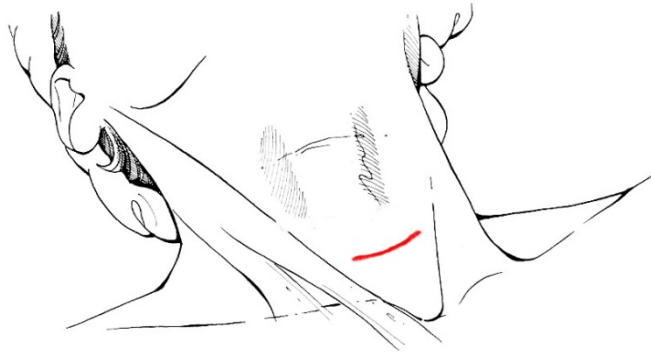


Figure 2: Diagram showing the usual size of the cut in the neck for thyroid surgery. A larger cut may be needed with big goitres.

While you are asleep a cut is made in the neck in the line of one of your skin creases. I aim to make the cut as small as possible (minimally invasive surgery), usually around 4 or 5 cm long (Figure 2), but this of course depends on the size of the goitre.

The whole thyroid is removed and sent to the laboratory to be examined by the pathologist.

The wound is closed to leave a neat scar with a few stitches, which will be removed in a few days. Occasionally a small drain tube is left in the neck to catch any bleeding, and is then removed in a day or so.

What can go wrong with the operation?

We aim to make the operation as safe as possible, but very occasionally things can go wrong and a complication can occur. These fall into three main areas:

1. *Complications of the anaesthetic:*

Your anaesthetist will discuss with you any possible complications related to the anaesthetic.

2. *General complications of any operation:*

Bleeding

- can occur during or after the operation, causing a bruise or collection of blood (haematoma) to form in the neck. This usually gets better by itself, but occasionally a second operation may be needed to control the bleeding. The risk is less than 1 in 500 patients.

If you are taking warfarin or clopidogrel these can increase the risk of bleeding in thyroid surgery. Please tell me if you are taking either of them so that I can advise you about stopping these medications prior to the operation.

Pain

- is unusual after minimally invasive surgery as the cut is smaller, I don't cut the muscles, and I use lots of local anaesthetic in the wound to minimise discomfort after surgery. Generally only paracetamol (Panadol) is needed to control any pain.

Infection

- in the wound is extremely rare.

3. *Complications specific to thyroidectomy:*

Low calcium levels in the blood

- can occur after removal of the thyroid, and is more common after toxic thyroid glands are removed, because your bones can be deprived of calcium by the overactive gland. After the operation the bones begin to rebuild, which tends to lower the amount of calcium in the blood for a few weeks to months. It does not occur in all patients but is quite common.

This can also occur if the tiny parathyroid glands, which are embedded in the back of the thyroid, are inadvertently damaged or removed. Every effort is made to preserve the parathyroids but they may still not function for a time after the operation.

You may feel tingling or numbness in the fingers or around the mouth, which is an indication that the calcium is low in the blood. The parathyroids will usually start working normally in a few days to weeks, but meanwhile you may need to take some calcium and vitamin D supplements to relieve the symptoms. There is a 2 in 100 risk of a permanent loss of parathyroid function.

It is a good idea to purchase some Caltrate (calcium) tablets from your chemist before your surgery, so they are on hand at home if you develop any tingling after the operation. I will advise you if the tablets are necessary and how much to take.

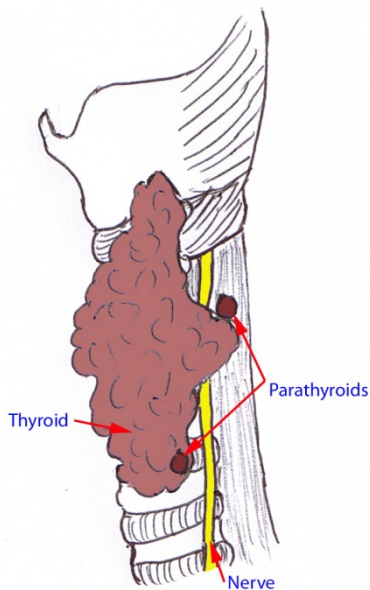


Figure 3: Left side view of the thyroid showing the position of the nerve to the voicebox and the parathyroids.

Change in the voice

- the nerves to the voicebox run very close to the thyroid and to the parathyroids on each side of the neck (Figure 3).

These nerves can be damaged or stretched during the operation, especially if the gland is very large or extending into the chest, resulting in a change in the voice or difficulty with singing or shouting.

The risk of a permanent change is less than 1 in 500. Any change in the voice is usually temporary and settles in a few weeks to months.

Damage to both nerves is exceedingly rare, but can result in breathing difficulties, which may need another operation to allow an adequate airway.

Low thyroid function

- will occur after total thyroidectomy without replacement, so you will need to take thyroid supplements (Thyroxine) for the rest of your life. This usually only involves taking one or two small tablets a day, which will be started while you are in hospital. The final thyroxine dose will be determined by a blood test 6 weeks after the operation.

What happens after the operation?

After the surgery you will be transferred to the recovery room and then to the ward. You will be able to drink and eat soon after the operation, and can usually go home the next day or the day after, with your thyroxine tablets. I will then see you in the rooms for removal of the stitches and to check the wound. We will also discuss the pathology results and the need for any further treatment.

Most people feel fine after the surgery with very little discomfort and can return to work and normal activities after one or two weeks. It is quite normal to feel a bit tired after an operation, but this gets better with time and regular exercise.

Thyrotoxic patients often feel more tired than most however, as they need to adjust to lower thyroid activity, especially if they were still toxic at the time of surgery. It is common to put on a little weight as the thyroid activity returns to normal, but the overall health benefits of normal thyroid function far outweigh this inconvenience. Increasing physical activity, and adjustment to the diet, will minimise the weight gain, and it is important to remember that patients with normal thyroid function tend to eat less anyway.

If you are worried about anything at all please ring or email the office for information.