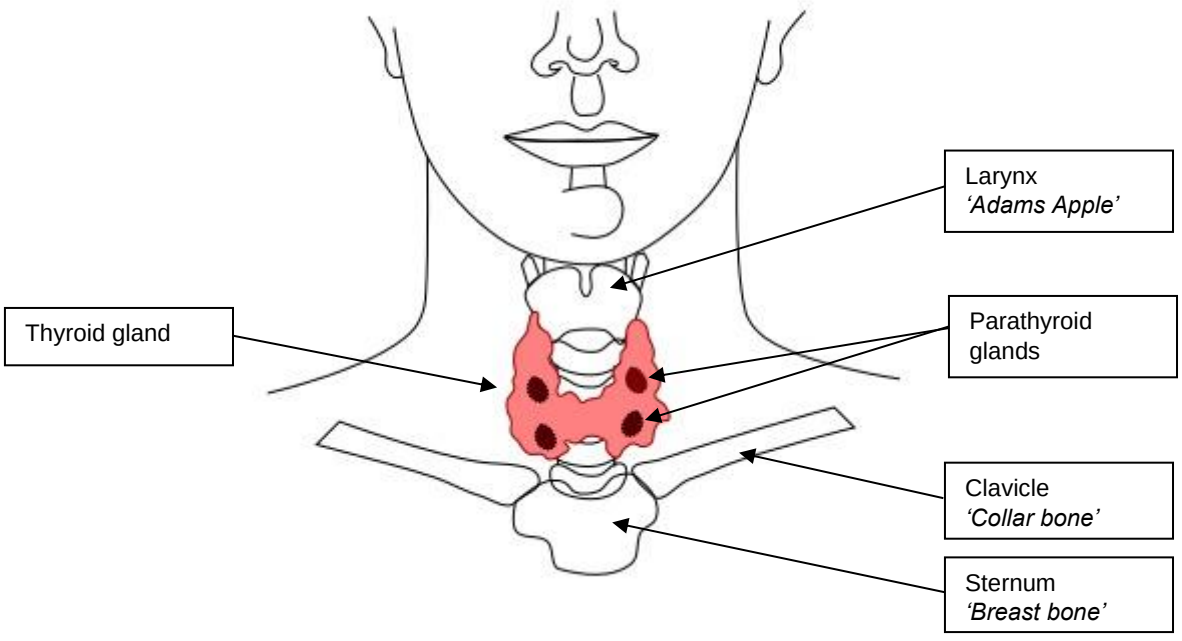
Thyroid surgery

This information sheet is designed to help you make an informed decision about having surgery on your thyroid. If you have any further questions, please discuss these with our staff before your operation.

What is the thyroid gland?

The thyroid gland is a butterfly shaped organ that sits in the neck in front of the trachea (windpipe) below the Adams Apple. It consists of two halves (left and right lobes) joined by a central bridge (isthmus).



Picture showing thyroid gland in neck (pink) with 4 parathyroid glands (dark pink) which are normally found behind the thyroid gland

The thyroid gland secretes a hormone known as Thyroxine. Thyroxine controls the body's metabolism, which is vital for normal health.

Types of thyroid surgery?

There a different types of thyroid surgery and the choice of operation will depend on the reason for needing surgery.

- HEMITHYROIDECTOMY – also known as a thyroid lobectomy, this involves removing one of the lobes and sometimes also the isthmus.
- TOTAL THYROIDECTOMY – this involves removing the whole thyroid gland. Occasionally the surgeon may leave a tiny amount of thyroid behind to protect the underlying structures but this is small and this procedure is a total thyroidectomy.
- SUBTOTAL THYROIDECTOMY - this is a historic procedure that is now rarely recommended. This procedure involves removing part of the thyroid leaving a remnant of each thyroid lobe. This is no longer performed routinely as it leaves an unacceptable amount of thyroid and has the risk of recurrence of symptoms.

Why is thyroid surgery needed?

Surgery on the thyroid is done for a number of reasons:

Goitre:

A goitre is a non-cancerous enlargement of the thyroid gland which can cause compression on surrounding structures such as your oesophagus (food pipe) or trachea (windpipe) as it enlarges. Symptoms can include a lump in the throat, difficulty swallowing or make you feel more short of breath.

Thyroid nodule or lump:

Nodules in the thyroid are common and can be single solitary nodule or multiple (multi-nodular goitre). As we get older it is common to develop thyroid nodules and the majority of nodules will be benign (non-cancerous). Nodules are usually assessed with an ultrasound scan of the neck and in some cases a small needle biopsy of the nodules is taken. If your surgeon is concerned by findings from any of these tests surgery maybe recommended and this could be either a hemithyroidectomy or a total thyroidectomy.

You may also require further imaging before surgery and your surgeon will explain this to you if this is necessary.

Overactive thyroid:

The thyroid gland can become overactive and release too much thyroid hormone. This is called hyperthyroidism or thyrotoxicosis. This condition is diagnosed by blood tests and clinical assessment. Patients with this condition are also under the care of Endocrinology specialists. Hyperthyroidism can be treated with medication or radio-iodine but in some cases surgery is recommended.

What about lymph nodes?

Lymph nodes drain a natural fluid called lymph that is produced by many tissues in the body. Lymph nodes (also called lymph glands) filter bacteria, viruses or cancer cells in the body. Each node drains a particular area of the body. The nodes in the neck drain the skin of the head and neck and all the swallowing and breathing tubes. Once cancer cells are present in the lymph node it can grow and multiply.

In patients who have a diagnosis of thyroid cancer, the lymph nodes around the thyroid gland are sometimes removed as part of the cancer operation. Sometimes only the lymph nodes close to the thyroid gland are removed. This operation is called a central neck dissection as the lymph glands in the centre of the neck are removed. Performing a central neck dissection does not usually affect the size of the scar.

Occasionally, it is also necessary to remove lymph glands from the side of the neck. This is a more involved operation requiring a longer scar and is called a lateral neck dissection. Your surgeon will explain what is required before your surgery and what the surgery involves.

Please also see the RUH information leaflet on Neck Dissection.

Not all patients who have a diagnosis of thyroid cancer will require a neck dissection and your team will make this decision based on a number of factors and discuss these with you. It is also possible that after any surgery for thyroid cancer you will require further surgery and your team will also discuss this with you.

What does the operation involve?

The operation is done under a general anaesthetic and can take several hours depending on the type of thyroid surgery you require. The thyroid sits in front of the windpipe in the neck and to remove the thyroid an incision (cut) is made across the lower neck and which will leave you with a scar. In the majority of patients this scar heals quickly and is hidden in the natural skins creases of the neck but may, in some cases, be a little prominent.

In some cases a small plastic tube (drain) is placed under the skin to stop any blood from collecting under the skin. This will is commonly removed the following day but your surgeon will advise you of this and you will not be discharged until it is removed.

When will I be able to go home?

This will depend on the exact diagnosis and the operation being performed. In most cases, patients stay in hospital overnight and are discharged the day following surgery. In some instances you may stay in hospital for longer. Your surgeon will advise you.

How long will I take to recover?

Thyroidectomy is not a significantly painful operation and most patients don't require any pain killers after 72 hours. It is advised that you avoid driving whilst taking any strong painkillers such as codeine and tramadol.

Following a thyroidectomy, some patients feel as though there is a lump in their throat as they swallow. This is common and will disappear in time.

It is common to have a sore neck following surgery. It is important to continue to gently move your neck to prevent it from becoming stiff after surgery. Before resuming driving you need to ensure that you can make an emergency stop without hurting your neck. You also need to be able to comfortably turn your neck to look around as you drive, for example, when you change lanes. You should inform your car insurance company that you have had a thyroid operation as different insurers may have their own rules about how long you should wait after an operation before you return to driving.

Care of your wound

When you are discharged from hospital you can expect to be given advice about care of your wound from the ward staff. There are different methods to close the incision and the surgeon will inform you of this. The wound may be covered by a dressing and this can usually be removed after 48 hours unless you are told otherwise. You will usually be able to take a bath or shower 48 hours after your operation. Gently pat your wound dry rather than rub it.

Your wound may be slightly raised and pink or red in the days following surgery. This will settle over time as it heals. Eventually the wound should become flat and pale but this may take several months.

Unless suggested by your medical team, it is not advisable to rub any ointments or bio-oils onto the wound immediately after your surgery before the wound has had chance to heal. It is best to wait until you have been seen in the postoperative clinic and discuss with your surgeon if you wish to use such products. It may also be beneficial to use a high SPF sun cream on the scar to prevent it from sunburn.

When can I return to work?

This will depend on the type of work you do. You may be able to return to office-based work after 1-2 weeks but it may take up to four weeks for heavier work. Please let the team know if you require a sick note for work.

Will I need Thyroid replacement tablets after my operation?

This depends on which operation you have had performed. Patients who have all the thyroid gland removed (total thyroidectomy) will need thyroid tablets (Levothyroxine) following surgery and this will be life-long. Your surgical or medical

team will prescribe these tablets the day after your thyroid operation and you will have tablets to take home and your GP will continue to prescribe these long-term.

To check that you are on the correct dose you will require a blood tests at your GP, which should be done about a month after surgery.

20% of patients who have half of their thyroid gland removed (hemithyroidectomy) may ultimately also require thyroid hormone treatment. This is decided by a blood test 6 weeks (not before) following your operation.

Are there any risks to having thyroid surgery?

Thyroid surgery is a generally safe procedure and the majority of patients make a full recovery following surgery. But, as with all operations, there are risks with having the surgery which your surgical team will discuss with you:

Bleeding:

This is an uncommon complication. Sometimes, at the end of the procedure a small plastic drain is left under the skin to prevent blood from collecting. Occasionally, patients will need to return to operating theatre and have further surgery to have the neck explored so that the cause of bleeding can be dealt with.

Infection:

Infections following this type of surgery is uncommon. If you were to develop an infection it can be treated with antibiotics.

Swelling:

It is not uncommon to have a degree of swelling around the wound as it heals following the surgery. Occasionally some fluid can collect under the scar (seroma) which normally settles on its own. Rarely this needs aspirating with a needle.

Scar and numbness:

Following the surgery you will have a scar across the front of your neck. Sometimes the scar may be red for a few months after the operation before fading and can take up to a year to reach its final appearance. Some patients may develop a thick exaggerated scar which is unsightly but this is very rare.

It is common for the skin around the scar to feel numb. This numbness should settle with time.

Voice change:

There are several reasons why you could have a change to your voice following surgery.

Injury to the recurrent laryngeal nerve:

There are two recurrent laryngeal nerves, one on each side of the neck. They pass behind the thyroid gland and into the larynx (voice box) where they control movements of the vocal cords. A nerve monitor is often used during the surgery to reduce the risk of injury but damage can occur to one (unilateral) or both (bilateral)

nerves and the damage can be temporary or permanent. Damage to a nerve is called a palsy.

If “bruised”, the nerve may not work properly immediately after surgery but recovers and should return to normal function during the next few days or weeks. Sometimes, however, it can take up to 12 months for the nerve to recover. Permanent damage to one of these nerves usually causes a hoarse, croaky and weak voice. The voice box usually adapts to the damage and symptoms often improve with time. It is recommended that early treatment for a nerve injury should take place. Speech therapy and in some instances a vocal cord injection may be recommended by your surgeon. A permanent damage to one or both nerves is rare.

Significant injury to both laryngeal nerves although uncommon is a serious problem that may require placement of breathing tube (tracheostomy) in the neck. In time, removal of the breathing tube is ultimately achieved in most instances.

Injury to superior laryngeal nerve(s)

These fine nerves travel close to the blood vessels that feed the thyroid gland and control the tension of the vocal cords. Damage to these nerves may result in a change to the pitch of your voice. This might result in a difficulty in reaching high notes when singing, the voice can tire more easily and you might not be able to shout loudly.

Non-specific voice changes

30% of patients may experience voice change up to 3 months following thyroidectomy without any recognizable nerve injury. Fortunately such voice change is not usually a problem for patients and recovery ultimately occurs. You might find your voice is slightly deeper and experience voice fatigue. This is significant mainly for those who use their voice for professional reasons. Voice changes are more likely to occur in people who have surgery on a very large thyroid gland or have been operated on for cancer.

There is a higher risk of injury to nerve if the surgery is performed for an overactive thyroid, cancer of the thyroid, a very large goitre and if you also need a neck dissection.

Before and after surgery you surgeon may pass a camera via your nose (fibreoptic nasendoscopy) to check the movements of your vocal cords. This may happen whilst you are in hospital or at your follow-up appointment.

Low Calcium Levels

There are four parathyroid glands, two on each side of the neck; each about the size of a grain of rice and tightly attached to the thyroid gland. They are involved in regulating the calcium levels in the blood and are important for normal function. It is normally possible for the surgeon to identify and save some or all of these glands therefore avoiding a long-term problem. However, during thyroid surgery the parathyroid glands can be bruised or damaged.

If you are having surgery to remove the whole thyroid (total thyroidectomy) or the remainder of your thyroid (completion thyroidectomy) you are at risk of having a drop in your calcium levels. Even when the glands are saved they may not work properly for several weeks or months. Because of this your calcium levels might drop and you might experience tingling in the fingers and lips ('pins and needles'). You will have your calcium levels checked the morning after surgery. Depending on the levels you may need to take calcium replacement or vitamin D tablets.

There is a risk that you might need calcium or vitamin D tablets on a long-term basis. The risk of low calcium levels post-operatively is higher in patients who have surgery for:

- an over-active thyroid gland such as Graves' disease
- thyroid cancer
- lymph node surgery

What will happen after the surgery?

You will have a routine follow-up appointment with the team 6-8 weeks after surgery with the results of a thyroid blood test that can be performed at your GP practise. If the surgery is for a suspicious nodule or lump, then your follow-up appointment will be 2-3 weeks after surgery. The results of the tissue sent for analysis will be available and any further treatment that might be required will be discussed with you.

The surgeon will also review your wound to ensure it is healing. Following surgery on your thyroid it is routine to check that your vocal cords are functioning normal. To do this a camera will be passed through your nose (endoscope) to visualise the voice box. You will have had the same procedure done before the operation.

Further information

This information leaflet has been adapted from the British Association of Endocrine and Thyroid surgery (BAETS) leaflet. Further information can be found at: www.baets.org.uk

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Please contact the Patient Advice and Liaison Service (PALS) if you require this leaflet in a different format, or would like to feedback your experience of the hospital. Email ruh-tr.pals@nhs.net or telephone 01225 825656.

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