# THYROID SURGERY

## (for benign thyroid disease)

## Things you should know about

## your thyroidectomy

This booklet is designed for people who have been recommended to have a thyroidectomy, but who do not have thyroid cancer.

If you do have thyroid cancer, or a suspicion of this disease, then we recommend the booklets written specifically to answer your questions (obtainable from your surgeon or from the British Thyroid Foundation)

## Introduction

This booklet is designed to give you information about the thyroid gland, and about having a thyroidectomy and the care you will receive before, during and after your operation.

The booklet is designed for people who have been recommended to have a thyroidectomy because of a thyroid swelling (goitre) or for Graves' disease or overactive thyroid.

It is not intended for people who may be having a thyroidectomy for thyroid cancer. If you do have thyroid cancer, or a suspicion of this disease, then we recommend the booklets written specifically to answer your questions (these are obtainable from your surgeon or from the British Thyroid Foundation)

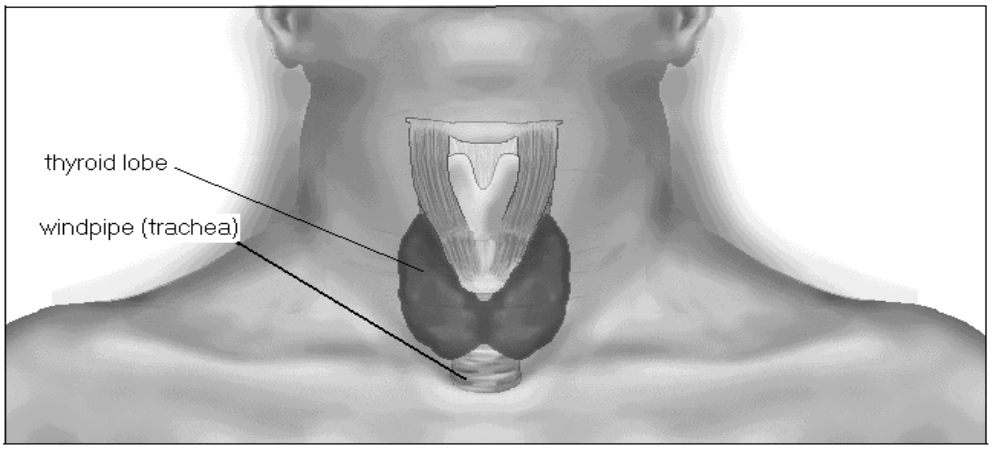
# THE THYROID GLAND

## What is the thyroid gland?

The thyroid gland is an endocrine gland; this means that it manufactures hormones that are released into the bloodstream, which then act as messengers to affect cells and tissues in other parts of the body.

## Where is the thyroid gland?

The thyroid gland is made up of two lobes (each about the size of half a plum) that are joined together by a ridge of thyroid tissue (called the isthmus). The two lobes lie on either side of your windpipe, with the gland as a whole lying just below your Adam's Apple.



## What does the thyroid gland do?

The thyroid gland produces thyroid hormones which it secretes into the bloodstream. The first is called 'Thyroxine'; it contains four atoms of iodine so is often called T4. If little or no thyroxine is produced it can easily be replaced with medication.

The second is called 'Triiodothyronine'; it contains three atoms of iodine so is often called T3. T4 is converted in the body into T3, and this influences the activity of all the cells and tissues of the body. If little or no T3 is produced it can easily be replaced by taking thyroxine.

## What do the thyroid hormones do?

Thyroid hormones regulate the speed at which your body cells work. If too much of the thyroid hormones are secreted, the body cells work faster than normal, and you have thyroid overactivity or 'hyperthyroidism' (also sometimes referred to as "thyrotoxicosis"). However if too little of the thyroid hormones are secreted then the body cells work slower than normal, and you have underactivity or 'hypothyroidism'.

## How is the thyroid gland controlled?

Most glands work in conjunction with other glands, and the thyroid gland works with the pituitary gland. The thyroid is controlled by the pituitary, which lies underneath your brain in your skull and senses the levels of thyroid hormones in your bloodstream. If the levels drop below normal, the pituitary reacts by secreting a hormone called the 'thyroid stimulating hormone' which is often called TSH. TSH stimulates the thyroid gland to make more thyroid hormone. Should the thyroid hormone levels rise above normal (eg in Graves' disease) the pituitary senses this and slows down or stops making TSH

## How is thyroid activity measured?

Your doctor will be able to get a good assessment of your thyroid gland activity by taking a history of your symptoms and by a physical examination. However, to gain an exact level of the thyroid hormones, it is necessary to take a small sample of blood, which when analysed in the laboratory will show how much T4 is being made, and how active your pituitary is, by measuring the level of TSH. These tests are sometimes called thyroid function tests or TFTs.

## What are the parathyroid glands and how do they affect calcium levels?

The parathyroids, normally four in number, are attached to the thyroid. The parathyroids produce Parathyroid Hormone (PTH) and this regulates the concentration of calcium in the blood. Normal calcium levels in the blood are essential for healthy bones, as well as for general well-being.

# THYROIDECTOMY

## What is a Thyroidectomy?

A thyroidectomy is the removal of all (total thyroidectomy) or part of the thyroid gland (sub-total thyroidectomy, hemithyroidectomy or lobectomy). You may need to have this done because you have a swelling or enlarged gland (goitre) or for treatment of an overactive thyroid (Graves' disease or toxic nodular goitre). Your specialist will explain to you whether a part or all of your thyroid needs to be removed, in order for you to give fully informed consent. If you do not understand any of the information please ask, as it is very important for you to make the right decision.

## Why is thyroidectomy performed?

- Thyroidectomy is sometimes recommended for patients with an overactive thyroid (hyperthyroidism), such as Graves' disease. In this case it is important that the overactivity has first been corrected with tablets. Thyroidectomy generally cures the problem, though some people need to take thyroxine afterwards.

- Thyroidectomy is also done to remove a goitre (enlarged thyroid), either because it is causing pressure or looks unsightly or is making too much T4 and T3.

- Thyroidectomy is also done when there is a suspicion of thyroid cancer from a previous FNA test or biopsy. Special patient information literature is available for patients with suspected thyroid cancer which your specialist should be able to give you, or if not it can be obtained from the British Thyroid Foundation.

## Is it a safe operation and what are the side-effects?

- The ***total*** removal of the thyroid gland means that you will need to take replacement hormone tablets called thyroxine (or T4) every day for the rest of your life, otherwise you will experience symptoms of an underactive thyroid (hypothyroidism). Thyroxine tablets are the size of a sugar sweetener and contain exactly the same chemical normally made by the thyroid gland. When taken as instructed, thyroxine tablets have no side-effects. With monitoring by your specialist centre and or your general practitioner (GP) you will be able to lead an active and normal life.

- If only ***part*** of the thyroid is removed (eg a lobectomy or sub-total thyroidectomy ) then you may not need to take thyroxine after the operation, as the remaining part of the gland will often be able to produce enough T4. A blood test will be done to check on this after the operation.

- You will need regular blood tests to measure the levels of hormones in your blood, and your medication will be adjusted accordingly. You will be given appointments for this.

- Thyroidectomy does not affect your ability to have children, but do ask your specialist for advice and information first if you are thinking of starting a family.

- The parathyroids are not usually removed or damaged at a thyroidectomy operation. But sometimes one or more of the parathyroids is unavoidably removed, or their blood supply affected, and then the calcium levels may fall below normal. If this happens you will be advised to take calcium tablets and sometimes vitamin D also. Usually this is only temporary, but sometimes it is permanent (it is called hypoparathyroidism).

**Will it affect my voice?**

The thyroid gland lies close to the voice box (larynx) and the nerves to the voice box. Following your surgery you may find that your voice may sound hoarse and weak and your singing voice may be slightly altered, but this generally recovers quite quickly. In a very small number of cases this can be permanent. Your surgeon or a member of the surgical team should discuss this with you before the operation.

**Will my calcium levels be affected following thyroid surgery?**

The parathyroid glands control the level of calcium in the blood and are attached to the thyroid. Sometimes these glands are affected during the operation and then the calcium levels may fall below normal; if that is the case you may experience tingling sensations in your hands, fingers, toes, in your lips or around your nose. Please report this to the staff looking after you or, if at home, to your GP. Blood tests will be taken to monitor the levels of calcium in your blood after the operation. If the level of calcium is falling this can easily be treated by giving you calcium supplements, which may be given by an intravenous drip and/or by tablets; if the problem continues then you may need to take vitamin D also. This is usually only temporary, as the parathyroids usually kick back into action after removal of the thyroid. You will be advised by the medical and nursing staff.

**Will I have neck stiffness, restricted shoulder movement or pain?**

You will feel some discomfort and stiffness around your neck but you will be given some medication to help ease any pain and discomfort. Pain relief may be given in different ways, such as injections, liquid medicine or tablets. Most patients say the discomfort is not as bad as they expected and after the first day are up and walking around. After the first day following your surgery you will be given some gentle neck exercises to do; this may be given in an information sheet but please do ask staff if you are unsure.
After a few weeks you should be back to a good standard of neck movement and shoulder function.

**Will I have a scar?**

Following your surgery, whether all or part of your thyroid is removed, you will have a scar, but once this is healed it is usually not very noticeable. The scar runs in the same direction as the natural lines of the skin on your neck

## Before your operation

### When will the operation be done?

You will probably have attended the out-patient clinic and may have been given a date for your operation at that time. Otherwise you may receive a date through the post or by phone from your Consultant's secretary.

### What happens in a pre-admission assessment clinic?

- Some hospitals (not all) run a pre-admission assessment clinic, and you may be invited to attend one or two weeks before your operation. This enables both the doctors and the nurses to assess your health needs and carry out any routine tests that may be required prior to surgery, such as blood tests, a heart tracing (ECG) and a chest X-ray. You may also be seen by an ENT surgeon to have your vocal cords checked before the operation.

- The pre-admission assessment gives you the opportunity to meet the ward staff and to see where you will be admitted on the day of your operation. It is also a time when you can ask questions and discuss any concerns you may have about your operation and coming into hospital.

- Some patients may have their investigations carried out the day before surgery and in that case would not be asked to attend the pre-admission assessment.

- If you have an overactive thyroid (eg Graves' disease), the operation will not be done until the thyroid is stable, so you will need to continue the tablets you have been given for that until the operation. Please make sure you bring them with you. Also bring any other medications that you are using.

- The operation will be explained to you and you will be given the chance to ask any questions you may have. You will then be asked to sign a 'consent form'

### What about smoking?

Most hospitals operate a No Smoking policy and smoking is not allowed on the ward. If you do smoke it is in your own health interests to stop smoking at least 24 hours prior to your anaesthetic.

Please contact your GP's surgery for advice on stopping smoking.

### What shall I bring into hospital?

- Please bring nightwear (preferably buttoning down the front), day wear, dressing gown, towels, toiletries, slippers, books/magazines and a pen. It will be helpful to arrange for a relative or friend to wash your nightwear etc and bring in fresh supplies. Hospital nightwear is available if required.

- **You must bring with you any medication you are currently taking, including inhalers.**

- Please do not bring any valuables with you, such as jewellery, large sums of money or bank cards. The hospital cannot take responsibility for your valuables. On your admission you will be asked to sign a disclaimer form which gives you the responsibility for any valuables you bring with you.

- Valuables may be taken for temporary safe keeping by the ward staff, while you have your operation and you will be issued with a receipt.

**Will there be a bed?**

- Most Hospitals run an emergency service, and for this reason it is not always possible to predict how many beds will be available. Also operations are carried out every day and clients are discharged home every day. It is therefore difficult to predict early in the morning how many beds will be available.

- You may be asked to take a seat in the waiting room until your bed is ready. You may be waiting for another person who has already had an operation to be discharged. The operation lists are planned and it is necessary to operate in a certain order for various reasons. It is for this reason that beds are allocated in order of operating lists and not in order of arrival. Please feel free to ask any member of staff for help and advice at any time. They will do their best to accommodate you and to keep you waiting for the least time possible.

**What instructions or help will I have to get ready for surgery?**

- Before your operation: when you have been taken to your bed the nurse will welcome you and check your details. It is necessary for you to wear a special theatre gown for your operation. This will be given to you by the nurse and she will show you how to wear it and give assistance if required.

- Please only wear cotton pants / underpants under your gown. All other underwear must be removed to ensure your safety during the use of the equipment in the operating theatre.

- You will also be given a pair of white elastic stockings to wear during and after the operation which will prevent blood clots forming in your legs. They feel quite tight and you may need help in putting them on.

**What preparation will I need for the operation?**

- Your operation will be carried out under a general anaesthetic, which means that you are unconscious for the whole operation. Removing all or part of the thyroid involves delicate surgery which means that the operation can take about two hours.

- To prevent vomiting and other complications during your operation it is necessary that you should starve for at least 6 hours prior to your operation. You will be advised of what time you should starve from when you attend the pre-admission assessment or by letter from the Consultant's secretary.

- You should expect to stay in hospital between 1 to 3 nights after the operation, or longer if any complications arise.

- If you would like to meet another patient who has had a thyroidectomy this can sometimes be arranged.

**What will happen when I go to theatre?**

- Just before going to theatre a checklist is completed by the nurse. You will then be taken on your bed to the operating theatre, usually by a theatre technician and a nurse. The nurse will stay with you in the anaesthetic room.

- Dentures, glasses and hearing aids can be taken out in the anaesthetic room and taken back to the ward by the nurse or you may like to put them in your locker before your operation.

- The anaesthetist will insert a small needle into the back of your hand through which you will be given the anaesthetic. The nurse will stay with you until you are fully under the anaesthetic and fully asleep. You will not wake up until the operation is over. You will be taken, on your bed, to the recovery area where a nurse will look after you until you are awake. You will then be taken back to the ward, on your bed, by a theatre technician and a nurse.

## After the Operation

**What will happen when I get back on the ward following surgery?**

- Back on the ward you will be made comfortable. You will be sitting fairly upright in your bed supported by several pillows as this will help to reduce any neck swelling. Your nurse call bell will be situated close to you so that you can call a nurse at any time.

- You will have your blood pressure, pulse and oxygen levels checked frequently. A machine will do this automatically -- a blood pressure cuff is wrapped around your upper arm and a probe is clipped to one of your fingers.

- There will be a fluid drip going into a vein, probably in the back of your hand; this will be removed as soon as you are drinking normally (usually within 24 hours). You will be able to sip drinks quite soon after your operation as long as you are not feeling sick, and you can eat as soon as you feel you are able.

**What will I look like after thyroid surgery and what will I be able to do?**

- You will have a scar on the front part of your neck which will feel a little tight and swollen initially after the operation. The skin wound will be closed with a stitch or with clips. These will be removed painlessly by a nurse, which may be done in hospital or they may be removed after you have returned home.

- You may have a drain from your wound to collect wound fluid; this helps to speed up healing of the wound. The drain is a small plastic tube that is inserted into the neck during the operation. The tubing outside the neck is attached to a plastic collection bottle into which the fluid drains. The drain is not painful and you can carry it around with you. The drain will be removed by a nurse when the drainage is very minimal. The time span may vary but it is usually a day or two after your operation.

- You will feel some discomfort and stiffness around your neck but you will be given some medication to help ease any pain and discomfort. Pain relief may be given in different ways such as injections, liquid medicine or tablets. Other patients say it is not as bad as they expected and after the first day are up and walking around.

- For your own safety it is important that you do not get out of bed on your own immediately following your operation as you may be drowsy and weak. At first when you need to use the toilet a member of staff will need to assist you with a commode or bedpan. You will soon be able to walk to the bathroom yourself.

- You will have a nurse call bell within easy reach so that you can seek help from the ward staff as needed.

- Following your operation you may not feel very sociable so it is wise to restrict visitors.

**Will it affect my eating and drinking?**

For a short period after your operation you may find it painful to swallow and you may need a softer diet for a short time. You may find that nutritious drinks are helpful in maintaining a balanced diet which is important to assist healing.

## After leaving Hospital

**Will I have a sore neck?**

You will probably find that your neck is quite sore and you will be given medication to take home to relieve the discomfort. Please take your medication as described on the packet and take care not to exceed the recommended number of tablets.

This medication should also ease the discomfort on swallowing. Your neck may appear swollen and hard to touch, with some numbness, which will gradually resolve as healing takes place.

**What should I do to reduce any risk of wound infection?**

Keep you neck wound clean and dry. Initially the nursing staff will check your wound and clean it as necessary. When you feel more mobile you may have a shower or bath

but take care to ask the nursing staff's advice first and gently pat the wound dry with a clean towel. Exposure of the wound to the air will assist wound healing.

If your neck becomes increasingly painful, red or swollen, or you notice any discharge then please seek medical advice from ward staff or GP.

**What care do I need to take regarding my neck wound?**

Take care not to knock your wound and remember to keep the wound dry if it becomes wet after bathing or showering by patting it dry with a clean towel.
Use only clean towels on your wound area for the first few weeks.
After your skin clips/stitches are removed and the scar is healing well you can rub a small amount of unscented moisturising cream on the scar so it is less dry as it heals. Calendula, Aloe Vera or E45 cream (available from health shops) are effective. The pressure of rubbing the cream in will also help to soften the scar.

**What rest do I need?**
You will need to take it easy while your neck wound is healing. This means avoiding strenuous activity and heavy lifting for a couple of weeks. Your neck will gradually feel less stiff and you will soon be able to enjoy your normal activities.

**What about my medications and tablets?**

You may need to start taking thyroxine. You will be informed about this before you leave hospital.

If you have had a problem with the level of calcium then you may also need to take calcium supplements and again you will be advised about this before you go home. Most people do not need to take calcium tablets after a thyroidectomy.

Please continue to take the medication you have been prescribed and ensure that you have a good supply. If you are unsure about any of the tablets you need to take please check this with a nurse before you go home. Repeat prescriptions can be obtained from your GP. When you come for your appointments at the hospital to check your blood levels following your thyroidectomy your medication may need to be altered so please check with the medical staff.

**When should I return to work?**

You will probably need to take at least 2 weeks off work (or sometimes longer) depending on your occupation and the nature of your work. If you should develop problems with the blood calcium level (it's unusual to do so) then you may need a little longer off work while the calcium is being stabilised. The hospital can issue you with a sick note for 2 weeks and then you should see your GP if more time is required.

**How long will it be before I feel really well again (back to normal)?**

This is very variable. It may be a little as 2 weeks. It depends on things like your age and which operation you have had. Also if you need to start taking thyroxine tablets (eg after a total thyroidectomy) it may take a little time to get the dose of T4 just right. And if your calcium has been low, this may take a little time to get adjusted. In either of these cases it may be several weeks before you feel fully well again.

**Will I need to be checked in an out-patient department following discharge home?**

Following your discharge you will need to be reviewed in the out-patient clinic to check how your wound is settling down, your hormone levels and how you are feeling. You will usually receive the date and time for this appointment through the post or it may be given to you by the ward staff before you go home. Please contact the ward or the Consultant's secretary at the hospital if you do not receive one shortly following discharge

**Will I be able to cope?**

Most people when first told they need to have a thyroidectomy say they feel all sorts of mixed emotions, while others feel numb, some feel they knew all the time that they would need surgery. We are all individuals and cope in different ways and need different lengths of time to adjust to the changes we face.

**You do not have to face your treatment on your own.**
**Support and help is available from the staff.**
**Together we can help you through your investigations treatment and recovery**

**Useful web addresses**

www.thyroid.org
http://www.endo-society.org/pubrelations/patientFactsheet.cfm
http://www.hormone.org/learn/thyroid.html
http://216.205.53.178/endo/pubrelations/patientInfo/thyroid.htm
http://www.tsh.org
http://www.dundee.ac.uk/medicine/tayendoweb/

The above are correct at the time of going to press.
Up-to-date links to useful sites can be found on the BTA links page at:
www.british-thyroid-association.org

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**The British Thyroid Foundation**
PO Box 97
Clifford
Wetherby
West Yorkshire, LS23 6XD
www.btf-thyroid.org

**Further copies of this booklet are obtainable from the BTF at the address above**