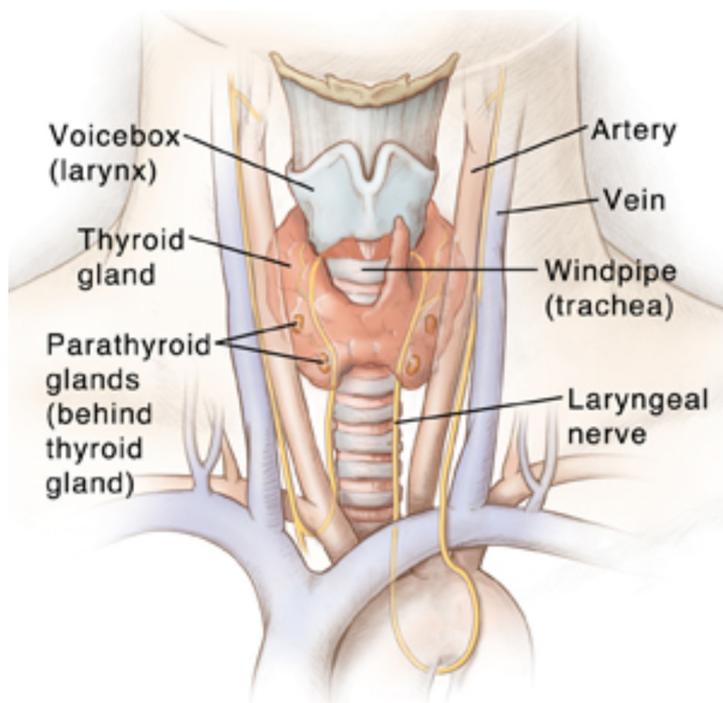


# Parathyroidectomy

## Endocrine Surgery Patient information

Your surgeon and specialist nurse have explained to you the reason for recommending parathyroidectomy. The purpose of this leaflet is to give you more information about the parathyroid glands and having a parathyroidectomy, which is the removal of your parathyroid gland(s).

### The parathyroid glands



There are usually four parathyroid glands. A normal parathyroid gland is small, about the size of a grain of rice. The parathyroid glands are in the neck behind the thyroid gland. Although they are found close to the thyroid gland, their function is unrelated to the thyroid.

The parathyroid glands produce a substance called parathyroid hormone (PTH). PTH helps to control the level of calcium in the blood to keep it within a healthy range. This control of blood calcium levels is important for the proper functioning of the brain and nervous system. Too much PTH is called hyperparathyroidism, and it results in high levels of calcium in the blood. Not only can this cause several symptoms, but it can also result in damage to some organs in the body.

## Why I need a parathyroidectomy?

You have been diagnosed with a condition called primary hyperparathyroidism (HPT). HPT is an overproduction of PTH by the parathyroid glands leading to high levels of calcium in your blood known as hypercalcaemia. Hypercalcaemia affects people differently, some people have no symptoms, and others may have several symptoms. Symptoms of hypercalcaemia can include:

- fatigue
- dehydration
- being sick (vomiting)
- confusion
- muscle spasms
- bone pain or tenderness
- joint pain
- high blood pressure (hypertension)
- constipation
- gastritis (inflammation of the stomach)

Hypercalcaemia can also cause other complications including:

- osteoporosis (thinning of the bones)
- kidney stones
- kidney damage or failure
- pancreatitis (inflammation of the pancreas)

There are three reasons why you can develop primary hyperparathyroidism. The most common reason is when one of the glands develops a noncancerous overactive overgrowth called an adenoma. 75% to 80% of people with hyperparathyroidism have an adenoma. Rarely, you can have two of these growths at the same time, which happens 5% of the time. Less commonly, for around 20% of patients, all four glands can grow and become overactive - this is known as parathyroid hyperplasia. Very rarely, hyperparathyroidism can be caused by parathyroid cancer, which affects 1% of patients with hyperparathyroidism.

Currently the only effective treatment of primary hyperparathyroidism is an operation to identify and remove the overactive parathyroid gland(s).

## How does the surgeon know which gland(s) to remove?

If your endocrine specialist and surgeon recommends a parathyroidectomy for hyperparathyroidism, they will organise two investigations. These tests are an ultrasound of your neck and a nuclear medicine scan called Sestamibi SPECT CT. The scans can help to identify which parathyroid gland is overactive and where it is located in the neck. This will determine what type of operation is needed to find and remove the gland. The scans will identify the overactive gland in approximately 85% of cases. If the scans do not locate an enlarged gland, your surgeon may recommend a 4D CT scan.

If the site of the abnormal gland is identified, the surgeon may be able to perform a less invasive targeted operation to remove your enlarged parathyroid gland. If no abnormal gland is seen on the scans, you will need an open parathyroidectomy. This means a larger incision is made in the neck allowing the surgeon to look at all four parathyroid glands to identify which one to remove.

# What tests are needed before my operation?

## Vocal cord check

You may be advised to have your vocal cords checked before surgery, particularly if you have had previous surgery on your neck. This requires an appointment in an ear, nose and throat (ENT) clinic which will be arranged for you.

At the appointment, a small camera is inserted into the nose under local anaesthetic to view the vocal cords and to check they are moving adequately. If a problem is identified, a referral to the voice clinic will be made for assessment and treatment as required.

## How is surgery performed?

Parathyroidectomy is performed under general anaesthetic in theatre.

## Targeted parathyroidectomy

With this targeted operation, a small incision is made low down the front of your neck, over the area where the scans have successfully identified the site of the abnormal parathyroid gland. The surgeon will locate the gland and remove it. All tissue removed be sent to the laboratory for analysis.

The wound will be closed with a stitch under the skin.

Occasionally, the surgeon will not be able to find the abnormal gland in the area that the scan suggested. In this case they will make the incision on the neck larger and do a full neck exploration.

## Open parathyroidectomy

With this procedure, a larger incision is made low down the front of the neck. The surgeon will explore all the areas in the neck where they would expect to find the parathyroid glands and remove any that are abnormal. All tissue removed will be sent to the laboratory for analysis.

Occasionally, the abnormal gland lies within the thyroid gland. In this situation part of the thyroid gland will need to be removed.

If all four glands are enlarged, three and a half glands will be removed. The remaining parathyroid tissue will take over and should be able to produce enough parathyroid hormone to maintain a normal calcium level after recovery.

## What happens if no parathyroid gland is found?

It's possible that no abnormal gland is found in your neck during the operation. This occurs in about 1 patient in 20. Failure to find an abnormal gland may happen because the gland is hidden in an unusual position. Sometimes the abnormal gland is not in the neck and may be lower down in the chest where it is not visible.

If the surgeon is not able to find the abnormal gland, the operation will be stopped and you may need further tests to locate the gland, with a further operation at a later date to remove it.

# Why I need a parathyroidectomy?

To reduce the chance of some of the following complications happening, you can make sure you are as fit as possible before your operation by:

- stopping smoking
- reducing your weight
- reducing your alcohol intake
- keeping active
- doing regular exercise

## General surgical risks

### Scarring

Most neck incisions heal to produce a very faint scar. The scar may become thick and red for a few months after the operation, before fading to a thin white line. Some patients developed a thick, exaggerated keloid scar but this is uncommon and unpredictable. After about two weeks, once the skin has healed, gently massaging the scar from the middle to the outside of the neck can help to smooth, soften, and flatten the scar.

### Pain

There will be some discomfort at the operation site. This can be controlled with painkillers such as paracetamol and ibuprofen. Keep your head and neck moving, you will not cause any damage to the operation site by moving your head.

### Bleeding/haematoma

Any operation carries a risk of bleeding either during or after surgery. Very occasionally, a drainage tube may be temporarily placed into the wound at the time of your operation. This tube is usually removed on the ward after 24 hours.

If a collection of blood, known as a haematoma, develops at the site of your operation, then it may be necessary to return to theatre for the wound to be opened and the collection of blood to be removed. This is done to prevent breathing problems from the pressure of the haematoma on your windpipe.

If you are usually prescribed blood thinning medication, the risk of bleeding or haematoma will be higher.

### Infection

Any surgery carries a risk of wound infection. Signs of infection include fever, a red wound, discharge from the wound, and increasing pain at the site of surgery. If infection is confirmed, antibiotic treatment may be necessary.

You have a higher risk of wound infection if you are diabetic or smoke.

### Deep vein thrombosis (DVT)/pulmonary embolism (PE)

Any patient has a general anaesthetic risk of developing blood clots in the legs (DVT) or lungs (PE). To reduce this risk, you will be given elasticated stockings to wear while in hospital. Keeping active before and after your operation can help to reduce this risk..

### Stroke, heart attack, death

Anaesthetic and cardiovascular risks such as these are extremely rare and making sure you are as healthy as possible before your operation will reduce the risk of complications.

## Specific risks

### Voice change and damage to recurrent laryngeal nerves (RLN's)

The RLN's control your vocal cords. They are very close to the thyroid gland. Due to their location, they are at risk of injury from this procedure. Damage to the RLN's can be temporary, the risk of this is 4-6%, or permanent, which has a 1-2% chance of happening. Damage to the RLN's may cause hoarseness and weakness of the voice as well as swallowing difficulties. Temporary damage causes short term changes to the voice. This may last a few days or up to six months.

In the event of permanent damage to the RLN's, voice change may persist. The risk of permanent voice change is approximately 2%. If your surgeon suspects there is permanent paralysis of the vocal cord(s), you may be referred to our team of voice specialists who can offer advice and interventions to help improve the strength of your voice. Improvement in your voice can be expected for up to one year after surgery.

In the unlikely event that both RLN's are damaged, both vocal cords may be paralysed. This can result in complete blockage of the airway requiring a tracheostomy, which is a tube placed through the front of the neck directly into the windpipe, to bypass the blockage. If the nerve damage is temporary, the tracheostomy will be temporary. However, if the damage is permanent, the tracheostomy may be permanent.

### Low calcium levels

Once the overactive parathyroid gland(s) has been removed, your calcium levels will fall quite quickly, sometimes to a low level. This is because the remaining glands have become lazy or underactive. These glands will recover their normal function quite quickly, but you may require calcium and/or vitamin D tablets temporarily after the operation to boost the level of calcium in the blood..

If all your parathyroid glands are removed, you will need lifelong calcium and vitamin D replacement.

## Informed consent

Once a date for your operation is agreed, you will need to come to hospital for a consent appointment. This will be with the surgeon or one of the specialist surgical endocrine nurses. They will make sure you understand the reason surgery is recommended and have read and understood this leaflet. They will then go through the operation in detail with you to ensure you understand the benefits and risks. You will then be asked to sign a consent form.

## What happens on the day of surgery?

You will be admitted to hospital on the day of surgery. Before surgery you will be contacted by the hospital to confirm your instructions, including time of arrival to hospital, where you need to go, and when you must stop eating and drinking. Unless otherwise directed, you should continue to take any regular medication.

Before your operation you will meet your surgeon. This is an opportunity for you to ask any outstanding questions you have.

You will also be seen by the anaesthetist who will discuss the anaesthetic with you. If you have any more questions, it is important you ask them then.

When it is time for your operation, a nurse will collect you and walk with you to the theatre area. You will enter the anaesthetic room and be asked to sit or lie on the trolley. The anaesthetist and theatre staff will then prepare you for giving the anaesthetic. This will include inserting a cannula, which is a small plastic tube, into a vein in your hand or arm. Monitoring of your pulse and blood pressure will begin and you may be asked to put on an oxygen mask. Once everything has been prepared, the anaesthetist will inject the anaesthetic drugs into the cannula. When you are asleep, a breathing tube will be passed into your airway so your breathing can be controlled. At this point you will be taken to the operating theatre.

## How long does the operation take?

Your operation can take as little as half an hour but may be up to an hour and a half. The length of time it takes depends on how easily the abnormal gland(s) are found and removed.

## Where will I wake up after the operation?

After the operation, you will be taken to the recovery area in theatres to be closely monitored while you wake up. Here, specially trained nurses will carry out regular checks on your breathing, heart rate, and blood pressure, as well as your wound. When they are happy you are well enough, you will be moved to the overnight ward to continue your recovery. If you have had a targeted parathyroidectomy, you may be able to go home on the same day as your operation.

## What can I do after my operation and how will I feel?

### Pins and needles

Very occasionally after this operation, you may experience symptoms of low calcium such as pins and needles in your lips and/or fingertips. Please ensure you let a member of staff know so a blood test can be done to check your calcium levels.

### Pain

After this operation, most patients only need simple painkillers such as paracetamol and ibuprofen to control any discomfort.

### Nausea and vomiting

You may feel sick for up to 24 hours following the anaesthetic. Medication can be given to control this.

## Eating and drinking

You may have some intravenous fluids, known as a drip, attached to the cannula in your arm when you wake up. This will stay in place to keep you well hydrated until you are able to tolerate fluids. You will be able to eat and drink once you are awake enough.

## Going to the toilet

Occasionally, anaesthetics can cause the bladder to temporarily stop working properly, which causes urinary retention (holding wee in your bladder). You may need a catheter (small tube) placed into your bladder to drain the urine. The catheter is usually removed after 24 hours, with the bladder function returning to normal.

## Walking

You may feel unsteady on your feet when you first try and get up after the operation. You should ask a nurse on the ward to help you until you feel safe to walk independently. You will be encouraged to get up and move around as soon as you can, as this helps your recovery and reduces the likelihood of some of the possible complications.

## Washing and dressing

You can wash and shower as normal after the operation. Just gently pat the wound area dry after showering. Do not lie in a bath as you should not soak your wounds until they are well healed, and this may take up to two weeks. You can dress as normal after the operation.

## When can I go home?

If you have a targeted operation, you may be able to go home on the same day as your surgery. However, if you do remain in hospital overnight, it is very likely you will go home the following morning.

If you have an open parathyroidectomy you will remain in hospital overnight and it is very likely you will go home the following morning.

## How do I care for my wound when I go home?

Depending on the surgeon who performed your operation, there may be different advice for stitch removal.

If you have had targeted parathyroidectomy, there will be a dissolvable stitch under the skin. This stitch does not need to be removed. There will be a small dressing or piece of tape covering the wound itself. This will start to peel away in a few days and can be removed completely after seven days.

If you have had open parathyroidectomy, you may need to have your stitch removed after four days. If this is needed, you will be advised before you leave hospital.

You should avoid soaking your wound and swimming is not advised for at least two weeks after surgery.

If you are concerned about any swelling or redness of the wound after leaving hospital, you can call the surgical endocrine specialist nurse or your GP surgery for advice.

Once your wound is fully healed, which is after about two weeks, it is recommended that you massage the scar with a simple moisturiser each day, which will help to soften and smooth out the scar.

## When can I drive?

After an anaesthetic you should not drive for 48 hours. You should only return to driving when you are pain free and are able to turn your head comfortably. Your insurance company may have specific limitations.

## When can I go back to work/normal activity?

This will depend on the type of work you do and how you are recovering. Most patients are well enough to return to work after one week.

## When will I be seen in clinic after my operation?

You will be sent an appointment to see the surgeon and/or endocrinologist 2-6 weeks after your operation.

You will be asked to have a repeat blood test before this appointment so we can reassess your calcium and PTH levels.

## Who can I contact if I have further questions?

If you have further questions, please contact:

### Royal Bournemouth:

Tanya Longshaw, advanced nurse practitioner

Tel: **0300 019 4674** Email: **Tanya.Longshaw1@nhs.net**

### Poole:

Carly Ringrose, advanced nurse practitioner

Tel: **0300 019 2990** Email: **Carly.Ringrose@nhs.net**

## Other resources and sources of support

**BAETS** (British Association of Endocrine and Thyroid Surgeons)

Website: **www.baets.org.uk**

**Parathyroid UK** (The national voice for people living with parathyroid conditions)

Website: **www.parathyroiduk.org** Helpline tel: **01342 316315**

**You and your hormones** (an education resource from the Society for Endocrinology)

**www.yourhormones.info/patients**



## UK registry of endocrine and thyroid surgery (UKRETS)

### Patient information leaflet

The UK registry of endocrine and thyroid surgery aims to collect information on the results of surgery for every UK patient undergoing thyroid, parathyroid, adrenal, or pancreatic endocrine surgery operations.

If you are having a thyroid, parathyroid, or adrenal (endocrine) operation in England, Wales, Scotland or Northern Ireland, the surgeon performing the surgery may collect information on this for the purposes of clinical audit.

Clinical audit is a process by which the surgical team reviews treatments and outcomes with the aim of finding ways to improve care.

This leaflet describes what patient information is kept in the UK registry of endocrine and thyroid surgery (UKRETS), and how this data is used to promote good practice and maintain standards.

### What is UKRETS?

UKRETS is a clinical audit or registry that endocrine and thyroid surgeons use to monitor their practice. It was set up by the British Association of Endocrine and Thyroid Surgeons (BAETS) and is approved by the Healthcare Quality Improvement Partnership (HQIP), an independent organisation led by Academy of Medical Royal Colleges, The Royal College of Nursing, and National Voices.

BAETS stipulate that all surgeons performing thyroid surgery contribute data on all their relevant operations to UKRETS. BAETS strongly recommends that all other relevant endocrine operations are also recorded.

Surgeons enter data directly onto the database through a secure web-based connection. UKRETS analyse this data to provide information on their standard of clinical care and patient outcomes. This allows surgeons and their hospitals to know where they are doing well, as well as highlight areas they can improve.

UKRETS is part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP), commissioned by HQIP for England.

## What information is collected on me?

UKRETS collects information about the endocrine operation you have while in hospital. In addition, your gender, date of birth, and date of operation are recorded to allow individual surgeons to know they are accessing the correct patient record when entering data from your follow up postoperative appointments - your NHS number may be collected also in the future.

Only information related to your surgery is collected, such as the severity of your condition, the type of investigations and treatment you receive, your surgical treatment and wider clinical outcomes of your operation.

UKRETS do not need you to have any extra appointments, or clinical tests. The registry does not collect information on any care that does not relate to your thyroid or endocrine surgery.

## Opting out from the UKRETS

If you do not wish your personal data - date of birth, gender, and date of operation - to be entered on the database, please inform your surgeon. Your decision will be respected, and your choice will be recorded in the front of your medical notes.

If you have changed your mind and wish to have your details removed from the registry, please contact either by:

Email:

**secretary@baets.org.uk**

Tel:

**0207 3044771**

In writing:

**UK Registry of Endocrine and Thyroid Surgery,**

at: BAETS,  
ASGBI Office,  
Royal College of Surgeons of England,  
35-43 Lincoln's Inn Fields,  
London WC2A 3PE

## How will your information be used?

UKRETS only publishes information describing the care received by groups of similar patients. It does not publish information on individual patients, and your personal details will never be made public.

The information collected by UKRETS is used:

- To produce information on the quality of care received by patients having thyroid and endocrine surgery in the United Kingdom.
- UKRETS produces reports that describe whether care is meeting national standards. The reports are available to the public, endocrine and thyroid surgeons, hospital management, and NHS England.

- To enable sharing of good practice amongst all NHS organizations.
- To provide patients with information about endocrine services at different hospitals, such as the number of operations done each year, and the rates of complications after surgery.
- To help commissioners and policy makers with decisions about how endocrine surgery should be organized within the NHS.

Further information on how BAETS processes your data in UKRETS is available on the BAETS website at the following address:

**[www.baets.org.uk/wp-content/uploads/UKRETS-fair-processing-statement-v2.pdf](http://www.baets.org.uk/wp-content/uploads/UKRETS-fair-processing-statement-v2.pdf)**

## How your information is be kept safe?

The registry has strict data security measures to keep the information held on you confidential.

We follow rules about how the data is stored in a secure environment and that it is only made available to appropriate staff. The registry conforms to the confidentiality rules established by the Data Protection Act 1998, the NHS Act 2006, and the Health and Social Care Act 2008.

Your personal data will never be shared with anyone outside BAETS or Dendrite, the company that hosts the database.

It is important that the UKRETS has information from all patients to give an accurate picture of thyroid and endocrine surgery in the UK.

Further information on the measures taken to ensure your data is stored safely in UKRETS are available on the BAETS website at the following address:

**[www.baets.org.uk/wp-content/uploads/UKRETS-privacy-notice-v2.pdf](http://www.baets.org.uk/wp-content/uploads/UKRETS-privacy-notice-v2.pdf)**

## Further information

If you would like more information about UKRETS, please ask your endocrine or thyroid surgeon.

You are entitled to access your data in UKRETS to see what information is stored on you. To request this please complete a BAETS subject access request form, which you can find at the following address: **<http://baes.e-dendrite.com/sar.html>**

To read this leaflet in a different language,  
please visit our website: **[www.uhd.nhs.uk/visit/patient-information-leaflets](http://www.uhd.nhs.uk/visit/patient-information-leaflets)**  
and use the language and accessibility function available along the top of the site.

To ask for this leaflet in larger print, please contact the patient experience team on **0300 019 8499**  
or email **[uhd.patientexperienceteam@nhs.net](mailto:uhd.patientexperienceteam@nhs.net)**.

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