

Subtotal Petrosectomy and Blind Sac Closure

This leaflet explains more about subtotal petrosectomy and blind sac closure, including the benefits, risks and any alternatives and what you can expect when you come to hospital.

If you have any further questions, please speak to a doctor or nurse caring for you.

What is a subtotal petrosectomy and blind sac closure?

All the structures that make up your internal ear (the ear canal, the middle ear and the inner ear) sit within the temporal bone, which is part of the skull. In some severe ear conditions, it is necessary to remove the entirety of the middle ear and other structures in this area and to close the ear canal.

The space that is left in the temporal bone is sometimes refilled with bone, a thick fibrous piece of tissue or fat. Sometimes a mixture of all three is used to get a tight seal. The ear canal is also filled with material and the outer hole of the ear canal is closed off with skin. Your external ear stays the same shape.

Why should I have subtotal petrosectomy and blind sac closure?

This type of surgery is typically performed to treat a condition called cholesteatoma when it is very severe and may have already damaged your hearing, balance organ or inner ear, causing severe hearing loss. Alternatively, this procedure can be offered to patients with hearing loss who also have an ear that is always infected and leaking as a way to get it dry.

What is cholesteatoma?

Cholesteatoma is a condition where the skin of the ear grows into the ear drum. The skin can grow into the space behind the ear drum (middle ear) which contains the bones of hearing. In some cases, the skin expands into the middle ear space and into the bones of the skull, middle and inner ears. This small ball of skin can damage and destroy bone over time. This can destroy the hearing bones causing loss of hearing and can damage the balance organ causing dizziness. In rare cases the nerve that controls movement of the muscles in the face can be permanently damaged and the thin layer of bone protecting the lining of the brain can be weakened, which in very rare cases leads to brain infections. However, how quickly this skin grows and the damage it causes varies from patient to patient and it is often a slow process.

What are the benefits of subtotal petrosectomy and blind sac closure?

The main aims of the surgery are:

1. To make the ear “safe” (by removing cholesteatoma and preventing more damage).
2. To stop the ear from leaking fluid/getting infected.

What are the risks?

The operation is done under a general anaesthetic (i.e. while asleep) and all operations under a general anaesthetic carry a small risk. You will be able to discuss this with your anaesthetist on the day of the surgery.

With all surgery, there are some associated risks. The risks are by and large the same as if the disease is left untreated.

- Dizziness for a couple of days after the surgery, rarely lasting more than a week.

The only rare exception to this is when your balance organ needs to be removed on purpose to remove the disease. Your surgeon will let you know if this is a possibility before your operation. If this has to be done it may take you longer to recover from your dizziness and you may need specialised balance physiotherapy.

- Extra noises in the ear (often caused by the dressing in the ear). It is rare for tinnitus to develop permanently if you didn't have it before the operation.
- The wound site behind the ear or the skin of the closed-off ear canal can become infected and may take longer to heal.
- Your hearing will be reduced after the surgery and in some cases may fail altogether. However, there are options to reconstruct your hearing with specialised hearing aid devices or implants. Your surgeon will talk about this with you before your operation.
- Some patients can experience a change in their taste at the front of the tongue on the same side of the ear undergoing the operation. This is because one of the taste nerves runs through the middle ear. This normally becomes less noticeable over the course of a year.
- Numbness of the top of the ear or around the incision site behind the ear. There is often some decreased sensation in these two areas after surgery which improves over time. This is because the nerve supply is normally interrupted by the skin incisions. Most people do not find this a problem.
- Facial weakness. The nerve supplying the face muscles runs through the middle ear, normally in a bony channel. If the disease has damaged the bony channel, or the nerve runs in an abnormal position, or the bony channel has not developed fully, then the nerve may be damaged causing a degree of facial weakness. This is very rare and there is less than a 1% chance of damage.
- Leak of cerebrospinal fluid (CSF). CSF is the fluid that surrounds the brain. Sometimes the disease damages the bony protection

between the middle ear, mastoid bone and the brain. Very rarely a leak of the CSF can occur into the ear. This would normally be repaired at the time of injury. The chance of a CSF leak is less than 1%. A small number of this 1% of patients who develop a CSF leak could develop meningitis, which would need antibiotic treatment.

- Recurrent cholesteatoma. There is a small risk of microscopic pieces of skin being left behind or trapped when your ear is closed off. Often you will have an MRI scan 12 months after surgery to look for this trapped skin. Occasionally you may need another operation to remove it, but generally revision surgery for this is not as extensive as your first operation.

Are there any alternatives?

If you have been offered this operation because you have hearing loss and a chronic leaking infected ear, then this will be likely to continue if you don't have this operation. Oral and topical antibiotics often only stop ear discharge for a period of time and will have likely been tried several times before if you are being offered this type of surgery. However, it is always your choice whether or not to go ahead with surgery.

If you are offered this surgery because you have extensive/severe cholesteatoma disease of the ear, then if you have a smaller operation it is unlikely that all of the disease will be removed. You may continue to experience ear discharge, your balance may worsen and there is a small risk of getting meningitis and developing permanent weakness of the face on the affected side. However, if you are not fit for surgery, the only alternative is the regular cleaning of the ear by a specialist and the use of antibiotic eardrops. This at best could only reduce your ear discharge.

How can I prepare for subtotal petrosectomy and blind sac closure surgery?

- You will need to have had a hearing test three months before your operation. If you think you need another hearing test prior to the surgery, please contact the Admissions team.
- Arrange two weeks off work (if you require a sickness certificate please ask the nurse on the day of your surgery).
- Arrange for someone to come and pick you up after the surgery. This is because you cannot drive for 24 hours after a general anaesthetic.
- Bring all the medication you are currently taking with you on the day of your surgery.
- Make you sure you have pain killers at home such as paracetamol and ibuprofen (unless you GP has told you can't take these drugs).
- Inform the hospital if you have a cold, flu or tonsillitis in the two weeks before admission as your operation may need to be postponed.

Asking for your consent

It is important that you feel involved in decisions about your care. For some treatments, you will be asked to sign a consent form to say that you agree to have the treatment and understand what it involves. You can withdraw your consent at any time, even if you have said 'yes' previously. If you would like more details about our consent process, please ask for a copy of our policy.

What happens during subtotal petrosectomy and blind sac closure surgery?

Please remember that your surgeon will confirm how your surgery is performed and finalise your aftercare plan with you, as practices

sometimes slightly vary. The below is a general guide.

You will be asleep during the operation and it takes three hours or more to do. You may be able to go home on the day of surgery, stay overnight, or stay in the hospital for a few days if you are very dizzy. Always bring an overnight bag just in case.

The surgery is performed by making a cut behind the ear. Sometimes you may have a small wound on your tummy or the side of your upper leg. This is because we may need to take tissue such as fat or thick connective tissue to reconstruct the bone that was removed. Any skin wounds made will be closed with stitches that may need to be removed 7 to 14 days after surgery. Occasionally a drain will be placed in the leg wound to stop you developing a blood clot underneath the skin.

Will I feel any pain?

It is common to experience a dull, occasionally throbbing pain in the ear after the surgery. Most patients don't require more than simple painkillers.

What happens after subtotal petrosectomy and blind sac closure surgery?

When you wake up you may have a head bandage. We may ask you to remove the head bandage yourself at home. There will often be a squelching sound or popping in the ear when chewing or yawning; this is normal and will get better after the wound heals. You may feel dizzy and have to stay in hospital until you can function without the support from our nursing staff.

You will have a wound behind the ear and the ear canal will be closed. You must not touch these two areas whilst it is healing. You may need to have the sutures removed from behind the ear; your surgeon will give precise instructions when you leave the hospital.

What do I need to do after I go home?

Make sure you wash your hands with soap and water before touching the ear or dressing.

- Try to sneeze with your mouth open and don't blow your nose for the first two weeks after surgery to prevent build-up of pressure in the ear. Sniff if you need to.
- There will be a paper-like strips on the ear wound behind the ear. You can remove these gently after seven days.
- You should keep the ear dry until your surgeon tells you that you can get it wet. Ask at your post-operative appointment. Do not wash your hair if the wounds are leaking.
- Work/school: You should be off work for seven to ten days, depending upon how you feel. One of the main reasons is to try to prevent you catching a cold when mixing with other people. If you feel up to it and have the sort of job that allows, you may be able to work in about five days. If you need a medical certificate for your employer, please ask your nurse before you leave hospital; otherwise, your GP can give you one.

Will I have a follow-up appointment?

Yes, you will be asked to return to the clinic to check your progress and to have any dressings/sutures removed. Often you will be asked to come to the clinic two to four weeks after the operation. You will be asked to go to ENT Outpatients in the Lanesborough Wing.

Your surgeon will give you more precise instructions on the discharge letter you get when you go home after the operation.

Contact us

If you have questions or concerns, please contact your consultant's medical secretary on 020 8725 2052 or 020 8725 2493, or use the ENT secretarial email address: stgh-tr.entsecretariesadmin@nhs.net.

If you have more urgent concerns or feel unwell, see your GP, an urgent care service, or your nearest Emergency Department.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).

Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

Web: www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones. **Tel:** 111

AccessAble

You can download accessibility guides for all of our services by searching 'St George's Hospital' on the AccessAble website (www.accessable.co.uk).

The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.

