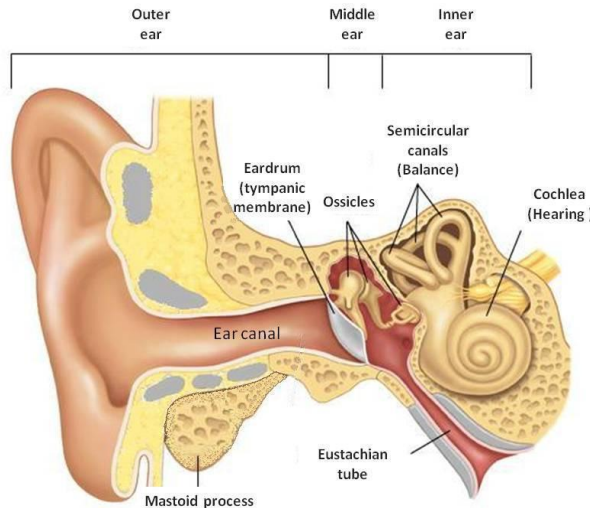
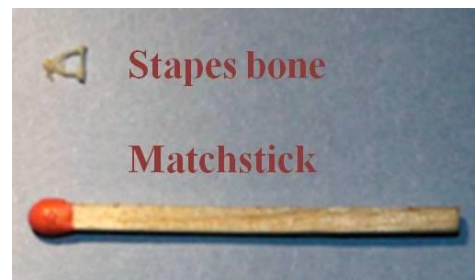


## Stapes Surgery (Stapedotomy)

The ear is divided into three parts – the outer (external) ear, the middle ear and the inner ear. In the middle ear there are three tiny bones (ossicles).



The stapes bone is the third bone (ossicle) of hearing in your ear, which transmits sound from the environment to your inner ear.



**Otosclerosis** is a condition that fixes the stapes bone and thus preventing the transmission of sound to the inner ear, causing a conductive hearing loss. Otosclerosis can also affect the other ear and the condition can run in families. It may also affect the inner ear preventing the nerves from sending messages to the brain (sensorineural hearing loss), which cannot be treated with surgery.

### Indication for Stapes Surgery

- Significant conductive hearing loss due to fixation of the stapes in presence of a good functioning hearing nerve.  
Alternatively, you may choose to have a hearing aid instead of having surgery.  
The surgeon will discuss the benefits and risks of the operation and you will have an opportunity to ask questions prior to your surgery.

### **Stapes Surgery (Stapedotomy)**

The operation can be performed under a general anaesthetic or local anaesthetic and you can discuss these options with your surgeon to see if it is suitable for you. This procedure usually takes 60-90 minutes to perform. The anaesthetic doctor will see you before the operation to discuss the options with you and recommend the best form of anaesthesia for you. The aim of the operation is to replace the fixed stapes bone with an implant. The operation is performed through the ear canal or a small cut is made in front of the ear, which will heal well.

The eardrum is carefully lifted and diagnosis is confirmed. The fixed stapes bone is removed and a specially designed implant is placed. This can be done either by using a very fine drill or with the Laser. The eardrum is replaced and a yellow anti-bacterial packing is placed in the ear canal.



### **Complications of Stapes Surgery**

1. Pain: This is not usually a problem and can be controlled by simple painkillers like paracetamol or ibuprofen.
2. Bleeding: A small amount of blood can be noticed from the incision. This is usually self-limiting and the cotton wool ball in the outer ear can be changed daily.
3. Scar: the scar in front of the ear usually heals very neatly.
4. Eardrum perforation: rarely on lifting the very thin eardrum, this can tear and can lead to a hole in the eardrum. This should heal up on its own.
5. Change in taste: the nerve of taste is lying on top of the second bone of hearing, and has to be moved gently to one side. This can lead to temporary change in

taste (metallic) which will return to normal after a few months. It is rare to get a permanent change of taste.

6. Facial weakness: very rarely the nerve to the muscles of the face can be bruised, which can lead to temporary weakness of the face muscles. This will return to normal. If you notice this, please inform the operating team and they will arrange to see you urgently for steroid treatment.
7. Dizziness and Vomiting: whilst removing the fixed stapes bone, this can lead to temporary dizziness and vomiting, which will improve after a few days. This can be common (5%) and usually settles conservatively.
8. Tinnitus: this can be part of the condition itself and maybe improved with the operation
9. Decreased hearing: the hearing may drop in the future if the prosthesis moves. This would require another operation in due course.
10. Total hearing loss: there is <1% chance that the hearing may completely go down. This can be due to difficult anatomy or infection of the inner ear. If you notice this, please inform the operating team and they will arrange to see you urgently for steroid treatment

### **Outlook after surgery**

- Stapes surgery is highly successful at improving the conductive element of your hearing loss in otosclerosis. It will not improve the sensorineural element of the hearing loss. You may not need to use your hearing aid after the operation. It can improve the tinnitus.
- The implants usually last in excess of 10 years but a future operation may be necessary.

### **Expectations and advice following stapes surgery**

- There will be a number of small yellow packs (soaked in Iodine) within the ear canal, which will remain for 2 weeks and removed at your first outpatient's visit. The yellow packs should be left alone and the outer cotton wool ball be changed when soiled.
- Some of the packing may fall out. If this occurs there is no cause for concern. Please trim the loose end of the packing with scissors and leave the rest in place.
- Your hearing will still remain muffled whilst the packs are in, but should improve following pack removal. The best level of hearing is usually noticed at 6 weeks.
- Some patients are slightly dizzy for the first two days after surgery and you may notice a slight headache. This is treated with simple painkillers.
- You will usually go home on the same day of the operation or the day after.
- Avoid all moderate to heavy physical activity for 3 weeks as this may displace the prosthesis and the hearing will decrease.
- Avoid straining with your bowels. Take laxatives if required.

- Avoid blowing your nose vigorously or suppressing any sneezes.
- Do not drive for 48 hours (because of the effect of the general anaesthetic and possible dizziness).
- Take 2 weeks off work. A certificate can be provided by the hospital.
- You should not fly for at least 6 weeks to allow the eardrum to heal. Please discuss with your surgeon.
- When taking a shower, please ensure that NO water enters the ear. A cotton wool ball soaked in Vaseline can be placed in the outer ear to prevent this.
- If there are any stitches in front of your ear, they may either dissolve naturally or will require to be removed by your practice nurse at your GP's surgery after 1 week. You will be informed by your surgeon about the type of stitches used.
- You should consult the surgeon at the hospital if you experience sudden onset of total hearing loss, dizziness, or severe pain after you are discharged from hospital.
- You can never do deep sea diving following this surgery.

**Please note that the details in this section are for general information only. You should always discuss the risks, limitations and complications of your specific operation with your surgeon.**