

Information for Patients on

# Stapes Surgery

## What is Otosclerosis?

Otosclerosis is a condition affecting the stapes bone, one of the three hearing bones in the middle ear. It affects the joint of the bone causing it to become more rigid and so reduces its ability to vibrate, which reduces your hearing. It is a condition that affects women more than men, and can sometimes run in families. Typically, this condition will affect people in early adult life and may progress to varying degrees of severity.

## Treatment

There are several different ways of dealing with this problem. In the early stages, if the hearing loss is mild, it may just be observed with repeat hearing tests. Sometimes a hearing aid may be an effective way of helping to overcome the problems caused by the hearing loss. Surgery for the condition is termed a stapedectomy and is dealt with in this leaflet.

## Middle Ear

Several important things are in the middle ear including:

**The hearing mechanism** – the three small bones that conduct sound into the inner ear are suspended in the middle ear and mastoid.

**The facial nerve** – this nerve controls the muscles on the same side of the face that make all the facial expressions. The nerve lies usually in a bony canal that crosses the middle ear and mastoid.

Further into the ear is the inner ear and balance organ which are in dense bone in the wall of the mastoid bone.

## Before the operation

You will attend a pre-assessment clinic and may have a hearing test performed.

If you are taking the contraceptive pill, this should be stopped a month before the surgery.

If you have a cold or an ear infection, your operation may be postponed.

## About the operation

The operation is usually carried out under general anaesthetic (fast asleep) and takes just over one hour.

It is often possible to do the operation straight down the ear canal without the need for any external incisions. During the surgery we sometimes take a piece of vein from the back of one of your hands which will leave a small scar.

The eardrum has to be peeled back (anterior tympanotomy) to gain access to the middle ear and the bones of hearing. It is only at this stage that the exact cause of the hearing loss can be confirmed.

Occasionally a different cause may be found for which an operation may not be appropriate; if this is the case the operation is stopped and the hearing will be no different.

In the majority of cases the diagnosis is confirmed as otosclerosis and part of the stapes bone is then removed and replaced with an artificial piston (prosthesis).

## After The Operation

Any stitches (in the hand) that need to come out will be removed after a week. A dressing will be left in the ear canal for one to two weeks. You will be able to go home the day after the operation, but you will need to rest quietly at home for about two weeks.

## Pain

A headache around the ear is normal and you will need pain relief for a few days. This will be supplied to you on leaving hospital.

## Discharge from the ear canal

Some discharge, often blood stained, is common in the first few days but then dries up.

## Hearing

This will be muffled because of the packing in the ear and tinnitus (noises in the ear) is sometimes worsened temporarily.

## Balance

This is sometimes disturbed but only for a few days.

An Out-patient appointment will either be given to you when you leave the ward or will be sent later on.

## Post-Operative Instructions

Stay off work for a minimum of seven days but up to two weeks may be necessary. You can be given a sick note by the hospital if you need one – please ask for this before you leave the ward.

Avoid vigorous exercise for at least 2 weeks.

Keep the ear and scar dry when washing. Cotton wool smeared in Vaseline is an effective ear plug. Avoid swimming until given the all clear. Change the cotton wool in the ear if it becomes dirty but be careful not to pull the dressing out with it – get someone to help. If some of the dressing is pulled out cut off the bit hanging out; if a whole piece comes out contact the ward.

Minimise pressure changes in the ear – avoid vigorous nose blowing, sneeze with your mouth open and don't fly for at least one month after surgery.

Complete any course of antibiotics you are given.

## Risks

Failure of operation – surgery of this sort carries a very high success rate, often with a dramatic improvement in the hearing, but this cannot be guaranteed. There are occasions when the hearing remains the same, no better or worse. This may be because the full operation was not carried out; either because the diagnosis proved to be incorrect or the shape of the middle ear made surgery impossible. Both of these possibilities are very uncommon.

Profound hearing loss – very rarely, disturbance to the inner ear during the operation can cause complete deafness that is irreversible (only on the operated side).

Tinnitus is improved in some cases but occasionally is worsened by the operation.

Balance disturbance – immediately after the operation some unsteadiness may occur but it does not usually last more than a day or so. If dizziness occurs after you have gone home you should contact the hospital.

Infection – can occur at the site of the skin cut or in the middle ear causing increased pain, discharge, swelling and fever; seek attention if you are concerned this may be developing.

Taste disturbance – occasionally this is noticed due to damage to a small nerve that crosses the middle ear. It is unlikely to be a long-term problem even if the nerve has to be cut in order to perform the operation.

Facial weakness – disturbance to the facial nerve occurs extremely rarely in this type of surgery and would cause weakness of the muscles of the face on the side of the operation. It may be either temporary or permanent.

If any of these problems arise after you have gone home please contact the ward.