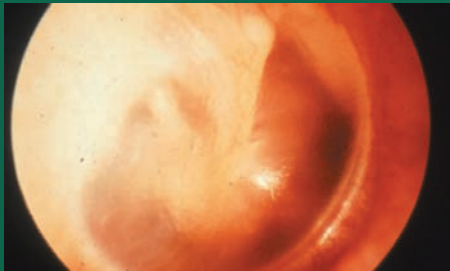


How does the ear work?

The ear consists of the outer, middle and inner ear. Sound travels through the outer ear and reaches the eardrum, causing it to vibrate. The vibration is then transmitted through three tiny bones (ossicles) in the middle ear.

The vibration then enters the inner ear where the nerve cells are. The nerve cells within the inner ear are stimulated to produce nerve signals. These nerve signals are carried to the brain, where they are interpreted as sound.



A normal ear drum.



*This patient has a hole in their right ear drum.
The small ossicle bones can be seen through the hole.*

What is a hole in the eardrum?

A hole in the eardrum is known as a “perforation”. It can be caused by infection or injury to the eardrum.

Quite often a hole in the eardrum may heal itself. Sometimes it does not cause any problem. However a hole in the eardrum may cause a discharge from the ear. If the hole in the eardrum is large, then the hearing may be reduced.

How is the condition diagnosed?

You will need an examination by an otolaryngologist (ear, nose and throat specialist) to rule out any hidden infection behind the perforation. The hole in the eardrum can be identified using a special medical instrument called ‘auriscope’.

It consists of a magnifying lens and light. Examination with the auriscope is pain free. The amount of hearing loss can be determined only by careful hearing tests. A severe hearing loss usually means that the ossicles are not working properly, or the inner ear is damaged.

How can a hole in the eardrum be treated?

If the hole in the eardrum has only just occurred, no treatment may be required. The eardrum may simply heal itself.

If an infection is present you may need antibiotics. You should avoid getting water in the ear until the eardrum heals.

A hole in the eardrum that is not causing any problems can be left alone. If the hole in the eardrum is causing discharge or deafness, or if you wish to swim, it may be sensible to have the hole repaired. The operation is called a “myringoplasty”. You should discuss with your surgeon whether this surgery is appropriate for you.

Aims of the operation

The benefits of closing a perforation include prevention of water entering the middle ear while showering, bathing or swimming (which could cause ear infection). It can be done as part of a mastoid operation (see leaflet on mastoid surgery).

Repairing the eardrum alone seldom leads to great improvement of hearing. You may change your mind about the operation at any time, and signing a consent form does not mean that you have to have the operation.

If you would like to have a second opinion about the treatment, you can ask your specialist. He or she will not mind arranging this for you. You may wish to ask your own GP to arrange a second opinion with another specialist.

How is the operation done?

Most myringoplasties in the UK are done under general anaesthetic, although some surgeons prefer to do it under local anaesthetic.

A cut is made behind the ear or above the ear opening. The material used to patch the eardrum is taken from under the skin. This eardrum “graft” is placed against the eardrum. Dressings are placed in the ear canal.

You may have an external dressing and a head bandage for a few hours. For a small perforation, your surgeon may even be able to plug it without making any cut in the ear. Occasionally, your surgeon may need to widen the ear canal with a drill to get to the perforation.

How successful is the operation?

The operation can successfully close a small hole nine times out of ten. The success rate is not quite so good if the hole is large.

Possible complications

There are some risks that you must be aware of before giving consent to this treatment. These potential complications are rare. You should consult your surgeon about the likelihood of problems in your case.

Taste disturbance:

The taste nerve runs close to the eardrum and may occasionally be damaged. This can cause an abnormal taste on one side of the tongue. This is usually temporary but occasionally it can be permanent.

Dizziness:

Dizziness is common for a few hours following surgery. On rare occasions, dizziness can last for months or even years if the inner ear is damaged during surgery.

Hearing loss:

In a very small number of patients, severe deafness can happen if the inner ear is damaged.

Tinnitus:

Sometimes the patient may notice noise in the ear, in particular if the hearing loss worsens.

Facial Paralysis:

The nerve for the muscle of the face runs through the ear. Therefore, there is a slight chance of a facial paralysis. The facial paralysis affects the movement of the facial muscles for closing of the eye, making a smile and raising the forehead. The paralysis could be partial or complete. It may occur immediately after surgery or have a delayed onset. Recovery can be complete or partial.

What happens after the operation?

The ear may ache a little but this can be controlled with painkillers provided by the hospital.

You will usually go home after the head bandage is removed, which is either the day after the operation or sometimes the same day. The stitches will be removed one to two weeks after the operation at your doctor's surgery.

There may be a small amount of discharge from the ear canal. This usually comes from the antiseptic solutions in the ear dressings.

Some of the ear dressings may fall out. If this occurs there is no cause for concern. It is sensible to trim the loose end of the ear dressings with scissors and leave the rest in place. The dressings in the ear canal will be removed after two or three weeks by your surgeon at the hospital.

You should keep the ear dry and avoid blowing your nose too vigorously. Plug the ear with a cotton wool ball coated with Vaseline when you are having a shower or washing your hair. If the ear becomes more painful or is swollen then you should consult the Ear, Nose and Throat department or your GP.

How long will I be off work?

The exact time needed off work varies between patients, but as a guide you may need to take two to three weeks off work.

If you have any problems or questions, please contact:

Please insert local department routine and emergency contact details here

Disclaimer: This publication is designed for the information of patients. Whilst every effort has been made to ensure accuracy, the information contained may not be comprehensive and patients should not act upon it without seeking professional advice.

Last updated: November 2010 - Review due: November 2012

ABOUT A HOLE IN THE EARDRUM

By Matthew Yung

ENT-UK is the professional Association for British Ear, Nose and Throat Surgeons and related professionals. This leaflet provides some background information about hole in the eardrum. It may be helpful in the discussions you have with your GP or specialist when deciding on possible treatment. This information leaflet is to support and not to substitute the discussion between you and your doctor. Before you give your consent to the treatment, you should raise any concerns with your GP or specialist.



ENT.UK
The Royal College of Surgeons of England
35-43 Lincoln's Inn Fields
London WC2A 3PE



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