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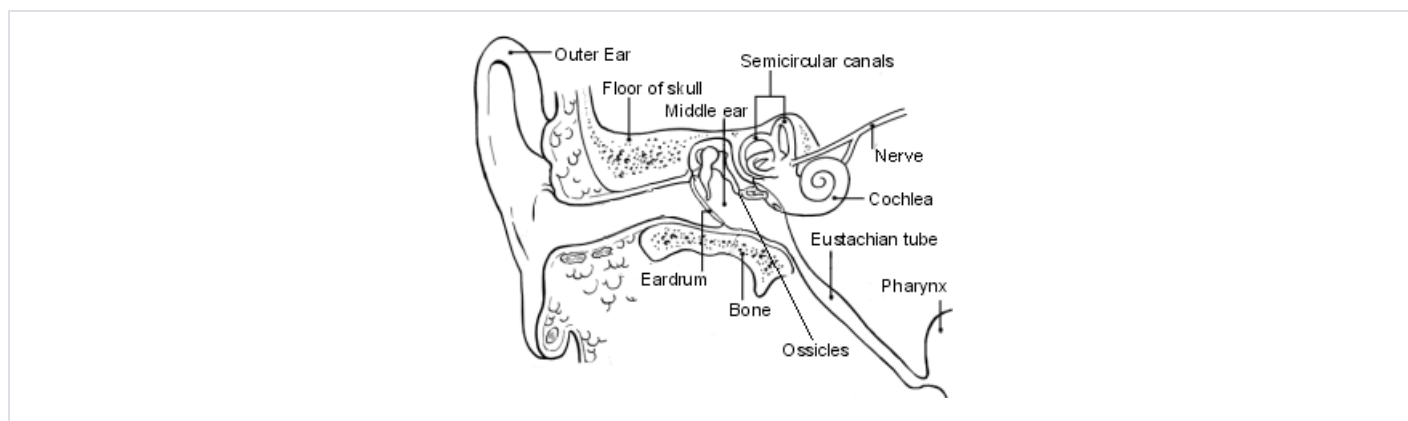
Earache (Ear Pain)

Earache, or pain in the ear, is very common. It is particularly common in children. There are many causes of earache but the most common cause is infection. This often clears up on its own without any treatment. However, if it is not getting better or if you have other more serious symptoms, you may need to see a doctor.

The ear is involved in our hearing and our balance. So, problems with the ear may cause other symptoms such as loss of hearing, dizziness or a ringing in the ear.

This leaflet provides an overview of some of the more common problems related to the ears. It will direct you towards leaflets with more detailed information on the individual conditions.

Structure and functions of the ear



The ear is roughly divided into three parts.

The outer (external) ear includes:

- The part you can see, called the pinna.
- A narrow tube-like structure - the ear canal.
- The eardrum which is at the end of the canal. This separates the external ear from the middle ear. The eardrum is a tightly stretched membrane, a bit like the skin of a drum.

The middle ear is an air-filled compartment. Inside it are three of the smallest bones in the body, called malleus, incus and stapes. These bones are connected to each other. The last in the group, stapes, also makes contact with the internal (inner) ear. The air space of the middle ear connects to the back of the nose by the Eustachian tube.

The inner ear is made up of two components:

- The cochlea - a snail-shaped chamber filled with fluid. It is lined with special hair cells. These cells transform sound waves into electrical signals. These signals are then passed by nerves to the brain.
- The vestibular system, which helps with balance. The vestibular system is made up of a network of tubes, called the semicircular canals, plus the vestibule. The vestibular system detects movement instead of sound.

The ear is important for hearing and for balance.

What are the causes of earache?

There are many causes of earache. Some of the more common ones are explained briefly below. For many of them you will find links to leaflets with more detailed information.

Middle ear infection (otitis media)

Otitis media is an extremely common cause of earache in children. It can occur in adults, but is unusual. It is most common in children of preschool age. It often occurs following a common cold.

Children with otitis media have a painful ear and often a high temperature (fever). Mostly otitis media gets better on its own and is treated with painkillers only. However, if it is not improving after a few days or if your child is very young, your doctor may consider [antibiotic medication](#).

[For more details about otitis media, see the separate leaflet called Ear Infection \(Otitis Media\).](#)

Infection in the ear canal (otitis externa)

Otitis externa is an infection of the outer part of the ear, the ear canal. This type of infection is more common in adults than in children. It is more common in people who swim. It also may occur in people who have skin conditions such as eczema around the ear.

If you have otitis externa your ear may feel sore or itchy. There may be a discharge coming out of your ear. Your ear may feel blocked and you may not be able to hear as well as usual.

The treatment for otitis externa is usually ear drops or an ear spray. You will normally need to see your doctor for a prescription. However, there are ear drops called acetic acid ear drops (EarCalm®) available over the counter which can treat most mild cases of otitis externa. Acetic acid drops make the inside of the ear more acidic. This has antifungal and antibacterial effects but for more severe infections an anti-infective medicine such as antibiotic ear drops may be needed.

If you have had otitis externa before and recognise the symptoms, you may be able to purchase acetic acid ear drops from a pharmacy. However, if this is the first time, you should see a doctor to confirm the diagnosis.

See the separate leaflets called [Ear Infection \(Otitis Externa\)](#) and [Fungal Ear Infection](#) for more detailed information.

Wax

Our ears produce a waxy substance to protect our ear canals. Normally this naturally moves out of your ear on its own. However, sometimes a plug of wax can form, blocking your ear canal. This makes you feel deaf on one or both sides and can be uncomfortable. You also sometimes hear popping sounds or a ringing in your ear when you have wax stuck in your ear. Occasionally it can make you feel dizzy.

Never try to remove earwax with a cotton bud. This can push the wax further into your canal and cause a blockage.

Wax can usually be removed with oils or ear drops. Warmed olive oil or [sodium bicarbonate ear drops](#) (available from a pharmacy) applied three times a day usually help within a few days. If this does not remove the wax, you may need to see the nurse at your GP surgery. They may need to flush your earwax out with water (called irrigation).

[For further information, see the separate leaflet called Earwax.](#)

A common cold

Sometimes a [common cold](#) can cause earache without there being an infection in the ear itself. This is due to the excessive mucus you produce when you have a cold. Some of this may collect in the middle ear, putting pressure on the eardrum and causing earache. This will normally improve on its own. Treatments that may help the earache in this case are:

- Steam inhalation.
- [Decongestants](#) (not suitable for children under 6 years; for children under 12 years only with advice from your doctor).
- Simple painkillers.

[For further information, see the separate leaflet called Eustachian Tube Dysfunction.](#)

Foreign bodies

All sorts of objects can get stuck in ears. This is particularly common in children but can also occur in adults. Foreign bodies which can get into ears include beads, seeds, toys, bits of cotton bud and insects. This may cause earache, deafness, or a discharge. You (or someone else) may be able to see the foreign body in the ear canal. Never try to remove a foreign body yourself, as you may push it deeper into the ear canal. This might damage the eardrum. It is best to see your doctor. Foreign bodies can usually be removed with forceps or by flushing them out with water (irrigation).

Trauma or injury

Poking things into your ear, such as cotton buds or sharp objects, can cause damage to the ear canal. This can cause soreness which usually goes away on its own. It may go on to become infected, however. So if the pain does not settle, or if you start to have a discharge, see your doctor.

To avoid damage don't poke **anything** in your ear, even if it itches or you think you have wax there.

The eardrum can be torn (perforated) by objects poked into the ear. This can also happen due to other injuries such as a very loud noise or a slapped or boxed ear. Other more serious head injuries can also cause damage to the eardrum. A perforated eardrum usually causes a very sudden and severe pain. There may be some bleeding from the ear or you may not be able to hear as well. A perforated eardrum usually heals up on its own very well. However, if the pain or other symptoms do not settle, you should see your doctor.

[See the separate leaflet called Perforated Eardrum for more information.](#)

Flying and diving

The changes in pressure as a plane starts to descend commonly cause pain in the ear. This usually settles quickly. Similar problems can happen when scuba diving or even when going down in a lift. If pain carries on a few days after flying or diving, you should see a doctor.

For more information, and tips about how to improve this type of earache, see the separate leaflets called [Ears and Flying](#) and [Barotrauma of the Ear](#).

Boils, spots and pimples

Boils, spots and pimples can occur on the ear just like anywhere else on your body. If they are on the outside of the ear, you will be able to see them. If they are in the ear canal you may not be able to see where the pain is coming from. A small spot or boil will usually improve on its own with warm bathing. However, if it is very large or red or painful, you may need to see a doctor for advice. It may need an antibiotic medicine, or lancing with a needle.

[See the separate leaflet called Boil in the Ear Canal for more information.](#)

Pain coming from somewhere else (referred pain)

Referred pain is pain felt in one part of the body from a problem elsewhere in the body. Sometimes a pain in the ear is nothing to do with the ear but is coming from somewhere else. Causes of referred pain in the ear include:

- Problems with teeth, such as [teething in children](#), an [emerging wisdom tooth](#) or [dental abscesses](#).
- [Sore throats](#) and [tonsillitis](#).
- Problems with the gullet (oesophagus), such as [reflux or inflammation](#).
- Problems with the [salivary glands](#), such as [stones](#) or infections.
- Problems with the [jaw joint](#), such as [arthritis](#).

Shingles

Shingles is a condition where the virus which causes chickenpox (the varicella-zoster virus) is reactivated in just one nerve. It causes pain and a rash in the area of skin which that nerve supplies. Occasionally shingles can affect the nerve which supplies the ear. Symptoms may include:

- Pain inside the ear or on the outer ear, or both.
- A blistery rash on the ear.
- Hearing loss.
- Dizziness.
- Ringing in the ear (tinnitus).
- Weakness of one side of the face, so the face looks lopsided.

If you think you might have shingles around the ear, see a doctor as soon as possible. If treatment is required, it works best if it is started early. However, not all cases of shingles need treatment.

[See the separate leaflet called Shingles \(Herpes Zoster\) for more information.](#)

What should I do if I have earache?

If you feel well in yourself and have an earache, you may be able to [treat yourself with simple painkillers](#). [Paracetamol](#) or [ibuprofen](#), if you can take it, usually works well for ear pain. However, a person with earache should see a doctor if:

- They are unwell with other symptoms such as a high temperature (fever), a rash, being sick (vomiting), confusion or drowsiness.
- They are younger than 3 months.
- They are younger than 6 months and have a temperature of more than 38°C.
- They are younger than 2 years and have pain in both ears.
- The earache has not improved after four days.
- The ear is discharging.
- There is something stuck in the ear.
- The pain is very severe and simple painkillers are not helping.
- They have other illnesses which might affect their ability to fight off an infection.

Other ear problems

Discharge from the ear

A number of different conditions can cause discharge from the ear. Many of these are discussed in the sections above. The more common ones include:

- A burst (perforated) eardrum. This is discussed above in the trauma and injury section. Another common cause of a perforated eardrum is otitis media, also discussed above. In this condition the inflamed eardrum becomes so stretched that it bursts. The infected pus (mucus) in the middle ear then leaks out along the ear canal and can be seen. Typically, when this happens, a child has had an earache for a few days and then it suddenly becomes worse. Then the pus appears and usually the pain improves. This is because the eardrum is not being stretched so tightly anymore. An eardrum burst in this way usually heals up very well. However, antibiotics may be prescribed for the infection, so see your doctor.
- Outer ear infection (otitis externa).
- A foreign body in the ear.

Rare causes include:

- A cholesteatoma. This is the name for a build-up of cells causing a lump behind the eardrum. [For more information, see the separate leaflet called Cholesteatoma.](#)
- Skull fractures.
- Tumours.

Normally you will need to see a doctor to establish the cause of the discharge and the best treatment.

Glue ear

[This is discussed in full in a separate leaflet called Glue Ear.](#) It is a condition where the middle ear fills up with a glue-like fluid instead of air. It usually occurs in children who have had a number of middle ear infections. It causes dulled hearing. Occasionally it can cause earache.

Tinnitus

Tinnitus is a ringing or buzzing noise heard inside the ear. [It is discussed in full in a separate leaflet called Tinnitus.](#) The most common cause for this is age-related changes in the ear. This occurs commonly along with age-related hearing loss. Sometimes it is caused by another condition, such as [Ménière's disease](#), noise damage or ear infections. Your doctor will rule out an underlying cause.

Hearing loss (deafness)

Many of the conditions discussed elsewhere in this leaflet can cause hearing loss. One of the main functions of your ear is to allow you to hear. Therefore almost anything that goes wrong with it can affect your hearing. Depending on the condition this can be temporary or permanent, treatable or not. If the hearing loss comes on suddenly with earache and/or discharge, it is most likely to be due to an infection. If it comes on gradually as you get older, it is more likely to be due to [age-related hearing loss \(presbycusis\)](#). Wax is a common, easily treated cause of hearing loss. In children, glue ear is a common cause of hearing loss.

See your doctor if you have hearing loss. They will be able to establish the cause. Depending on the cause, they may be able to treat it. Even if it can't be treated (for example, age-related hearing loss), your doctor will be able to refer you for hearing aids. These can make an enormous difference to your life.

See the separate leaflets called [Hearing Problems](#) and [Hearing Tests](#) for more information.

Further reading & references

- [Tinnitus: assessment and management](#); NICE Guidance (March 2020)
- [Earwax](#); NICE CKS, July 2016 (UK access only)
- [Otitis media - acute](#); NICE CKS, July 2018 (UK access only)
- [Otitis externa](#); NICE CKS, February 2018 (UK access only)
- [Earwood JS, Rogers TS, Rathjen NA](#); Ear Pain: Diagnosing Common and Uncommon Causes. Am Fam Physician. 2018 Jan 1;97(1):20-27.

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Last updated by: Dr Laurence Knott	Peer reviewed by: Dr Hayley Willacy	
Last updated: 29/06/2020	Next review date: 28/06/2025	Document ID: 29041 (v3)

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