



Ear Infections

OTITIS EXTERNA (ITCHY EARS)

What is otitis externa?

Otitis externa is an inflammation or infection of the skin of the outer ear canal. Symptoms include itching, ear discharge, temporarily dulled hearing, and pain. There are two different types. Acute otitis externa will often seem to occur just 'overnight' for no specific reason, but it may be related to a swimming event. Chronic otitis externa occurs when the otitis externa persists for several weeks and then recurs at intervals after that.

There is also a rare, severe form of otitis externa that can occur in people of any age who have problems with their immune system, but it tends to be experienced by older people with diabetes. If you are one of these people and have severe ear pain and discharge it is important to see your doctor at the earliest opportunity to prevent it becoming worse.

What causes acute otitis externa?

Generally, outer ear infections are caused by a bacterial infection of the skin of the ear canal, although occasionally it may be due to a fungus or yeast. The skin can become so swollen that the ear canal closes, causing temporary deafness, and there can be some discharge from the ear. It occurs commonly in people who suffer from skin problems such as eczema, psoriasis or dermatitis but also in people with narrow ear canals or who swim a great deal.

One of the most common causes of this condition is swimming in pools which have not been maintained to a high standard or have a higher percentage of chlorine in the water than is advisable. Another cause is a hot humid climate when the ear canal perspires more, causing a damp condition in which bacteria breed easily. The use of hairsprays, shampoo or some soaps can cause irritation of the skin and some people seem more prone to this problem than others. If your ear canal is itchy and you scratch it, you may damage the skin which is more likely to become infected if there is static water in the ear canal. Rubbing the skin causes inflammation which in turn can become infected. When the ear requires irrigating (syringing), if damage to the skin has occurred through attempts at self-cleaning or scratching, it is more likely that an infection or inflammation will occur following this procedure.

Another type of acute otitis externa is a boil (an infected hair follicle) at the entrance to the ear canal known as a furuncle. This can occur for no reason like other spots on the skin or can occur where skin has been damaged with a cotton bud, fingernail or any other object.

The main symptom of a furuncle is severe pain with no discharge. The outer ear may be too painful to touch but the spot in the ear may actually be very small. A small infective spot is likely to recover without treatment but if the pain is severe it may require antibiotic capsules. Pain-reducing tablets will be required and sometimes a warm cloth held against the ear helps to relieve the pain. If the boil 'bursts' there may be a sudden discharge of smelly pus from the ear and then the pain will subside and the ear will recover.

How can otitis externa be treated?

The first line of treatment is to gently remove all the discharge and debris (results of the infection) lying in the ear canal. This may be done by a doctor or nurse who may irrigate or wipe the ear with a cotton-covered instrument. If your ear is dry, itchy or inflamed (but not infected) your doctor may use steroid drops to treat the otitis externa. If your ear is infected, an antibiotic treatment may be used. A dressing covered in antibiotic ointment may be inserted into the ear to remain in place for two days. This allows the antibiotic to be in constant contact with the whole ear canal. The dressing may be inserted soaked in the steroid drops for the same reason.

Alternatively, you may be prescribed a short course of ear drops or an ear spray. These usually contain an antibiotic to clear the bacteria and a steroid to reduce the inflammation. If the bacteria in the ear are sensitive to the antibiotic in the ear spray/drops/ointment, the infection should clear by the end of the treatment. If there is little change after three days' treatment it may require a different antibiotic drop to remove the bacteria as they could be resistant to the first treatment. At this stage the doctor or nurse will take a sample of the discharge on a cotton swab and send it to the laboratory to find out which bacteria are causing the infection and which antibiotic will remove it.

If the infection is very painful and affecting the face and scalp around the ear, antibiotic tablets or medicine may also be prescribed. Pain relieving tablets may also be required.

Using antibiotic/anti-inflammatory ear drops

- Tilt the head so that the infected ear is uppermost
- Pull the pinna (outer ear) backwards and upwards (just backwards in children)
- Drop the prescribed amount of drops into the affected ear and massage the tragus (the skin just in front of the entrance to the ear canal)
- Return the head to the upright position and wipe away any excess drops
- Do not put cotton wool into the ear after using drops as it will absorb the drops and they will be less effective
- Repeat procedure with the other ear if required.

WHY MIGHT OTITIS EXTERNA PERSIST DESPITE TREATMENT?

The infection will persist despite treatment if the cause of the problem is not removed. For example, some people are more sensitive to certain shampoos, hair sprays and soap. Washing the hair by lying down in the bath with the head under water can also cause re-infection if the bath water becomes trapped behind the wax in the ear canal. Scratching or poking the ear can also re-infect the canal. Inserting ear plugs with dirty hands and reusing ear plugs encourages repeat infections. People with skin disorders elsewhere (e.g. eczema or psoriasis) may experience the same symptoms in the ear canal when the skin disorders flare up from time to time. This is not necessarily an infection; it could just be an episode of the known skin disorder.

As explained above, resistant bacteria may require more than one type of antibiotic drop or dressing or there may be a fungal infection in addition to the bacteria. The swab sent to the laboratory will identify the cause of the repeated infection.

A fungal infection is identified by the type of discharge in the ear canal and the intense itching which it causes. A fungus is a spore which is not killed by antibiotics and it lies dormant for three weeks before recurring. The ear canal has to be cleaned meticulously and treated with antifungal ointment or drops for three weeks after all symptoms have gone. This type of infection may be suspected if the otitis externa does not improve with the above treatment.

Persistent otitis externa may occur because there is disease in the middle ear and the discharge from this runs out into the ear canal. This usually requires ENT consultant advice. This disease is evident once all the discharge has been cleared from the ear canal and the doctor will refer you to the hospital for specialist advice. Meanwhile it is best to continue keeping the ear clear and treating with the prescribed drops.

What can I do to prevent an external ear canal infection?

There is an ear spray obtainable over-the-counter from a pharmacy which provides an acid environment in the ear canal, which deters bacteria. If you are susceptible to ear canal infections, it might be a good idea to keep such a spray in a First Aid kit to be used at the first sign of infection, to prevent the ear becoming worse until it is possible to consult a doctor.

If you have an ear infection, it is advisable to keep the ear out of water for at least two weeks during treatment, to rest the ear until the infection has been resolved. It is then less likely to recur. Keep all water out of the ear by filling the outside of the ear with cotton wool smeared with petroleum jelly (to waterproof the cotton wool) before you wash your hair or have a shower. When swimming, wear silicone ear plugs. Please note that if the ear plugs have been used when the ear is infected they must be replaced with new ear plugs or there is a risk of re-infecting the ear.

A good rule to follow is: if you tend to have problems with your ears, keep them dry. Keep dirty hands, bath water, sub-standard swimming pool water and hair sprays away from ears. If ear plugs are part of safety equipment at work, ensure a clean

pair is used every day. Allow earwax to protect the ear canal – do not use cotton buds to push it into the wrong place.

If the ear has started to discharge it is best not to clean it with a cotton bud, as this may damage the skin. Also do not leave cotton wool at the entrance of the ear canal as this stops the discharge running out of the ear and may cause the infection to get worse. If the discharge gets worse, wipe it away with a tissue from time to time but allow air to enter the canal and seek medical advice as soon as possible.

EAR INFECTIONS (ACUTE OTITIS MEDIA)

What are the symptoms?

A middle ear infection occurs when the eardrum or middle ear space (containing the three tiny bones) becomes inflamed or sore due to an infection of bacteria or a virus caught from other people. The germs spread up the back of the throat, along the connecting tube (Eustachian tube) and into the middle ear space. The medical name for a middle ear infection is acute otitis media.

Ear infections can affect anyone, but are particularly common and distressing in children; eight out of ten will have had an ear infection by the time they are three years old. They tend to be very painful as the eardrum becomes swollen from the pressure of the infection in the middle ear, and can cause a fever and dulled hearing. Children with ear infections may feel sick or vomit.

If the infection causes the eardrum to burst (perforate), the outer ear canal may become itchy and weepy from the discharge of fluid, and the severe pain will stop. As long as you have had medical advice, you do not need to do anything except keep the ear dry, but you may wish to mop out only the part of the ear that you can see, gently with a tissue.

Sometimes, after the ear infection has cleared up, fluid remains in the middle ear because it is unable to drain away. It can cause hearing difficulties which, in children, can be serious enough to affect long-term behaviour and development. The condition is called glue ear and it is important to alert your doctor to the symptoms.

HOW CAN EAR INFECTIONS BE TREATED?

In the majority of cases, an ear infection will get better naturally. However, it is important to seek medical treatment promptly as, whilst rare, complications from ear infection can be serious. Seeing a doctor is especially important if symptoms include:

- A high fever (above 39^o C)
- A new rash, extreme floppiness/drowsiness, or intolerance to bright light
- No improvement in symptoms in a child under two after 48 hours

- No improvement in symptoms in a child over two, or adult, by four days

On the first visit, the doctor may prescribe pain relief, but not antibiotics. This is because overuse is causing bacteria to become resistant to the main antibiotics.

However, antibiotics may be prescribed if there has been no improvement after several days or if the child or adult is very unwell, or has complications. If they are prescribed, it is important to take the entire course.

If you do not have pain relief on prescription, paracetamol or ibuprofen are effective and can be purchased from a pharmacy.

It can also help to sit with a warm towel pressed gently against the painful ear or to put several drops of room temperature olive oil into the ear. However, keep water out and put nothing in the ear if a discharge suggests there may be a hole in the eardrum.

FURTHER INFORMATION

If any of your questions concerning ear infections have not been answered by reading this information sheet, contact the Deafness Research UK Information Service for further assistance. Our Information team will either answer your enquiry directly or refer it to one of our scientific or medical advisers.

Open: 9.00 a.m. to 5.00 p.m., Monday to Friday (a message can be left at other times).

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