

Outer ear infection (otitis externa)

Ear infection

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✓ Meets Patient's **editorial guidelines**

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Otitis externa, more commonly known as an outer ear infection, is an inflammation of the ear canal. The inflammation is usually caused by infection, although it can sometimes be due to allergy or irritation.

Treatment with ear drops is usually effective. Further episodes of the condition can often be prevented using the tips given below.

Otitis externa usually clears within a week or so. When it is short-lasting, this is described as 'acute otitis externa'. However, occasionally it may persist for three months or more – this is described as 'chronic otitis externa'.

In this article:

- What is otitis externa?
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- What if the treatment doesn't work?
- How can I prevent otitis externa?



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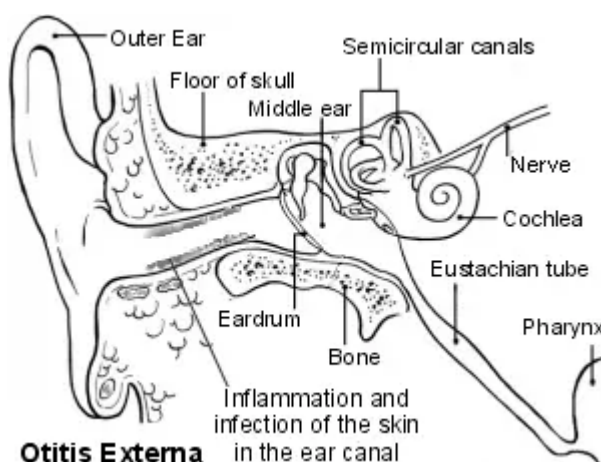
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What is otitis externa?

Otitis means inflammation of the ear. The inflammation is usually due to an ear infection. Otitis externa means that the inflammation affects the external part of the ear canal and does not go further than the eardrum.

Otitis externa is an infection of the skin of the ear canal and is very common.

The ear – otitis externa



What causes otitis externa?

Most infections are caused by a germ (bacterium). Occasionally, they can be due to a fungal or yeast infection. The ear canal is a narrow, warm, blind-ended tunnel, which can make it a good, protected environment for germs to grow in.

What can make you prone to ear infections?

Substances entering the ear

If water enters the ear canal (eg, when swimming), this may provide moisture for germs to grow and can increase the risk of otitis externa.

Water in the canal can also cause itching, causing the ear to be scratched or poked. This can damage the skin in the ear canal and cause inflammation. Inflamed skin can quickly become infected. A vicious circle may then develop. The inflammation and infection cause more itch, which increases the scratching, making things worse. This is known as the itch-scratch cycle.



Similarly, if shampoo, hairspray or other products enter the ear this can have the same effect and may be worse, as the chemicals may additionally irritate the sensitive skin of the canal.

Swimming

Otitis externa is much more common in regular swimmers, due to water getting into the ear canal. In fact, otitis externa is sometimes called 'swimmer's ear'. It is more likely to occur when swimming in open water which isn't clean, such as rivers, lakes or ponds.

Warm weather

Otitis externa is more likely to develop in hot, humid, and 'sweaty' weather. It is more common in hot countries. It commonly occurs in those who have recently holidayed in a hot country, particularly if they swam during the trip.

Skin problems

Eczema or **psoriasis** affecting the ear canal results in skin inflammation and flaking.

Excessive earwax

This can lead to trapping of water and debris in the ear canal. Bugs (eg, bacteria and fungi) can thrive in these conditions and infection then occurs easily.

Ear syringing to clear earwax

Syringing of the canal with water or suction may irritate the delicate lining of the ear canal and cause inflammation. Earwax is also protective of the ear canal, and if too little is left it is easier for a bacterial infection to take hold.

Middle ear infections

Sometimes **middle ear infections (otitis media)** can produce persistent discharge which can become stuck in the ear canal and cause otitis externa.



Otitis externa symptoms

Common signs and symptoms of otitis externa include:

- Itching.
- Ear discharge.
- Temporary hearing loss, which is typically mild.
- Ear pain – particularly upon movement of the ear.
- The ear may feel blocked or full.

Both ears can be affected; however, more often otitis externa affects one ear only. Sometimes the neck glands or those around the ear can become enlarged and sore.

What is the difference between acute otitis externa, recurrent otitis externa, and chronic otitis externa?

The only difference between these three 'types' of otitis externa is the length of time the condition persists for.

What is acute otitis externa?

In acute otitis externa, the condition has been present for under three months. Usually, it lasts for a week or so.

What is recurrent otitis externa?

Recurrent otitis externa means the condition keeps coming back. Episodes get better (or seem to get better) but then the same symptoms develop again.

What is chronic otitis externa?

Chronic otitis externa means the condition has lasted (persisted) for more than three months. Sometimes it can last for years. This is often because, even though treatment has been provided, the underlying reasons for it are still there.



Otitis externa treatment

Most people with otitis externa or ear infections are given treatment without having any tests, as the diagnosis is usually clear from examination of the ear.

If you recognise the symptoms, some ear drops for otitis externa can be tried. These are available without prescription from a pharmacy, such as those containing 2% acetic acid.

Ear drops are usually enough to cure a bout of short-lasting (acute) otitis externa. However, other treatments are sometimes added. This is more likely to be necessary if any of the following are present:

- The ears are particularly painful or swollen.
- The ears are completely blocked (so that the drops can't penetrate properly).
- Otitis externa keeps coming back or has become persistent (chronic).

It is also very important that steps are taken to help things settle down, as if the conditions that caused the otitis externa in the first place are unchanged, it may well come back.

Ear drops or sprays

A doctor or nurse will usually prescribe a short course of ear drops or an ear spray for an ear infection like otitis externa. These usually contain an antibiotic to clear any infection and a steroid to reduce the inflammation and itch.

A combination of **flumetasone and clioquinol** is often used. It may take a week or so of treatment for symptoms to go completely. If one does not work well then a doctor or nurse may advise changing to another type containing different treatment. An ear swab may be taken before the treatment is changed.

If the otitis externa is thought to have resulted from overuse of antibiotics you may be given drops containing a steroid only.

If the otitis externa is being caused by an inflammatory skin condition (such as eczema or psoriasis), bacteria or fungal germs are not always involved and the ear may be chronically itchy but will not be painful. Again you may be given ear drops containing a steroid only.



However, if the ear is painful or swollen it is likely that the doctor or nurse will provide drops which contain antibiotics too.

Painkillers

Otitis externa can be very sore. **Paracetamol** or **ibuprofen** will usually ease any pain. **Stronger painkillers** are occasionally needed. Holding a hot cloth (flannel) against the ear may also ease pain.

Ear wick

Sometimes, particularly if the ear canal is very swollen and blocked, otitis externa may be treated with a wick. This is a piece of gauze soaked in treatment drops and pushed gently into the ear canal between the swollen walls.

This makes sure that the treatment is held in contact with the sore skin for as long as possible. The wick is usually changed every 2–3 days until things have settled.

Ear canal cleaning

It may be helpful for the doctor or nurse to clear away discharge and dust from the ear canal. This is to allow the treatment (drops) to make better contact with the lining of the ear canal, so that they can be more effective.

The ear canal may be cleaned by gentle swabbing, by suction or by careful syringing. This cleaning may need to be repeated after a few days.

Ear canal cleaning and ear wick insertion is usually undertaken in an ENT clinic.

Oral antibiotics

If the infection is particularly severe or there is infection in the skin around the ear (cellulitis) then antibiotic tablets to be taken by mouth may be prescribed, usually in addition to the ear drops. It is important to complete the course.

Referral to a specialist

This may be needed for a more detailed examination of the ear if things don't settle.



How do I make sure the otitis externa treatment works?

Let the discharge escape

Try not to leave balls of cotton swabs in the ear canal. If the discharge is heavy, some cotton wool can be lightly placed in the outer part of the canal to mop it up and replace it frequently with a fresh piece.

Use the ear drops correctly

Sometimes otitis externa does not clear because ear drops are not used correctly. They must be used as often as prescribed to be fully effective. If the drops come out of the ear quickly, they may not work so well. When using drops:

- Lie with the affected ear upwards.
- Put several drops in the ear and remain lying in this position for 1–2 minutes.
- Gently massage the area at the front of the ear canal a few times to push the drops deep inside the ear canal.

Keep your ears dry (apart from the drops)

This will help the current attack to settle down and help to prevent future attacks (see below). It is best to avoid swimming and getting water in the ears with otitis externa.

What if the treatment doesn't work?

These otitis externa and ear infection treatments, together with prevention measures, will clear up most cases. However, your doctor or nurse may consider a few other measures if it still continues.

Ear drop allergies

Some people develop an allergy or sensitivity to the ear drops used for otitis externa. Allergy to the antibiotic or to the preservative can occur. The itch and discharge may then become worse when the drops are used, rather than better.

If this is suspected then a change to an ear drop low in preservatives may be advised or a steroid-only ear drop may be tried.



Fungal infections

Most infections of the ear canal are caused by germs (bacteria). These germs usually clear up with antibiotic drops. Occasionally, however, chronic otitis externa is due to a fungal infection.

Fungal germs are not killed by antibiotics. If the otitis externa does not clear with the usual treatment, a small sample (an ear swab) may be taken to see if fungi are present. It may take several weeks of antifungal ear drops to clear a fungal ear infection.

Middle ear infections

If the ear canal is full of discharge it may be difficult for a doctor or nurse to tell whether it is from the outer ear (otitis externa) or from a middle ear infection (otitis media) which has come through a burst eardrum.

If infected material from behind the eardrum leaks into the ear canal it will tend to cause otitis externa in addition to the otitis media. This condition may need oral antibiotics.

Necrotising otitis externa

This is a very rare condition, which is more likely to occur in those with impaired immunity (eg, diabetic people). The otitis externa infection spreads to the bone beside the ear causing swelling, discharge and pain.

People with this condition are likely to feel very unwell. It is mainly caused by a germ called *Pseudomonas aeruginosa*. It requires a lengthy course of antibiotic ear drops and tablets.

How can I prevent otitis externa?

There are several things that will help prevent otitis externa from occurring in the first place, from returning after treatment, or from becoming chronic. It's particularly important to try to follow the suggested guidance below if you know you are prone to the condition:



Don't clean your ear canal with cotton buds

The inflamed skin may be damaged and cotton bud use can also push wax further into the ear. Wax is designed to come out by itself. Just clean the outside of the ear with a cloth when any discharge appears. Don't scratch or poke the ear canal with anything.

Keep your ears dry

If water gets into the ear canal, tip it out as soon as possible. The ears can also be dried with the low heat setting of a hairdryer wafted at a distance. When swimming, try wearing a tightly fitting cap that covers the ears.

Some swimmers use silicone rubber earplugs but these should only be used if they do not irritate the skin of the ear canal. When exiting the pool, try to tip the water out of each ear.

Try not to let soap or shampoo get into the ear canals

If you are prone to otitis externa you can avoid soap entering the ear when showering, by placing a piece of cotton wool coated in soft white paraffin (eg, Vaseline®) into the outer canal.

Use prevention drops

Some swimmers use acetic acid drops (obtainable from pharmacies) in their ears before and after swimming. This may help prevent infection, although some doctors and nurses worry that this may irritate healthy tissue.

Consider wax dissolving drops

If you tend to have excessive wax and flakiness, proprietary wax drops from pharmacists, or olive oil, can melt out some of the wax. This helps to keep the ear canal clear and to prevent water trapping.

When to see a doctor about otitis externa

Very occasionally, the germs (bacteria) which infect the ear canal are resistant to some antibiotic ear drops. A change to a different type of ear drop may be helpful.



Sometimes a small sample (a swab) of the discharge is taken and sent to the laboratory to identify which germ is causing the infection. If the infection is severe, antibiotic tablets may be needed in addition to drops.

Dr Mary Lowth is an author or the original author of this leaflet.

Further reading and references

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