



## An approach to ear pain

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Earache is a common problem, especially in young children. The pain felt in the ear may be due to a problem with the ear or may be referred from another part of the body.<sup>1</sup>

### Ear anatomy

The ear consists of three main parts:<sup>2</sup>

- The external ear includes the auricle (visible part of the ear) and the external auditory canal.
- The middle ear includes the tympanic membrane (eardrum), three small bones (malleus, incus and stapes) and the Eustachian tube, which leads from the ear to the throat.
- The inner ear includes a system of semicircular canals, the vestibule and the cochlea.

### Causes of ear pain

Otitis media, or inflammation of the middle ear, is a common cause of earache. It is caused by allergies or infections due to colds and other upper respiratory tract infections. Bacterial or viral infections may cause an accumulation of fluid in the Eustachian tube, which could lead to swelling and pain.<sup>3,4</sup> Children may experience infections more often as they have shorter, narrower Eustachian tubes than adults and fluid may consequently be trapped in the middle ear more easily.<sup>3</sup>

Otitis externa is an infection in the outer ear and is often caused by moisture trapped in the ear canal. This typically occurs in swimmers and is known as 'swimmer's ear', but can also occur during bathing or showering.<sup>3,4</sup>

A build-up of earwax or an object pushed into the ear can cause pain. Myringitis (inflammation of the eardrum) may be caused by infections or trauma. Trauma may result from

using a sharp object to clean the ear or be due to a change in pressure on the eardrum, for example, from a blow to the ear. This may result in rupture of the eardrum.<sup>4</sup>

Pain of the outer ear is often caused by skin problems such as sunburn, skin infections or allergies.<sup>4</sup>

Other causes of ear pain may include:<sup>4</sup>

- inflammation of the jaw
- teeth grinding
- sinus infection
- tooth problems or dental abscesses
- throat inflammation and tonsillitis
- air pressure changes when scuba diving or travelling in an aeroplane

### Symptoms

Adults may describe itching, pain, hearing loss, feeling of fullness in the ear, swelling and drainage from the ear.<sup>3</sup> Young children are not always able to describe their symptoms, but may have earache if they pull or rub the ear, are irritable, refuse to eat or keep losing their balance.<sup>1,3</sup>

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### When to consult a doctor

The following symptoms require medical attention:

- high fever
- fluid draining from the ear
- severe headache or dizziness
- swelling around the ear

- severe pain that has stopped abruptly (this may indicate a ruptured eardrum)
- symptoms that do not improve within 24–48 hours
- loss of hearing<sup>1,3,4</sup>

### Treatment

Ear infections may need to be treated with oral antibiotics or eardrops. Steroids may help to reduce inflammation.<sup>3</sup>

Pain medication such as paracetamol and ibuprofen may be used to treat pain and inflammation.<sup>3</sup>

Foreign objects that have been inserted into the ear should be removed by a doctor.<sup>4</sup>

### Prevention

Ears should be carefully dried after swimming or bathing. Earplugs may be used during swimming, if necessary.<sup>4</sup>

Generally, ears are self-cleansing and using cotton-tipped buds for cleaning is not necessary. Inserting any object into the ear canal may scratch the skin.<sup>4</sup>

Babies should not be fed in a lying position as milk may run backwards, into the inner ear.<sup>3</sup>

Allergies should be controlled to reduce nasal or sinus congestion.

### Conclusion

Most cases of earache resolve quickly with appropriate treatment. Symptoms of hearing loss may take longer to resolve. Patients with recurring problems should be referred to a specialist.<sup>4</sup>

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