



# Otitis media

**Otitis media** is the general term referring to inflammation in the middle ear, which may include a range of conditions. This information sheet explains otitis media in technical terms.

## Clinical definitions

### ■ Acute otitis media (AOM)

... is diagnosed as an active infection of recent onset, characterised by an inflamed ear drum and usually accompanied by pain and fever. Discharge through a perforation of the tympanic membrane may occur. Hearing in the affected ear is diminished.

### ■ Recurrent otitis media (ROM)

... is characterised by three or more discrete episodes of acute otitis media in a six-month period.

### ■ Otitis media with effusion (OME)

... often referred to as 'glue ear', describes fluid in the middle ear in the absence of fever or inflammation of the drum. Minimal pain or discomfort seems to be experienced by the patient. The presence of the fluid may be transient, or may persist for many months.

## How common is otitis media?

Otitis media is particularly prevalent in childhood. It accounts for a large proportion of paediatric presentations to health care professionals and is the most common cause of hearing loss in children.

Research shows **83% of children** will have at least one episode of AOM by the age of three

years. The peak incidence of acute otitis media is between six months and 12 months of age. The incidence declines after six to seven years of age, but one out of every three primary school age children will have some form of conductive hearing loss at any given time.

Otitis media is even more common among children who are Aboriginal, Torres Strait Islanders or from a non-English speaking background, and in children with disabilities.

## Consequences of otitis media

OME can have several consequences.

### ■ Hearing loss

The hearing loss associated with OME generally averages 15-30dB and falls in the mild to moderate category. The degree of hearing loss can vary with the progress of the infection, and it may remain undetected for a long time. Small children do not complain and a surprising number of parents fail to notice that their children are hard of hearing. Often children are accused of not paying attention or being naughty and stubborn or just not wanting to hear.

### ■ Developmental problems

Although there is some debate over the psychological, educational and social consequences of the conductive hearing loss associated with OME, the general consensus is that there is a connection, especially when middle ear disease occurs in the first three years of life. There is evidence that even a mild, temporary hearing impairment can cause difficulties in school.

## Information Sheet

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## ■ Recurrent otitis media

OME may predispose to recurrent episodes of acute otitis media.

## ■ Tympanosclerosis

This is presence of white patches on the tympanic membrane. Although tympanosclerosis does not result in hearing loss it may interfere with viewing the middle ear space.

## ■ Retraction pocket formation

This is a localised retraction in the attic area of the tympanic membrane. The concern is that it may lead to cholesteatoma.

## ■ Adhesive chronic otitis media

The tympanic membrane may become irreversibly adherent to the middle ear structures.

## Detection

Many children have a middle ear effusion after an upper respiratory tract infection. The diagnosis can be difficult in an infant in the presence of a narrow ear canal, wax, crying or otitis externa.

Diagnosis of otitis media is best achieved using a combination of **otoscopy**, **tympanometry** and **hearing assessment**.

Hearing can be assessed at any age after birth with various test techniques. Audiological assessment of children with OME is recommended whenever possible, particularly if surgical management is being considered.

Children can be referred for audiological assessment to **Australian Hearing** (call 13 17 97), some public hospitals and some State/Territory Health centres.

## Signs of hearing loss

A parent who claims their child is having difficulty hearing, no matter what age, should never be disregarded. Signs of hearing loss to look for include:

- delayed speech development
- not responding to soft speech or when called from another room
- frequent requests for repetition
- liking the television up loud but aversion to loud sounds
- shouting or whispering while speaking
- distracting other children in school and being easily distracted.

## Management and treatment

OME will often resolve spontaneously with time and with the increasing age of the child. The decision to intervene with treatment will depend on several factors, including the age of the child, associated symptoms and duration of the effusion.

Usually antibiotics and decongestants are prescribed to treat otitis media. If the fluid in the middle ear persists, draining the fluid surgically may be appropriate, with or without the insertion of tympanostomy tubes (grommets). These grommets cannot be felt by the child, and usually are pushed out by the eardrum of their own accord between six and twelve months, leaving the drum intact.

Reference: "Guidelines on the management of paediatric middle ear disease", The Medical Journal of Australia, Supplement, 4 October 1993.



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