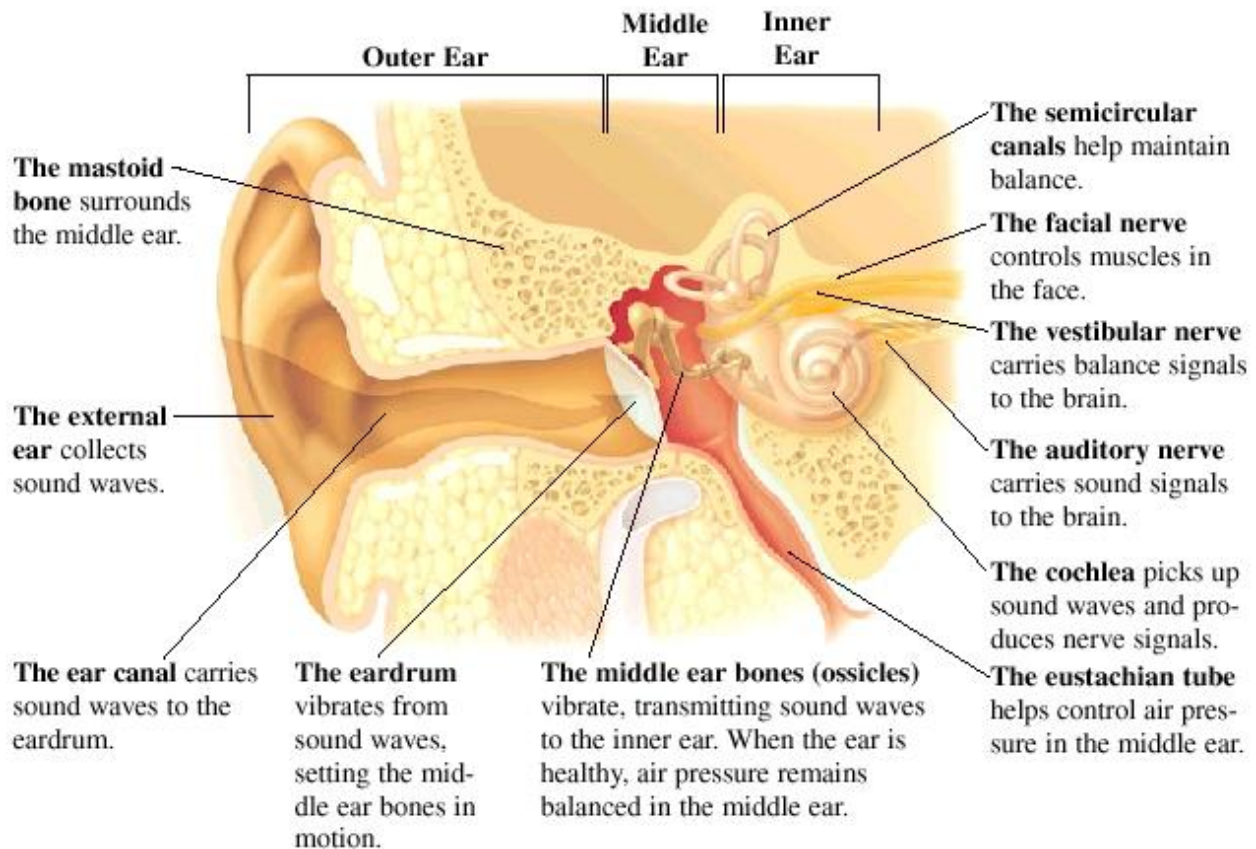


## Otitis Media

### What is Otitis Media?

It is any inflammation of the middle ear commonly caused by a bacterial or viral infection but can also be due to other causes such as allergies and immunodeficiency.

### Anatomy of the ear



- The ear functions by detecting sound from the environment and also aiding in balance and body position.
- The middle ear is the air-filled cavity behind the eardrum which is attached to the middle ear bones (ossicles) which serve to transmit sound waves from the eardrum to the inner ear.
- The middle ear is connected to the upper throat via the Eustachian tube.
- The Eustachian tube has 2 functions:
  - Equalizing pressure between the middle ear and the atmosphere.
  - Facilitates the drainage of mucus from the middle ear to the upper throat.

## Are there different types of Otitis Media?

There are 4 subtypes of otitis media:

- **Acute otitis media**
  - The commonest of all the subtypes of otitis media and occurs when the middle ear is inflamed, commonly by infection.
- **Otitis media with effusion**
  - Besides inflammation of the middle ear, fluid collects in the middle ear and affect your ability to hear via the affected ear.
- **Chronic suppurative otitis media**
  - Involves the buildup of pus in the middle ear and a hole in the eardrum
- **Adhesive otitis media**
  - Involves the retracted eardrum becoming sucked into the middle ear and getting stuck to the ossicles.

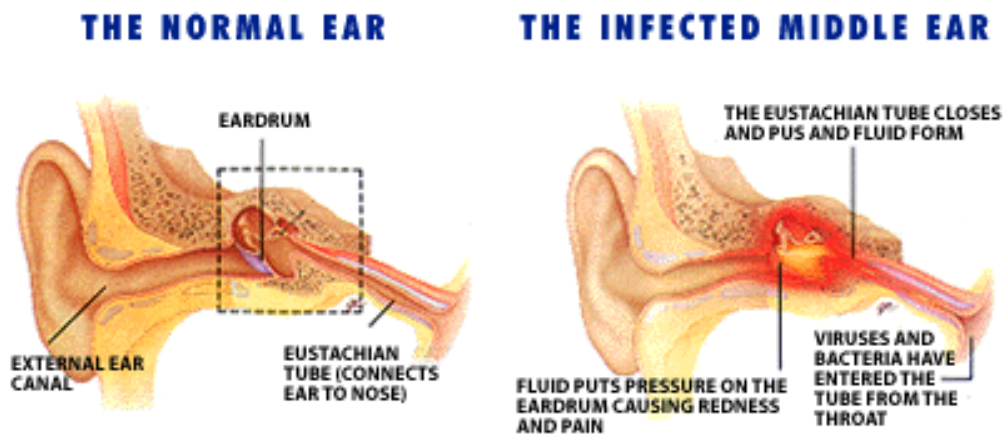
## What are the symptoms?



Otitis media often present with:

- Ear pain
- Headache
- Ear discharge
- Concurrent cough and cold
- Fever
- Hearing loss
- Ringing in the ears
- Vertigo and dizziness

## How did I get Otitis Media?



During an upper respiratory tract infection, 2 events may occur:

- The mucous membranes at the throat end of the Eustachian tube may become swollen, obstructing the drainage of mucus from the middle ear into the throat
- Bacteria and viruses may migrate from the throat to the middle ear via the Eustachian tube

The resultant build up of infected mucus in the middle ear causes inflammation which, if not treated properly or soon enough, will cause further complications such as:

- Ear discharge (clear or pus)
- Perforation of the eardrum
- Adhesion of the eardrum to the adjacent bones

## Do I need further tests?

A otoscopic examination by a doctor is usually enough to diagnose otitis media. CT scans and MRI may be useful in cases with complications such as extension of the infection to the brain or abscess formation.

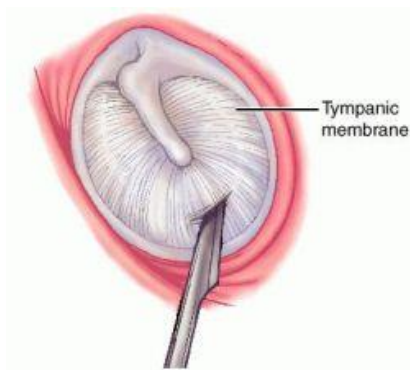
## What is the treatment?

### Medical treatment

- Antibiotics
- Painkillers

### Surgery

- Tympanocentesis (using a small needle to make a hole in the eardrum to drain out fluid from the middle ear)



- Tympanostomy tubes (insertion of a small tube into the eardrum to keep the middle ear aerated and prevent the accumulation of fluid for a longer time)

