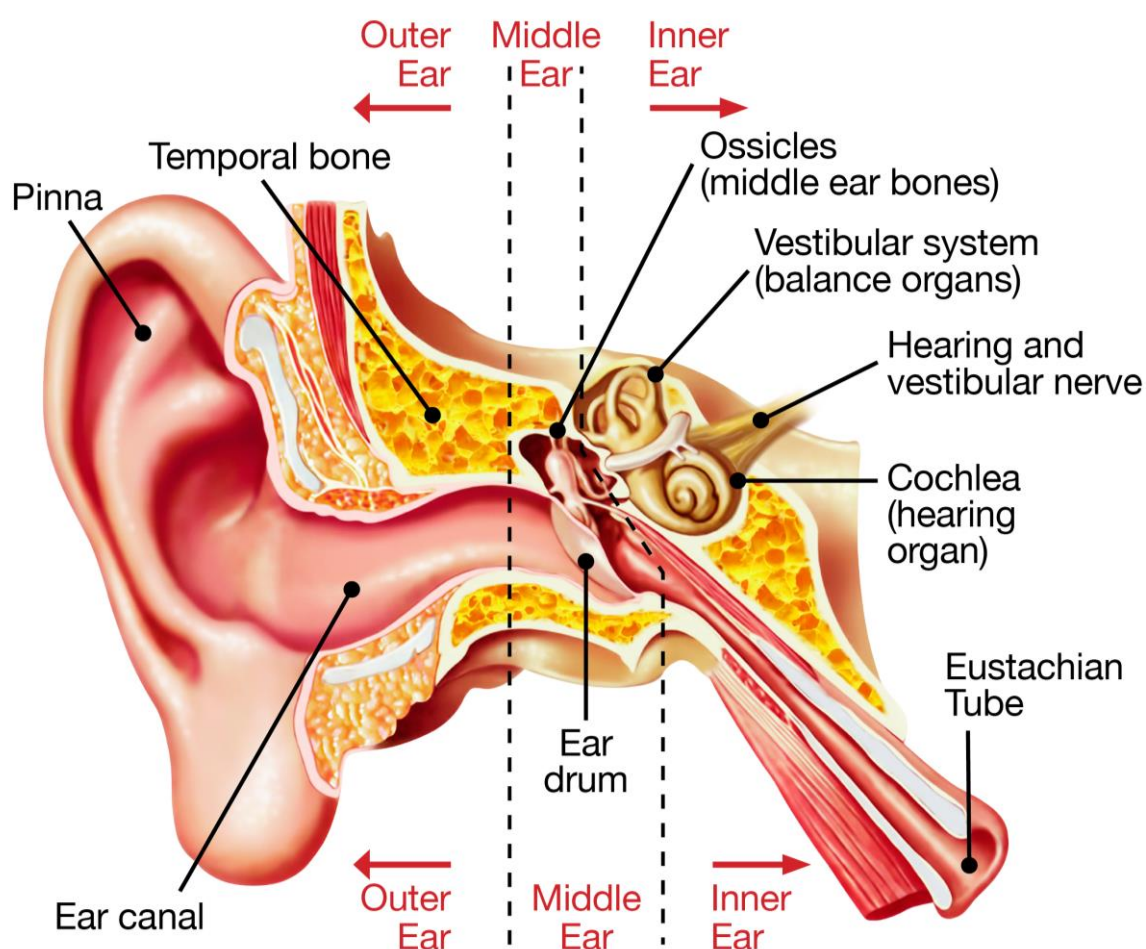


Eustachian tube dysfunction

What is the Eustachian tube?

The Eustachian tube is an airway passage which connects the middle ear to the back of the nose/throat. It is about 35mm long in adults and is orientated diagonally. In children, the Eustachian tube is shorter and more horizontal than in adults. The opening and closing of the Eustachian tube is controlled by a number of small muscles at the back of the throat.



What does it do?

The main role of the Eustachian tube is to balance the air pressure in the middle ear with the air pressure in the outside environment. It is also important for aeration of the middle ear, and drainage of secretions from the middle ear. Normally, the Eustachian tube is closed, preventing contamination of the middle ear from nasal secretions. It opens when we yawn, chew or swallow.

Eustachian tube dysfunction (ETD)

Sometimes, the Eustachian tube may become blocked and this is known as Eustachian tube dysfunction (ETD). This can result in insufficient air behind the ear drum creating changes in air pressure and can cause the ear drum to become retracted into the middle ear. This can cause a feeling of fullness in the ear and muffled sounds. It is not uncommon for people to experience some degree of Eustachian tube dysfunction at some point in their life.

Symptoms of ETD

Symptoms associated with Eustachian tube dysfunction include:

- a feeling of fullness or 'blocked' ears
- crackling or clicking sounds when chewing or swallowing
- intermittent pain (otalgia)
- muffled sounds
- discomfort.

Causes of ETD

Eustachian tube dysfunction is often caused by differences in air pressure arising from:

- altitude changes (air travel, driving through hilly environments, scuba diving)
- nasal congestion, sinus problems or allergies
- the common cold; chest, ear or sinus infections
- failure of the Eustachian tube to open when yawning/swallowing.

Who is more susceptible to ETD?

Children are more prone to Eustachian tube dysfunction for a number of reasons. Firstly, when compared to adults, a child's Eustachian tube is more horizontal and this does not always allow adequate drainage of fluid. The muscles surrounding the Eustachian tube are not as well developed in children, which can also cause problems. Eustachian tube problems in children can lead to a build-up of fluid in the middle part of the ear, known as Otitis Media.

People who are exposed to frequent flying or deep sea diving may experience greater problems with Eustachian tube function, as they are exposed to environments that have sudden changes in atmospheric pressure. In rare cases, damage to the tissue linings can occur after rapidly ascending or descending and cause perforations of the eardrum and very rarely, cause permanent hearing loss. This is known as barotrauma.



Treatment for ETD

- The main treatment for Eustachian tube dysfunction is to clear blockage from the Eustachian tube, and aerate the middle ear. If the Eustachian tube dysfunction is mild, often no treatment is required and the symptoms usually resolve within a few weeks.
- The Valsalva manoeuvre, which involves pinching your nose, holding your mouth closed and puffing up your cheeks, is used to equalise air pressure between the middle ear and the outside environment.
- Eustachian tube dysfunction whilst flying can often be relieved by chewing gum, yawning, swallowing or completing the Valsalva manoeuvre.
- Nasal decongestants can assist with clearing the Eustachian tube and nasal passages, particularly in patients with sinus problems. Antihistamines are also sometimes recommended if Eustachian tube dysfunction is due to allergens.

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Eustachian tube dysfunction #68 | Owner: Audiology | Last published: 27/09/17 | Next review: 27/09/19

