



## Eustachian Tube Dysfunction

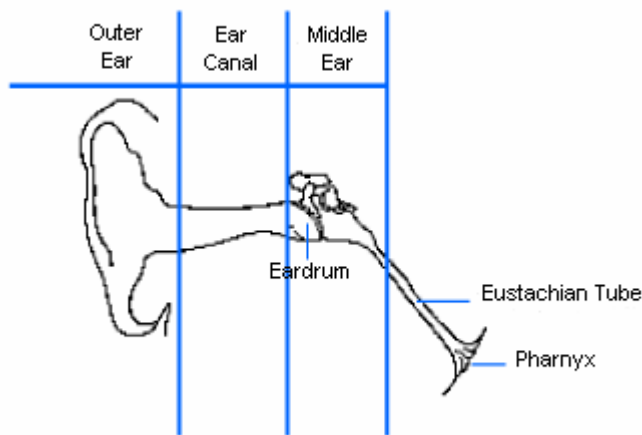
The Eustachian tube is the passage, which extends from the cavity behind the eardrum (middle ear) to the pharynx and measures approximately 1.5 inches. Its main function is to equalize middle ear pressure with that of the atmosphere. Usually, it is closed with its wall collapsed, but opens during swallowing, yawning or chewing, allowing air to pass through.

Eustachian tube dysfunction occurs when the external atmospheric pressure changes without a compensatory pressure change in the middle ear cavity. This pressure change can leave a feeling of blockage in the ear, followed by temporary hearing loss and even discomfort. Some ringing in the ears (tinnitus) and dizziness may also occur. These symptoms may occur while riding in a fast elevator, swimming in deep water, driving up and down steep hills or when flying. Normally, these symptoms are relieved by yawning, swallowing or chewing.

However, when these actions do not relieve the symptoms experienced during external atmospheric pressure changes, the result is eustachian tube dysfunction. Difficulty equalizing the middle ear pressure is usually caused by nasal congestion due to a cold or allergy. Some individuals experience the same difficulty due to a narrow eustachian tube and not nasal congestion. It may also be caused by an infection.

Diagnosis is based on the history of symptoms and visual inspection of the tympanic membrane (or eardrum) for fluid, inflammation and retraction. Other diagnostic procedures may be indicated. A tympanogram, a sensitive electronic test, documents the ability of the eardrum to transmit vibrations, which may reflect eustachian tube function. An audiogram or hearing test may also be warranted.

Treating this problem is done by addressing the cause. It may involve the use of decongestants to relieve nasal congestion, learning how to "mechanically" open the eustachian tube prior to atmospheric pressure changes or allowing the condition to resolve on its own if the ear is functioning normally. Rarely, surgery is needed to correct eustachian tube dysfunction. It is recommended that you should not do any scuba diving, swimming, or flying until given medical



clearance. If you must travel it is recommended that you use a decongestant orally as well as nasally 30 minutes before take off and landing in an aircraft.

### References

Eustachian tube dysfunction. University Health Services, University of Wisconsin-Madison Web site, search for eustachian tube dysfunction

Farb N. Stanley (1980). The Ear, Nose and Throat Book: A Doctor's Guide to Better Health. New York: Appleton-Century-Crofts.

Rosenblum, Laurie, (2005). Eustachian tube dysfunction. Gentiva Health Services Web site, search for eustachian tube dysfunction

If you are a registered University of Illinois student and you have questions or concerns, or need to make an appointment, please call: **Dial-A-Nurse at 333-2700**

If you are concerned about any difference in your treatment plan and the information in this handout, you are advised to contact your health care provider.

Visit the McKinley Health Center Web site at: <http://www.mckinley.uiuc.edu>