

If you have ever had to "pop" your ears while flying in an airplane or driving in the mountains, you have had firsthand experience with your Eustachian tubes. If you have ever felt ear discomfort in these situations, you have experienced Eustachian tube dysfunction.

The Eustachian tube connects the middle ear with the back of the throat. The middle ear is an air-filled space, and the air pressure in this space under ideal circumstances is the same as the ambient (outside) air pressure. When the ambient air pressure changes rapidly, as it does while driving through the mountains, there is a difference in pressure between the outside air and the air in your middle ear. If this pressure difference is great enough, you will feel pressure, or even pain, in your ears. When people "pop" their ears they typically swallow or open and close their jaws. These actions tend to open the Eustachian tube, allowing the air pressure to equalize between the outside world and your middle ears.

Most of the time, the Eustachian tubes are not open; it takes active muscle movement to open them (1). Unfortunately, many things can inflame the tubes, causing the tissue lining the tube to swell. Under such circumstances it becomes difficult or impossible to actively open the tubes. This is very similar to the problem we have all experienced breathing through a congested nose: as the tissues lining the nasal cavity swell, it becomes progressively more difficult to pull air through the nose.

The Eustachian tubes open into the throat immediately behind the nasal cavity. Many nasal problems may lead to inflammation of the Eustachian tube openings. Allergies, sinusitis, and the common cold primarily affect the nose and sinuses; because

drainage from the nose passes by the Eustachian tube openings, these nasal/sinus problems can lead to Eustachian tube dysfunction. Similarly, throat infections (viral or bacterial) can also cause Eustachian tube dysfunction (2).

The symptoms of Eustachian tube dysfunction are fullness and pain in the ears; if persistent, you may experience hearing loss, ringing in the ears, and dizziness or unsteadiness. Your doctor may have noted fluid behind your ear drums, or that the ear drums appear retracted (sucked in).

The treatment for this problem depends upon the root cause. Dr. Hoffman will need to determine whether your Eustachian tube dysfunction is due to a throat, nose or sinus problem. The treatment will vary depending upon the root cause, but may involve antibiotics, nasal sprays, decongestants and/or antihistamines. Only occasionally is surgical treatment required. This involves making a small cut in the ear drum and placing a tiny plastic grommet tube into the cut. The hole in the grommet tube allows air to pass into the middle ear, thus functionally "replacing" the Eustachian tube. This procedure is performed using local anesthesia.

The tube is called a "ventilation tube," which is a reflection of its function, but it is also frequently referred to as a "PE tube" for pressure equalization or polyethylene (the material from which the first such tubes were made.)