Eustachian Tube Dysfuncton

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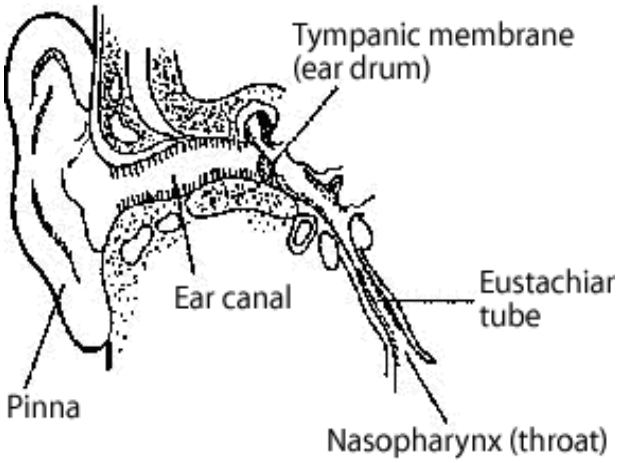
What is the Eustachian Tube?

The Eustachian tube is the tube that connects the middle part of your ear to the back of your nose. It's the structure that you use to 'pop your ears' by blowing your pinched nose.



It has several important roles in the health of your ears; it allows mucus to drain from the middle ear into the back of the nose, allows the pressure on either side of your eardrum to be equal, and protects the ear from fluid and bacteria going up into the ear from the back of the nose.

The former two roles require it to be open, while the latter requires it to be closed. When this dynamic system is disrupted for some reason, the result is Eustachian Tube Dysfunction (ETD). The majority of people experience problems because their Eustachian Tube fails to open enough. However, a Eustachian Tube that is 'too open' can cause as many distressing symptoms as one that is 'too closed'.

What does Eustachian Tube Dysfunction Cause?

There are a number of symptoms that can result from ETD. In mild cases, you can experience a feeling of intermittent blockage in the ear, popping, squelching, ringing, a feeling of fluid running from the ear without actually being able to see any come out the ear canal, or occasionally mild unsteadiness. Some people feel that they can hear their own voice amplified within their head when they talk. Frustratingly, the ear usually looks normal and when a formal hearing test is done, this is also usually normal.

In more severe cases, the dysfunction can result in prolonged fluid accumulation in the middle ear (an 'effusion') with resulting decrease in hearing, and possible changes in the eardrum that can result in serious infections and the need for surgery. Some other people are fine in day-to-day life, but experience severe pain when they fly or dive, as their ear cannot 'equalise' with the changes in atmospheric pressure.

How is ETD Treated?

Most cases of ETD do not require surgery, or even any medication.

First line treatment – "auto-inflation"

This is using the ability we all have to 'pop our ears' by pinching the nose closed and blowing it. This manoeuvre itself can often be very effective, and can be repeated as often as needed to manage your symptoms. Yawning and swallowing also help to open the Eustachian tube. Recurrent sniffing should be avoided because this tends to remove air from the middle ears down the Eustachian tubes, making the symptoms worse.

It maybe necessary to combine nose blowing and swallowing because the action of swallowing tends to open the Eustachian tube more effectively, which then allows the extra pressure to force air up to the middle ear. This involves pinching the nose and continuing to blow the nose while performing the act of swallowing.

There is a device available from your chemist called an 'Otovent Balloon', which can make these manoeuvres more effective. This is a small nozzle that you place into one nostril, and you use this to blow up an attached

balloon using your nose. A script is not needed. Information about the product, and how to use it, is available at the company website: www.gluear.co.uk. Another way of using this product is outlined below.

Otovent Balloon Plus Swallowing Manoeuvre

Hold some water in your mouth; breathe in fully through your nose. Block on nostril and blow up the balloon using the other nostril and Otovent nozzle. While the balloon is still blown up swallow the water. Wait about 5 seconds and then remove balloon from nose. Repeat this exercise a few times every evening and possibly several other times through the day. Slight pain might occur as the extra air stretches the eardrum.

The essential concept is that the water is swallowed while the air in the balloon is creating extra pressure behind the nose where the Eustachian tube is situated. This creates the best possible chance that the Eustachian tube will open and that extra air will be forced up the Eustachian tube to the middle ear.

Medication:

If symptoms are more severe, then medication may be suggested. These can include:

- Treatment for any inflammation of the nose/nasopharynx: oral steroids, nasal saline rinses and nasal steroid sprays etc.
- Managing any allergy contributing to your symptoms: this might include antihistamines, formal allergy testing and desensitization by an Allergist.
- Anti-reflux medication: reflux has been shown to cause ETD in some patients, many of whom might not have many other symptoms of reflux.

Surgery:

This is usually reserved for situations where:

- Your surgeon sees persistent fluid within the middle ear, with evidence of decreased hearing on a hearing test
- Your surgeon sees the eardrum is being ‘sucked in’ towards the middle of the ear and is at risk of permanent damage.
- You get frequent recurrent severe symptoms with flying, that do not respond to medication, and where you cannot avoid frequent flights in the future.

Flying with ETD

Some people are fine except when they fly. Try the following measures:

- Avoid flying when you have a cold or hayfever symptoms. Consider buying travel insurance for any flights so you have the flexibility to change or cancel your flights if needed.
- Use chewing gum during the ascent/descent: this will help open the Eustachian tube and allow air to enter the middle ear.
- Oral decongestants (e.g. Sudafed) can help. They need to be working during the descent part of the flight, and usually take about an hour to reach maximal effectiveness, so time your dose accordingly.
- Nasal decongestants may also help. They take about 15min to work; again, time their use to be working during descent.
- Flight Protection ear plugs: these can be used to extend the time it takes for pressure changes to reach your ear drums, giving the Eustachian tubes longer to equalise. They can be bought at the airport, or from a chemist closer to home. Explain to your pharmacist that you need them for pressure reasons, not just to block out noise. Follow the instructions on the packet for their use.
- As a last resort, your surgeon can place tubes in the ear to allow rapid pressure equalization. This can be appropriate if you fly often and have otherwise disabling symptoms, or if you’ve had a severe reaction to pressure changes in the past with flights (e.g. a burst ear drum).