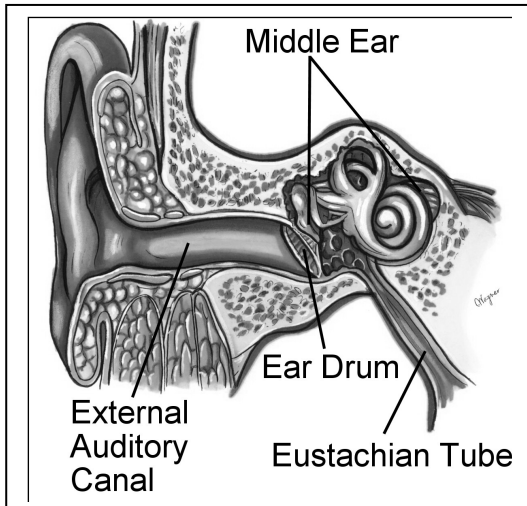


Eustachian tube dysfunction



WHAT IS EUSTACHIAN TUBE DYSFUNCTION?

The Eustachian tube is a bone and cartilage passage that joins the middle ear to the back of the nose to drain fluid and equalize pressure between the middle and outer ear. When you swallow, yawn or “pop your ears” the Eustachian tube opens and air flows into the middle ear. If the tube is blocked, the pressure in your middle ear may become different to the outside causing your ear drum to be sucked in. A dysfunctional Eustachian

tube is one that does not allow the middle ear pressure to remain the same as the outside air. This may be caused by swelling in the lining of the nose (eg viruses, allergies in the nose), something blocking the opening of the Eustachian tube in the nose (adenoids, rarely tumours) or just being born with a narrow Eustachian tube.

Eustachian tube dysfunction may cause a feeling of blockage or fullness in the ears, tinnitus (ringing, buzzing or humming in the ear) and a feeling of fluid in the ears (eg popping, crackling on movement of the head or opening the mouth).

DIAGNOSIS (HOW DO YOU TELL WHAT IS WRONG)

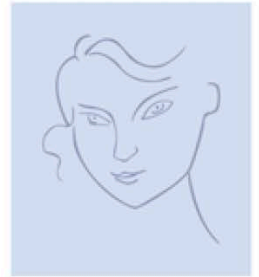
Dr Iseli can rule out another cause for ear symptoms eg fluid in the middle ear, wax accumulation or TMJ (jaw joint) dysfunction by examining the eardrums with an otoscope and feeling over the jaws. Pushing air into the outer ear canal will make a normal ear drum move but an eardrum with a hole or with fluid in the middle ear will not move in response to puffed air. Dr Iseli will look into your nose to rule out a rare cause for Eustachian tube blockage (eg residual adenoid tissue, rare tumours). Sometimes a special test called a “tympanogram” is used to identify fluid in the middle ear. Hearing is assessed with a test called an audiogram to check for another cause for your symptoms.

OPTIONS FOR TREATMENT

Equalize your ears frequently- this is a learned skill so practice often. Try yawning, chewing gum and swallowing saliva. Many can learn to “pop” their ears by pinching your nostrils and with your mouth closed try to force air into the nose (like blowing with the nostrils held shut).

The Eustachian tube is part of the nasal passages so can become blocked by anything that causes swelling in the nose. Almost everybody has had a sinus infection and most are caused by viral infections and will improve by themselves. Initial treatment of swelling and sinusitis includes control of allergies and inflammation to improve the nasal airflow and drainage of the sinuses. Therapies include:

- saline spray- use saline wash (see below) three times a day
- nasal cortisone spray (eg rhinocort, nasonex) 1 spray each side daily for 6 weeks (Note that these sprays take approx 2 weeks of regular use to work and 6 weeks for maximal effect). Spray these directed toward the ear lobe on each side to avoid irritating the septum which can cause nose bleeds.



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- antihistamines (try fexofenadine 180mg/ day if you prefer wakefulness in the morning or cetirizine 10mg/ day at night if you prefer light sedation) should work immediately and can be used as needed
- decongestants (sprays or tablets) should NOT be used beyond 3 days as they may cause worse nasal swelling and high blood pressure with prolonged use.



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SALINE IRRIGATIONS.

Saline irrigations should ideally be performed on both sides 3x/day. Purchase a Sinus Rinse (Neilmed ®) starter pack or similar irrigating bottle that may be easily refilled from the chemist. Saline may be purchased or made at home using the following formula:

- 1 teaspoon non-iodized salt (sea salt or cooking salt)
- 1 teaspoon baking soda
- 360mL water

Heat in microwave for 20-30 seconds (until comfortable to drip on hand).

Lean over sink or basin and gently place tip of bottle 1 cm into nostril.

While panting and tilting head over sink, instill ½ bottle into each nostril.

Gently blow nose without blocking nostrils.

Repeat if nose still feels crusted.

Wash bottle after each use with warm soapy water. Store in clean cup with tip down.

Once a week wash bottle with vinegar to prevent bacterial growth.

You may notice some dripping during the day when you tilt your head down.

Do not use saline 24 hours before a CT scan (it may cause an appearance like a sinus infection).

GROMMETS

In severe cases or if the above measures do not provide sufficient relief, grommets may be inserted (tiny metal or plastic tubes surgically inserted into the eardrum to drain fluid and equalize pressure between the middle and outer ear).

RISKS OF GROMMETS

Usually the grommet tubes are safe and cause no trouble. Possible risks of grommet tubes are:

1. Drainage from the ear (10%)- usually can be treated with topical antibiotic drops (ciproxin 3 drops 3x/day for 1 week)
2. The grommet tube not falling out and requiring removal (5%)
3. The drain hole not healing and requiring repair (2%)
4. Scarring on the ear drum afterwards (15%) usually does not affect hearing
5. Serious complications are fortunately rare and include such problems as hearing loss, ringing in the ears (tinnitus), skin cyst formation (cholesteotoma), bleeding or reactions to general anesthetic agents.