

Glue Ear and Eustachian tube dysfunction



The middle ear is connected to the back of the nose by a tube

The Eustachian tube connects the back of the nose to the middle ear, the space under the eardrum. Its job is to pass small bubbles of air from the nose into the middle ear, keeping it air-filled. When the middle ear is air-filled it is happy, the eardrum is floppy and able to transmit sound effectively.

When the bubbles of air don't pass up the tube, then the middle ear isn't air filled and a partial vacuum develops under the eardrum, sucking it in. In a little while, fluid is sucked in to the middle ear from the surrounding tissues. Later on, the fluid becomes viscous and sticky and is known as glue.

Glue can bind up the movement of the little linked bones which interface with the inner ear, and leads to hearing loss, a feeling of pressure or under water in the ear, and discomfort and mild disequilibrium.

Young children are most at risk of glue ear, as their Eustachian tubes are narrow and floppier and so more prone to collapse and blockage. In early childhood, frequent colds and Flu cause swelling of the tube, adding to the difficulties the immature tube faces.

Grommets are little hollow cylinders which keep a hole in the eardrum open, allowing air to travel into the middle ear and keep it healthy, effectively bypassing the dysfunctional Eustachian tube. Glue is suctioned out at the time of placement. One set of grommets is enough for most kids but repeat grommets may be required in a third.

By the time the child reaches age 7 or so, a lot of their head growth has happened and the Eustachian tube has become more robust and is performing closer to adult level. Consequently, even those kids who have been dependent on grommets to keep glue away usually grow out of this dependence.

Everyone's body has its weak points (e.g a bad knee) and rarely the Eustachian tube is a persistent weak point in some adults. Unfortunately there is no easy fix for persistent Eustachian tube dysfunction and the problem has to be addressed by bypassing it and getting the best out of it that is possible.

Improvements in Eustachian tube function can be obtained by prolonged nasal steroid spray use (particularly if there is intercurrent sinusitis), blowing the otovent nasal balloon up repeatedly and in children, removing the adenoid which can overgrow the opening of the tube and be a reservoir for infections right next to the tube.

Chronic Eustachian tube dysfunction is thought to be the behind the genesis of cholesteatoma, a trapped ever-enlarging sac of skin in the middle ear, dissolving everything in its path as it enlarges. More complex surgical cures are required for this condition.