

Glue Ear 1: What is Glue Ear?

The medical term for glue ear is 'otitis media (with or without effusion)'. This is a very common condition in children up to eight years, but older children can also be affected. Fluid builds up in the space behind the eardrum, often as the result of the child having a cold. If this fluid does not drain away naturally, it can turn into a thick 'glue' that may need to be removed with surgery. One or both ears can be affected, and children can have varying degrees of hearing difficulty. There may be a link between children having glue ear in early childhood and having reading and spelling difficulties when they are older, even though their hearing may now be normal.

How does Glue Ear develop?

When we hear a sound, the sound travels to our eardrums. Behind each eardrum there is a small space known as the *middle ear*. In the middle ear are three tiny bones, the *ossicles*, which are attached to the eardrum. When the eardrum vibrates, the ossicles move. The ossicles are connected to a small shell-like organ called the *cochlea*. The movements of the ossicles are transformed in the cochlea into energy that is passed to the brain, which makes sense of what we hear. It's all rather wonderful. The middle ear is normally full of air. The air gets in through a tube, the *Eustachian tube*, that runs from the middle ear to the back of the throat. This tube is horizontal in young children, but as they grow it gradually slopes downwards. It is very important that the Eustachian Tube stays open, to allow air pressure on both sides of the eardrum to be equal.

Sometimes the Eustachian tube closes up; e.g. when we are in a plane or in a lift. For a short while sounds can become muffled, until the tubes open, (this is the feeling of our ears 'popping'.) Sometimes the Eustachian tube becomes blocked. You might notice this after you have had a cold. Then you may have a feeling that your ears are blocked, and for a while you may not hear clearly. This is because mucous is blocking your Eustachian tube. In adults, this usually clears up on its own, because the mucous naturally drains away because our tubes slope downwards. If the Eustachian tube is blocked for more than a short while, the middle ear can start to fill with fluid. The small bones, the ossicles, find it difficult to move, and we may experience temporary hearing loss. Treatment with antibiotics often helps to heal the infection that is causing the blockage, and the fluid gradually drains away down the back of our throat. Some people are more prone to this problem than others, and particularly after a cold.

Why do *children* get Glue Ear?

Because children's Eustachian tubes are horizontal, any build-up of fluid has nowhere to go. As a result, the fluid can change from a runny consistency to being thick and sticky (hence the term 'Glue Ear'). Not only do the ossicles have difficulty in moving, but the eardrums also vibrate less, because of the build-up of fluid behind them. Some children are more prone than others to colds and ear infections, and this may be due to living in damp conditions, and/or allergy to dairy products or house dust. Children in the UK are more prone to Glue Ear than other countries, because of our damp climate.

For more information contact the National Deaf Children's Society at www.ndcs.org.uk or phone NDCS freephone helpline on 0800 800 8880

