



Audiology

Information for Young People and their families

North West England, the Isle of Man
and North Wales Cleft Lip and Palate Network



How does hearing Work?

Sound waves travel through the air as vibration. The sound waves travel through the air in the ear canal to the eardrum. The vibration of the sound wave travels from the eardrum via a chain of three tiny bones (the ossicles) through the air-filled middle ear to the inner ear. In the inner ear, hair cells are stimulated to send nerve impulses through the auditory nerve to the brain. The brain interprets what the sounds mean.

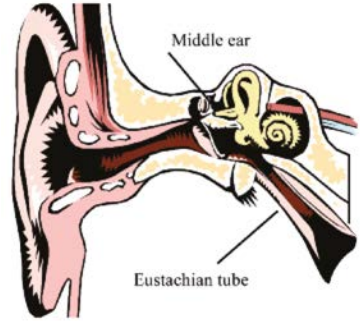


How do babies usually respond to sound

Shortly after birth, if startled by a sudden loud noise, a baby blinks, opens eyes widely, stops sucking or starts to cry. By the age of about 4 months, a baby quietyens or smiles to the sound of a familiar voice, even when unable to see the speaker. By 9 months, a baby listens attentively to familiar sounds and searches for quiet sounds made out of sight.

What is glue ear?

For ears to work properly, the middle ear (just inside the eardrum) needs to be kept full of air. If fluid collects in the middle ear after colds or ear infections, the middle ear gets blocked. This can make quiet sounds difficult to hear (like having your fingers in both ears.) Fluid collects if the Eustachian tube does not open to drain fluid away from the middle ear.



Palatal muscles help the Eustachian tube to open.

In children with a cleft palate, the muscles that control the Eustachian tubes do not work well and surgery on the palate cannot guarantee that the Eustachian tubes will work effectively.

How can cleft palate affect hearing?

Babies with cleft palate can be more likely to develop fluid in the middle ear and glue ear than other babies. All babies should have a screening test of hearing soon after birth. Babies who have clear responses on the screening test can still develop a hearing loss in later months or years.



When should my child have hearing tests?

If your child had clear responses on the newborn screening test of hearing, his or her next hearing test should be at around the age of 8 months with a repeat test 3 months later to check for any changes in hearing.

Young children who have a cleft palate should have a hearing test every 6 months to check for any change in hearing.



What treatment is there?

For some children, the Ear, Nose and Throat specialist considers putting grommets in the child's ears. Grommets are tiny plastic tubes. They are put in the eardrum after fluid has been removed. The grommets let air circulate into the middle ear to stop the fluid from building up again. The operation is done under general anaesthetic, sometimes at the same time as surgery on the palate.

Grommet size compared to a 5 pence piece (image is not to scale)



Grommets grow out after about 6 months and a hearing problem can come back again if the fluid returns.

If glue ear is causing a hearing loss, hearing aids sometimes help. A few children who have cleft palate also have a different type of hearing problem ("sensori-neural" hearing loss) and they may be helped by having hearing aids.

If you are worried about your child's hearing between visits to the cleft palate clinic, you should contact your Health Visitor, GP or your local audiology service.

Which treatment is best for glue ear?

There are advantages and disadvantages of both grommets and hearing aid fitting. Insertion of grommets can improve the child's hearing and so help development of speech and language. If grommets can be inserted at the time of surgery on the palate under the same anaesthetic, no separate operation is necessary. Middle ear fluid sometimes builds up again after a few months when the grommets have grown out. You may be advised against repeated surgery to insert grommets as it may cause scarring of the eardrums and permanent hearing loss.

Some parents prefer hearing aids for their child, as no surgery is involved. Modern hearing aids are small and are programmed to fit your child's hearing needs.

If you are not sure which treatment is best for your child, talk to your audiologist or Ear, Nose and Throat Consultant.



Why is glue ear important?

A hearing loss can sometimes affect a child's behaviour or communication. Glue ear can make a child tired and irritable because listening is such hard work. Children who do not hear well sometimes get labelled as lazy, rude, stubborn or naughty.

A long spell of hearing loss may even slow down a child's speech development or make an older child fall behind at school. Sometimes a child seems to hear well for a one-to-one conversation in a quiet room, but has difficulty hearing when there is background noise or when the conversation includes several people speaking.

For children who have cleft palate, good hearing is important for their speech development.

Children who have a cleft palate should have regular hearing checks throughout childhood. In this way, we hope to identify and treat problems early, so your child has fewer long-term difficulties.

How might this type of hearing loss affect my child?

A hearing loss caused by glue ear can lead to difficulties with learning or behaviour, especially if it continues for a long time. For example:

- It may be difficult for the child to listen and pay attention.
- Speech development may be delayed.
- A child may be labelled as "naughty" if he or she does not respond when spoken to and adults are unaware that the child may not have heard.
- Children may miss jokes, information and family news because they do not "overhear" when they are not being spoken to directly.

How can I help if my child has a hearing loss?

Even if you had not noticed any hearing difficulty before your child was tested, he or she could benefit from this extra help.

- Talk to and play with your child in a quiet room.
Turn off the TV or music.
- Get your child's attention before you speak
- Speak a little louder. Don't slow down your speech..
Do not shout.
- Get down to your child's level so your face can be seen.
- Speak clearly with good facial expression.
- Be patient.
- Avoid smoking.
- Tell your child's teacher about any hearing problem.
A seat near the teacher can make it easier to hear.

Where can I find out more?

Visit the website for The National Deaf Children's Society (www.ndcs.org.uk) and download the leaflet

Please remember that we are here to help.

You may want to contact the parent support organisation for additional information and local support group contacts:

Cleft Lip and Palate Association (CLAPA)

First Floor, Green Man Tower,
332b Goswell Rd, London EC1V 7LQ

Tel: 0207 833 4883 • Fax 0207 833 5999

E-mail: info@clapa.com

web: www.clapa.com

Changing Faces

The Squire Centre, 33-37 University Street,
London, WC1E 6JN

Tel: 0845 4500 275 • Fax: 0845 4500 276

E-mail: info@changingfaces.org.uk

web: www.changingfaces.org.uk

Information leaflets about our service are available to download from both Alder Hey Children's Hospital and Royal Manchester Children's Hospital websites:

www.alderhey.com/services/cleftpalate.asp

www.cmft.nhs.uk/childrens-hospitals/our-services/cleft-lip-and-palate.aspx

New Cleft Lip and Palate website www.cleftnorthwest.nhs.uk

This information is available in Welsh, if preferred.

Mae'r wybodaeth hon ar gael yn Gymraeg, pe baech yn dymuno hynny.