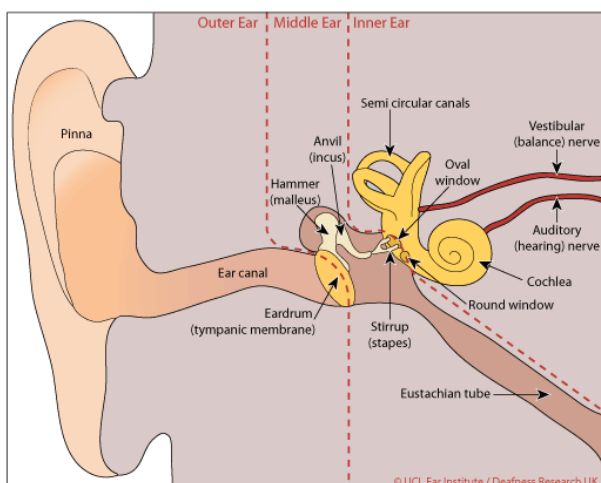


# Glue Ear – a guide for Teachers

## How this factsheet can help

This factsheet has been produced to help teachers understand the medical condition, glue ear, and offer appropriate support to children who have it, and their parents.

## How does the ear work?



When sounds enter the ear they cause the eardrum to vibrate. This in turn causes the three tiny bones in the middle ear to move backwards and forwards, making the vibrations bigger and passing them through to the inner ear (or cochlea). In the inner ear the vibrations ripple through fluid and move tiny hair-like strands on the end of special cells that convert the sound waves into electrical signals. These are sent through the hearing nerve to the brain which interprets the sound we hear. The Eustachian tube connects the ear to the back of the throat and lets air into the middle ear, keeping it aired and healthy and balancing the pressure across the eardrum.

## What is Glue Ear?

Glue ear occurs when fluid produced by the body to fight infection, collects and

becomes trapped in the middle ear space of one or both ears, often following ear infections or repeated colds. As a result, the eardrum and tiny bones in the middle ear cannot move properly and sound cannot so easily pass through to the inner ear.

Children are susceptible to glue ear because their immune systems are not fully developed and their Eustachian tubes more easily become blocked.

The symptoms of glue ear are in some ways different to those of an ear infection. Unlike ear infections, glue ear does not cause fever and the ear may or may not be painful. Older children often describe having 'shut-in' feeling, which results from a mix of dulled hearing and the physical pressure of the fluid in the middle ear mix of dulled hearing and the physical pressure of the fluid in the middle ear (e.g. a sense that the ear is blocked up). A younger child may not be able to describe how they feel and may express their symptoms through frustration or bad behaviour.

Particularly when the glue ear lasts a long time, the associated hearing loss can cause children problems with speech and difficulties communicating or socialising. Balance can also be affected.

## When are children most likely to get Glue Ear?

Glue ear is most common in children particularly between the ages of two and six. This is because, in the second half of the first year of life, many children begin attending day-care and mothers often stop breast-feeding. As a result, children are more exposed to infection at a time when they are temporarily losing some of their maternally conferred immunity, but have

not yet built up their own. Children are at particular risk of infections again as they start primary school.

Children who are born with a cleft lip or palate, or who have Down's Syndrome, are more prone to getting glue ear than children as a whole.

Fortunately, for many children the condition will be mild and will clear up quickly without causing any long term effects. However, around 200,000 children suffer from repeated ear infections or glue ear each year in the UK and symptoms are most likely to be experienced in the winter months.

### **How can Glue Ear affect educational development?**

Because of the time spent with reduced hearing and/or the time spent away from school as a result of associated ear infections, children with more persistent or recurrent bouts of glue ear are at risk of social and developmental problems. These include delayed language, difficulties learning to read, gaps in general knowledge and reasoning ability as well as social and behavioural problems.

A child with a mild hearing loss will hear some things, for example, when he or she is spoken to loudly or face to face, so at first it may not be obvious that they have a problem.

Teachers can help by being alert to any of the following signs common in children with glue ear. Any child can exhibit some of these signs some of the time but, if any occur frequently, particularly if there are also concerns about the child's educational development, the possibility of a hearing loss should be investigated.

### **How can I tell if a child may be affected?**

Does the child:

- Often say "what?" or "pardon?"
- Give inappropriate replies to questions?

- Misunderstand instructions or appear lost when asked to do something?
- Ask for things to be repeated?
- Stare intently at your face, or strain to hear you?
- Have difficulty following what you say in noisy environments or large rooms? The effort of concentrating can make a child very tired by the end of the day and they may be grumpy.
- Seem to have hearing ability that fluctuates from day to day, especially in winter?
- Show signs of frustration or anxiety?
- Appear withdrawn or seem to daydream?
- Speak with an unnecessarily loud voice?
- Mispronounce words or miss out parts of them?
- Have difficulty with reading?
- Have a limited vocabulary and difficulty learning new words?

Children with glue ear have particular difficulty hearing against the noisy background that is typical of a school environment, so you may identify the signs of a hearing loss ahead of the parent.

If you suspect a child may have glue ear, tell the parent and suggest that (s)he contacts their family doctor who will be able to carry out some basic checks and explore symptoms further. It is important to reassure the parent that glue ear is a common condition and often clears up by itself. If your suspicions are confirmed by the doctor, the parent may benefit from reading a copy of the Deafness Research UK leaflet, "Ear infections and Glue Ear in children."

It is important to look out for signs that glue ear may be affecting a child in these ways. Being able to show understanding of the child's situation may help them feel less frustrated or misunderstood, and may improve their behaviour. Arranging extra

support may also be appropriate, such as speech therapy or help in the classroom.

## **How can I communicate better with a child with glue ear?**

If you think a child may have a hearing problem:

- Seat them where (s)he has an unobstructed view of your face and can hear you most clearly, preferably at the front of the class and make sure you are in a good light
- Avoid speaking when facing the black/whiteboard or with your back to the child.
- Ensure the light is on your face, and avoid standing in front of windows, as this makes lipreading difficult.
- Ensure the child is watching you when you begin to speak, and try to give visual or oral clues if you are changing to a new topic.
- If you are speaking directly to the child, gain their attention by calling their name first.
- Speak clearly and at a steady pace. Do not shout as this distorts the lip pattern and looks frightening.
- Avoid walking around the classroom when speaking. A child with hearing difficulties will have to twist in their chair to keep you in clear sight.
- Check that the child has understood, but be aware they may say “yes” even if they have not been able to follow.
- There may be difficulty in hearing contributions from other pupils, so try to summarise what has been said.
- Sound travels less well outdoors, so PE and games teachers, or teachers accompanying children on an outing, should take this into account and check that children understand any special instructions that have been given.
- Try to improve listening conditions in the classroom by reducing the general level of background noise. The

acoustics of a classroom will also be improved by the addition of curtains or blinds, carpet and notice boards made of fabric or cork.

- In certain cases children may be provided with personal listening devices which will require you to wear a transmitter and microphone and enable your speech to be received directly by a child wearing the receiver. Classrooms can also be fitted with “Soundfield” amplification systems.

Some children hate to be singled out for special attention and so may appreciate a discreet approach where possible in the way these tactics are used.

## **What can parents do?**

Parents’ observations about their child’s symptoms can be of critical importance in helping a GP to make an accurate diagnosis and in their subsequent medical care. They can also communicate better with their child by using the same kind of tactics as listed above.

Deafness Research UK produces a range of literature which provides guidance and information for parents and this can be obtained from our Information Service.

If children are struggling with their schoolwork, parents can help by spending extra time talking with their child at home and/or going over some of the child’s lessons. Playing word games with a child may help speech, language or reading.

Finally, it’s important to remember that children with glue ear often feel frustrated and left out and this may, understandably, lead to behaviour that seems naughty.

## **How is Glue Ear treated?**

If the child’s doctor suspects glue ear, (s)he will initially arrange a hearing test to be carried out while symptoms are monitored. This is because for at least half of children who have it, glue ear clears up naturally within three months.

If the condition continues, the child will be referred to an Ear, Nose and Throat (ENT) specialist. Treatment will only be given if

the glue ear causes significant symptoms for a prolonged period of time. Antibiotics and other medicines are not prescribed for glue ear as they have not been shown to help, and may actually cause problems.

A first approach to treatment may be trying to clear the Eustachian tube by the child blowing up a special balloon through the nose. Known as an Otovent®, this is more successfully used by older children who can master the technique.

The specialist may recommend an operation to improve the child's hearing. Under a light general anaesthetic, a tiny cut is made in the eardrum. The 'glue' is drained away and a miniature ventilation tube called a 'grommet' is inserted into the eardrum. This does not usually involve an overnight stay in hospital. The grommet keeps the middle ear aired and healthy for as long as it is in place and the improvement to hearing is usually immediate.

It can take several weeks for related improvements in behaviour and development to take place. Grommets usually stay in place for between six and twelve months before falling out naturally.

The specialist may recommend removing the adenoid tissue at the same time as placing grommets, especially if the child is prone to respiratory infections. This may require the child to stay in hospital overnight. A hearing aid may be suggested, to treat the hearing loss and any speech problems, but at present this is only routinely done if the condition persists after two sets of grommets.

### **How long can Glue Ear problems continue?**

Most children grow out of the condition by about seven years of age, but more rarely it lasts until nine or ten. Occasionally there may be an impact into adolescence. Most children who have grommets only need one set, but some have several sets and a small number will remain long-term under a specialist. Rarely, a small hole can be left in the eardrum once the grommet has

dropped out. A small operation is then required to close it.

### **Further information**

Contact the Deafness Research UK Information Service for further information.

Open: 9.30 a.m. to 5.30 p.m., Monday to Friday (a message can be left at other times).

Freephone: 0808 808 2222

E-mail: [info@deafnessresearch.org.uk](mailto:info@deafnessresearch.org.uk) or click the 'ask question' option from our website homepage:

[www.deafnessresearch.org.uk](http://www.deafnessresearch.org.uk)

Deafness Research UK is the leading research charity for people with hearing and related ear problems.

It runs a wide-ranging research programme, which includes identifying the genes that cause different types of deafness, research into glue ear – the commonest cause of deafness in pre-school children, tinnitus (head noises which affect nearly 5 million people in the UK) and, ultimately, finding a cure for deafness through the regeneration or replacement of cells vital for hearing.

You can support us by making a donation. For more information call us on 0207 164 2290 or write to:

Deafness Research UK, 330-332 Gray's Inn Rd, London WC1X 8EE

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This factsheet has been produced by Deafness Research UK, in consultation with our medical and scientific advisers.

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You should not act on any advice without first referring to your family doctor or another medically qualified adviser.

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