Sounds travel into the ear along the ear canal and make the eardrum vibrate. These vibrations are passed along the three small bones inside the middle ear (the space behind the eardrum) to the inner ear. The inner ear sends messages along the auditory nerve to the brain, allowing us to hear.

Near the bottom of each middle ear space is a tube called the Eustachian tube. This connects the ear to the back of the nose. This tube lets air into the middle ear, keeping it aired and healthy. The air allows the eardrum to move freely.

**How does glue ear happen?**

Glue ear happens when fluid collects in the middle ear space of one or both ears.

After a cold or infection in the throat or ear, one or both Eustachian tubes can become clocked. When this happens, the air pressure inside the middle ear space drops. Fluid from the cells in the lining of the middle ear then fills up the middle ear space.

The fluid is often just a runny liquid but may become thicker, like glue — hence the name “glue ear”. When this happens, the eardrum cannot move as freely, and does not send vibrations into the inner ear easily. The child may then have a hearing problem.

**How many children get glue ear?**

Glue ear is very common. About four out of every five children have at least one bout, often called an episode, of glue ear before their fourth birthday.

**How much can my child hear?**

The amount of hearing loss in children who have glue ear varies between none at all to a moderate loss. The level of hearing may also change from day to day. This can make it seem as if children with glue ear are only listening when it suits them. Some children may be able to hear certain words, even when spoken in a quiet voice, but may mishear or even miss out other words.

**What can be done about glue ear?**

Your child has been referred to an ENT (Ear, Nose and Throat) specialist. The specialist has asked you questions about your child’s ear problem and has carried out an examination by looking into the ear with an otoscope.

A hearing test may have been performed to see how well your child hears, and a tympanogram to see if there is fluid in the ear.

**Treatments for glue ear**

The three ways of treating glue ear are:

1. **Surgery – Putting in Grommets**
   
   Under a light general anaesthetic, a tiny cut is made in the eardrum. The fluid is drained away and a miniature tube is inserted through the small hole that the surgeon has made. This tube is commonly called a grommet, but is also known as a ventilator, ventilation tube or “vent”. The small hole in the grommet keeps the middle ear aired and healthy.
Usually, this operation does not involve an overnight stay in hospital. The doctor will explain what will happen at your hospital.

The grommets will stay in place for about 6 months. When they fall out, the small hole in the eardrum will usually heal quickly. For many children, one set of grommets is all that is necessary. For some, the glue ear may return and another set of grommets may need to be put in.

2. **Observation – Including Medical Management**
   Glue ear does clear up on its own. This treatment means keeping a close watch on your child’s ears by examination and doing hearing tests at regular intervals. The doctor will give you medicines if they think these will help. For example, the doctor may prescribe antibiotics if your child gets an ear infection. In some children, the glue ear may clear up after a short time, in others it may take longer.
   It is not yet possible to say in advance how a particular child’s glue ear may change, and so observation is an important part of treatment.

3. **Surgery – Putting in Grommets and Removing the Adenoids**
   As well as inserting grommets as described above, the child’s adenoids are removed as these may affect the functioning of the Eustachian tubes. This operation is done at the same time as inserting the grommets but may mean that the child has to stay in hospital overnight.

**Is there a “best” treatment?**
It is not clear whether one type of treatment is better than the others. Each treatment is safe and will help the child. A particular treatment will probably suit some children better than others but it is not yet possible to determine this in advance for each child.

- Putting in grommets improves the child’s hearing immediately. For some children, the hearing problem may return when the grommet falls out. In these cases, it may be necessary to put in another set of grommets.

- Doctors generally want to avoid putting in too many sets of grommets as each grommet can leave a tiny scar on the ear drum. Occasionally, there is a discharge from the ear after the operation but this usually clears up after treatment with antibiotic drops. A few children will find that everything sounds too loud for a short time after the operation.

- Observation with medical treatment avoids an operation. The ENT specialist will examine your child to see how glue ear is affecting him/her and what, if any, hearing difficulties he/she is having. The child may learn to cope with glue ear. Most cases of glue ear will eventually get better on their own and the doctor will see how quickly this is happening.

- Taking out the adenoids may reduce the need for extra sets of grommets. It may also help the child’s general health in the long term, although this effect is not certain. However, an overnight stay may be necessary after this operation. This may be inconvenient for the family and child.

**How else can I help my child?**
Remind yourself and others constantly that your child’s hearing may be less than perfect. If your child seems to be having difficulty hearing, you can help by using these tactics.

**At home**
- When there is something important that he must hear, first attract your child’s attention by calling his/her name.
If there is a special friend that your child plays with, let his/her parents know about the hearing problem. When your child’s hearing seems particularly poor, try to encourage your child to listen carefully, kneel or stand in front of your child when talking. Speak clearly and wait for your child to answer. You can make your words clearer by using facial expressions and gestures.

At school or Pre-school
- Tell your child’s teachers that (s)he has glue ear. Remind them when it is particularly bad. Classrooms are noisy places, so it is important that your child should sit close enough to the teacher to be able to see and hear clearly.

- Ask the teachers if there is anything they would like your child to do to let them know when (s)he cannot hear what is being said. Encourage your child to let the teacher know if (s)he can’t hear what is being said.

How will I know if the glue ear is in a bad phase?
Here are some examples of the more common signs of glue ear. Some of them may only happen during a bad spell of glue ear. Your child will probably not show all of these.

- Some children may say “Eh”, “what” or “Pardon” a lot and may miss bits from a conversation. They may hear what is said directly to them, but not hear what is said to others in the family.

- Some children may turn up the radio or television to increase the sound level.

- Some children may mispronounce the beginning or ending of words or their speech may be generally unclear. They may speak louder than necessary.

Are there any other signs of glue ear?
Children whose hearing is sometimes poor may behave in some of the following ways:

- Some children may be afraid of missing something because of their poor hearing, and so they may talk a lot to keep in control of a conversation. Games where you take turns to say something (e.g., “I Spy With May Little Eye”) may be helpful. Play such games in a quiet area if possible.

- Some children with glue ear may drift off into their own world. Parents need to encourage a child to talk to help build up his/her confidence. Reading stories with lively pictures, encouraging the child to talk about what (s)he can see, may be helpful.

- Some children may be naughtier than usually expected when they have glue ear. The hearing loss can lead to frustration, especially when the child is tired.

Other points to remember if your child has grommets put in
Your ENT specialist will advise you what to do when the grommets fall out, and about swimming after grommets are put in. Remember to ask about this at your next visit.

What is not glue ear?
You may have heard of other studies involving hearing or about treatments for other hearing problems.

Glue ear itself is different from permanent deafness or severe deafness that runs in the family.
A grommet is a tube that simply allows air into the middle ear. It has nothing to do with a cochlear implant, which is a complex electronic device placed in the inner ear to restore some sensation of hearing to profoundly or totally deaf people.

Please ask me, I will try to answer them for you.

Dr A. Simon Carney  FRCS, FRACS  
Consultant, Senior lecturer and Specialist in ENT Surgery