

Glue ear

What is glue ear?

Glue ear is a condition where the middle ear becomes filled with a sticky fluid resembling glue. This fluid fills the space that is normally filled by air. It usually occurs in younger children but can occur at any age.

What causes glue ear?

The middle ear which lies behind the ear drum is connected to the inside and back of the nose by a narrow tube called the Eustachian tube. This tube, which acts like an air vent to the middle ear, becomes blocked and non-functional. A vacuum then develops in the middle ear and this causes fluid to seep into the space from cells in the vicinity.

Another important cause is a build-up of mucus in the middle ear after a cold or middle ear infection (otitis media). This mucus builds up and then does not drain well through a blocked Eustachian tube. This fluid in the middle ear dampens sound vibrations of the ear drum and has an effect similar to turning down the volume in a sound system.

How common is glue ear?

Glue ear is very common. It is estimated that about 7 in 10 children have at least one episode of glue ear before the age of 4. As a rule it is short lived because the fluid absorbs and drains well.

It is more common in children who:

- have frequent colds, coughs or ear infection
- live in smoke-filled homes
- have been bottle fed (not breast fed)
- have a family history of glue ear (e.g. brother or sister).

What are the symptoms of glue ear?

- **Hearing loss:** the child's hearing is reduced, without going completely deaf. The degree of loss varies from child to child and from day to day in the same person. Children may be noticed to turn up the sound on TV or other sound systems. Babies may not seem to respond normally to sounds.
- **Earache:** mild pain in the ears can occur causing children to pull at their ears.
- **Developmental handicaps:** persistent glue ear may uncommonly cause delay in speech and language due to impaired hearing especially in the classroom.
- **Behavioural problems:** frustration due to the reduced hearing and problems at school can result in behavioural problems in affected children.

What is the outcome?

The prognosis is usually good as most cases are symptomatic for only a few weeks because the sticky fluid tends to become watery and gradually drains, allowing air to return to the middle ear. As a rule, normal hearing

returns within 3 months in 50% of cases. Glue ear lasts for 12 months or more in only about 1 in 20 cases. Once the problem has cleared up it may return in the future, especially after an upper respiratory infection or ear infection. As children grow older the tendency to glue ear goes away because the Eustachian tube widens and ear drainage improves. Glue ear is uncommon over the age of 8 years. In rare instances persistent glue ear may lead to middle ear damage and variable permanent hearing loss.

What is the treatment for glue ear?

Time and patience

At first it is advisable to adopt a 'wait and see' approach, without any particular treatment, as most cases get better in time. A follow-up assessment by your doctor will usually be necessary.

Balloon treatment

An auto inflation method can be used in well-motivated older children. This involves blowing up a special type of balloon using the nose. It generates back pressure into the nose, helps open the Eustachian tube and allows improved drainage of fluid.

Surgery

Persistent and/or severe glue ear can be treated by a small operation on the eardrum. This involves making a small incision of about 2 to 3 mm in the eardrum, draining the fluid and then inserting a small ventilation tube called a 'grommet'. Grommets usually fall out of the ear after 6 to 12 months as the eardrum grows, the hole then seals over quickly.

Key points

- Glue ear is sticky fluid in the middle ear.
- It is common in children up to 8 years of age.
- It causes muffled hearing.
- It is not serious.
- It often clears up by itself within 3 months.
- More severe cases are treated by surgery including inserting a grommet tube.

