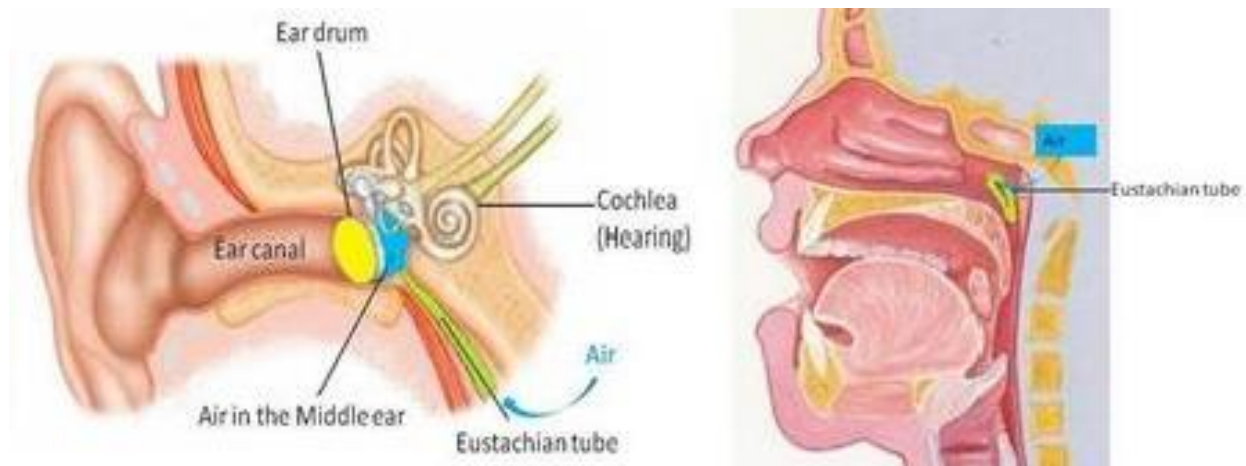


## Grommet

The middle ear is connected to the back of the nose by the Eustachian (pronounced you-stay-shun) tube. This tube helps to maintain an equal pressure inside and outside the middle ear, and so allows the eardrum to vibrate efficiently.

The tube opens to allow the pressure equalise in the middle ear space. This may cause the “click” or “pop” which can experience when swallowing, or when flying. These “pops” are evidence of working Eustachian tube.

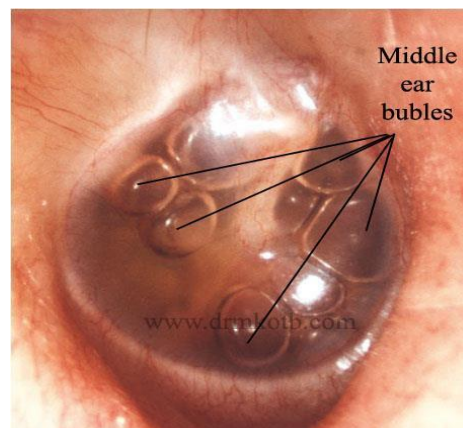


If the Eustachian tube does not work properly or is “blocked” by inflammation, the air in the middle ear is absorbed but cannot be replaced. This causes the air pressure in the middle ear to be less than the air pressure in the ear canal.

The negative pressure (partial vacuum) in the middle ear causes the eardrum becomes progressively more indrawn and eventually the body responds by filling the space with fluid to protect the eardrum and middle ear contents. This is the common condition called “glue ear”.



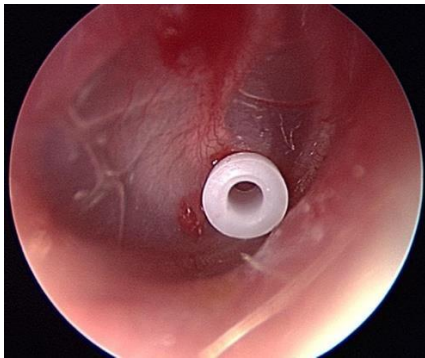
Normal eardrum



Glue ear

“Glue ear” is very common in children younger than 7 years old, but it dissipates spontaneously in the majority of cases, usually within 3 months. The longer fluid remains trapped there though, the thicker “egg white like” and more tenacious the secretions become, and spontaneous resolution becomes less likely.

### **Grommets (Ventilation tubes)**



A grommet is seen in the eardrum

Grommets are tiny little plastic tubes, which are inserted into the Tympanic Membrane “eardrum”.

The grommet does the work that the poorly functioning Eustachian tube should be doing. Therefore ventilating “aerating” the middle ear, reducing secretions, allowing better eardrum vibration “function” and giving the middle ear a chance to recover from infections. In America grommets are simply known as “ventilation tubes”.

### **Grommets are used for two common reasons:**

1. Persistent middle ear effusions, or fluid trapped behind the eardrum “glue ear”. This may cause considerable hearing loss “deafness”, and sometimes earache and slight imbalance.
2. Recurrent otitis media “middle ear infections”. These are painful recurrent ear infections in children, which may be accompanied by a high temperature, poor appetite and general lethargy.

### **What causes these ear problems?**

Eustachian tube is not mature in children and sometimes does not function properly resulting in accumulation of a sticky fluid (glue) in the middle ear. This is a very common condition in children up to age of 7. Glue ear is also called ‘otitis media with effusion’.

Some children develop glue ear after a cold, so it can be more common during the winter months.

Sometimes the cause is adenoiditis, with enlargement and infection of the adenoids causing obstruction of the Eustachian tube (a tube like structure that connects the middle ear to the back of the nose/upper throat).

Rare causes include sinusitis, cleft palate, immune deficiencies and bottle-feeding. Parental smoking is also a potent cause of both acute and chronic ear problems in young children.

### **Grommet insertion surgery**

This is a quick (10-15 min) day case procedure usually performed under general anaesthesia. In adults, who are not considered suitable for general anaesthesia, grommet insertion may be performed under local anaesthesia (a special anaesthetic cream in the ear) with little discomfort. This is a day case procedure and patients usually go home on the same day.

A microscope is used to visualise the tympanic membrane “eardrum”.

A tiny slit “cut” is made in the eardrum (myringotomy). Fluid “glue” within ear is drained by suction. A grommet is then inserted through the “hole” made in the eardrum to keep middle ear ventilated and healthy.

In a child, if adenoids are enlarged and the child is having the second or third sets of grommets inserted, the surgeon may also remove the adenoids.

### **Complications of the grommet surgery**

This is a relatively safe operation; however no surgery is totally free of any risk.

1) Infection- grommet may cause ear infection and even rarely be significant enough to require the removal of the grommet. However, it is usually to treat with antibiotics.

2) Persistent eardrum perforation- most grommets fall out of ears spontaneously after an average of 9 months. When they do, most eardrums heal up, by scarring however in about 2% of patients, the eardrum fails to heal or leave a smaller residual perforation “hole”. Some of these patients may require a further operation in future to repair the remaining hole, of course only if it causes any problem.

### **Expectations and advice following grommet insertion surgery**

After a grommet is inserted, the fluid in your eardrum will usually clear up. As your eardrum heals, the grommet is naturally pushed out and eventually drops out by itself after six to 12 months. You may not notice when it drops out. Sometimes this doesn't happen and the grommet may need to be removed by a small operation.

- A follow up appointment will be arranged for about 6 weeks after surgery.
- Avoid getting water into the ears as this may easily cause infection in the ears. This applies to showers, bathing, washing hair as well as swimming. Swimming is only permitted after the follow-up appointment has given the all clear. Avoid diving with a grommet in the ear. Earplugs must be used for all these activities. Alternatively, cotton wool heavily smeared with Vaseline is an excellent and sometimes more comfortable alternative
- You may get a bloodstained discharge after the surgery for couple of days

- If ear discharge persists, smells foul or there is increased pain seek help as this suggests infection and treatment with antibiotic eardrops will be required
- Pain is normally fairly minimal and can be controlled with simple painkillers
- Avoid poking of ear buds, matches, keys or a dirty finger. This can introduce infection. Clean ear with a damp cloth around the outside
- Grommets usually fall out of ear in about 9 months. They spontaneously grow out and are ejected by the eardrum and therefore very rarely have to be removed. Usually they fall out of the ear and may be found on the pillow upon awaking. The eardrum usually heals up where the grommet was sited
- If your grommet falls out early do not panic. You do not need to contact your doctor immediately. You should continue keeping your ear waterproof and attend the outpatient clinic as planned
- Sometimes (20%- 25% chance) repeat sets of grommets are needed if the fluid re-accumulates. A hearing test will indicate if this is the case. The older a child gets, the less likely this will be. In a way, grommets “buy time” by maintaining hearing and preventing serious eardrum damage until the child is older when the Eustachian tube function often starts working properly, and fluid does not readily recur
- Do not drive for 48 hours (because of the effect of the general anaesthetic)
- Flying is allowed.

We advise at least 24 hours off school/work.

**Please note that the details in this section are for general information only. You should always discuss the risks, limitations and complications of your specific operation with your surgeon.**