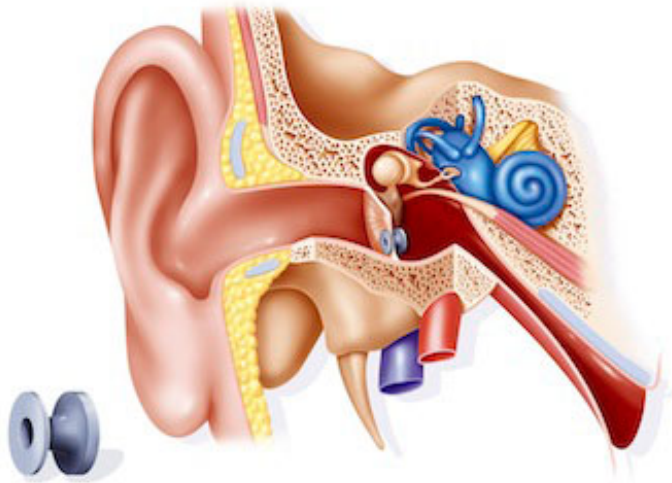


## Grommets and Glue Ear

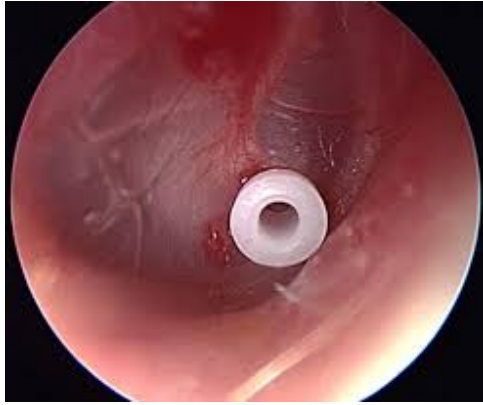
Grommets or Ventilation tubes or just Tubes (USA) are small plastic tubes (2x3.5mm) inserted into the ear drum to treat Glue ear (secretory otitis media / otitis media with effusion) or to relieve very poor Eustachian tube function.



The Eustachian tube connects the ear to the back of the nose. This tube allows air to enter the middle ear behind the ear drum. This allows the ear drum to move easily and transmit sound efficiently. If the Eustachian tube is blocked or is inefficient the air behind the ear drum gets absorbed causing low middle ear air pressure and then fluid fills the middle ear behind the ear drum. This is 'Glue ear'. Its called glue ear as the fluid is often very mucoid and sticky and gums up the ear drum and the middle ear, this causes hearing loss.



Draining fluid out of the middle ear and inserting a grommet in the ear drum restores hearing . The grommet is not a drain tube but it allows air to get behind the ear drum and frees it to move and transmit sound. Ventilating the middle ear also stops the middle ear producing fluid (glue).



Grommets are very effective in restoring the hearing loss associated with glue ear.

Grommets in children last on average 9 months. They can fall out or block sooner or last a lot longer. We usually want grommets to last as long as possible.

There is a lot of misunderstandings about how grommets work. Grommets do not cure Eustachian tube problems but they allow the ear to function normally whilst with time the Eustachian tube improves. In children this occurs as they grow or if we remove the adenoids. In adults grommets often last more than a year and are often inserted for more long standing Eustachian tube problems.

If grommets need reinserting this can be done a number of times. If frequent grommets are required then long stay grommets or T-tubes can be used. T-tubes however can cause more scarring and residual perforations.

### **Grommets and complications.**

Perhaps 20% of grommets get infected at some time. Infection can often be associated with water going down the ear canal. Keeping bath or shower water out of the ears helps prevent problems.

Using cotton wool made greasy with a little Vaseline keeps bath water out effectively.

Swimming can also cause problems and many patients are best advised to use ear plugs. Children also often find addition use of a neoprene headband helps keep water out.



Ear infection usually settles with antibiotics. These can be taken by mouth or instilled directly into the ear as drops. Sometimes an infection will block a grommet and lead to its early rejection.

Grommets and Infected grommets can lead to a lasting ear drum perforation. A visible scar on the ear drum sounds dramatic but only very rarely causes any

significant problems. Lasting perforation of the ear drum occur infrequently and usually can be repaired with surgery.

Grommets usually are naturally expelled from the ear drum and fall into the ear canal where they cause no problems. They eventually get expelled from the ear canal on the wax. Normally the ear drum heals up after the grommet is expelled.

### **Why do children get glue ear?**

In children the Eustachian tube is often inefficient. It initially lies in a horizontal position and does not open easily. Additionally the adenoids at the back of the nose may be large and further blocks the opening of the Eustachian tube at the back of the nose. When the Eustachian tube blocks the ear fills with fluid and glue ear develops.

The cause of glue ear are often multifactorial. Additional allergy and localized infection play a role. Nasal blockage, large adenoids and sometimes tonsil problems may all contribute to the problem.

Some groups of children get more glue ear. Cleft palate problems and PCD (primary ciliary dyskinesia) cause a lot of glue ear.

### **What problems does glue ear cause?**

Glue ear in some children causes no problems. In others it can lead to recurrent ear ache, ear infections with perforations, and hearing loss.

Hearing problems can cause poor behavior, speech problems and effect schooling. Glue ear can also cause poor balance.

### **How do we treat glue ear?**

Not all children require treatment, and only glue ear that is present for months is usually treated. Evidence shows that the most effective treatment is Grommet insertion often with Adenoidectomy. There is no evidence that antibiotics or antihistamines or decongestant medicine work. Massage and cranial osteopathy make claims for treating glue ear but there is no robust evidence that they work.

Children get improving Eustachian tube function as they grow. Most children will grow out of glue ear. We never know when this occurs but usually before secondary school age.

Grommet insertion is a brief operation undertaken under a general anaesthetic as a day case procedure. Even with the addition of adenoidectomy it remains a day case operation.

### **Why do adults get glue ear?**

This is usually because of a change in Eustachian tube function. This might be from nasal inflammation (rhinitis), sinusitis, or other blockages of the nose or from swellings in the back of the nose. Occasionally cancerous problems in the

back of the nose can block the Eustachian tube. Adult glue ear from colds and inflammation usually settles within 6 weeks.

If symptoms persist grommet insertion is often helpful. In adults it is sometimes possible to insert grommets under a local anaesthetic, if not a brief day case general anaesthetic may be preferred.