

# Insertion of Grommets

Dr David Wabnitz MBBS, MS, FRACS

## The Operation

This involves a short anaesthetic of around 15 minutes. Using a microscope, a small cut is made through the eardrum (Myringotomy) and any fluid behind the eardrum in the middle ear is removed. The grommet is then placed into the cut made in the eardrum, and this keeps the hole in the eardrum open. Antibiotic eardrops are often placed into the ear canal, with a small cotton wool ball placed in the opening of the ear canal to soak up any residual medication.

Once this has been done the patient is transferred to the Recovery Area, and then to the Day Surgery Unit. It's not uncommon for children to be upset when they return to the Day Surgery Unit – this is usually because of some mild pain or more commonly a reaction to being in a foreign environment. This should soon settle when children are reunited with their parents. If all is well after an hour or so of observation, the patient is able to go home.

If this operation is required in older children or young adults, it can sometimes be carried out under local anaesthesia in the rooms.

## After the Operation

### *Pain Relief*

Any pain is usually well controlled by Paracetamol or Ibuprofen (Nurofen), and pain relief may be required for the first 24 hours if required at all.

### *Fluid from the Ear*

Antibiotic ear drops are often placed into the ear canal during surgery, and any cotton wool that has been placed into the opening of the ear canal can be discarded once the child has returned to the ward. It is not unusual for a small amount of blood to be seen coming out of the ear on the day of

surgery. Antibiotic ear drops are often prescribed for a number of days after the operation. This is done to encourage the tube to remain open, to settle any inflammation within the middle ear, and/or to decrease the risk of ongoing discharge from the ear.

### *Return to Normal Activities*

As a day procedure, all patients having grommets should be observed for 24 hours. Most children can return to day care or school once they have fully recovered from the anaesthetic, usually on the day after surgery.

### *Aeroplane Travel*

This is often possible within a few days after surgery. The grommets will protect the ears from any pressure-related pain.

### *Hearing Loss*

Any hearing loss that was caused by fluid in the middle ear has usually resolved immediately following the insertion of grommets.

Occasionally children may complain that noises are too loud for them, as they hear sound normally for the first time for some time!

### *Follow Up Appointments*

Patients are usually seen 4 weeks following surgery. Follow-up appointments are then scheduled on a 6 monthly basis until the grommets fall out and it can be confirmed that the ears have been restored back to health. You may or may not see the grommets when they fall out.

A post-operative hearing test may be required to ensure that any hearing loss that was present prior to the operation has resolved and that there is no underlying nerve-related hearing loss.

### *Further Grommets*

Of all children who have grommets, about 1 in 4 will require another set of grommets after the first set have fallen out – due to a recurrence of middle ear infections or reaccumulation of middle ear fluid.

Where a repeat operation is required, it is often combined with removal of the adenoids (Adenoidectomy) as this tends to improve ear health and reduces the need for further grommet insertions.

## Complications

### *Discharge / Persistent Infection*

This affects 10-20% of children who have grommets and is not normally painful. The discharge can be watery or thick like nasal mucous. It can be clear, white, or discoloured, and at times can be foul-smelling. This can occur at any time after the operation, and is usually due to a concurrent cold or recent water exposure to the ears. If this occurs, you should contact the rooms or your GP for antibiotic ear drops (usually called Ciloxan or Ciproxin HC). Cleaning the ears with a rolled up tissue (Tissue Spears) to mop up any discharge in the ear canal can be helpful in allowing the drops to penetrate more deeply. Pressing the small cartilage in front of the ear canal (Tragus) into the ear canal helps “pump” the drops into the deeper part of the ear canal. If unwell with a fever, oral antibiotics are also required. If these measures fail to settle the discharge, you will need to contact the rooms to discuss further treatment.

Blood-stained discharge should also be treated with antibiotic eardrops. The cause is usually granulation tissue (a small clump of inflamed tissue rich in blood vessels) that has formed right next to the grommet. If antibiotic eardrops do not settle this, please contact the rooms for a review appointment.

In a very small proportion of children, discharge can continue to be a problem to the extent that grommets need to be removed under an anaesthetic to allow the ears to completely settle.

### *Early Extrusion*

This sometimes happens, often for no good reason. If the grommet extrudes early and there is a recurrence of the initial problem, then unfortunately another operation will be required to reinsert a further set of tubes.

### *Plugging of the Tube*

Various substances, usually mucous, can block the tubes and this occurs in 1 in 15 patients. If this leads to a recurrence of problems then an attempt will be made to clear the tubes using antibiotic ear drops. If this fails and problems continue, a second procedure may be required to insert new grommets.

### *Retained Grommet*

If a grommet remains in the ear drum for longer than 3 years, it is unlikely to come out by itself. It is usually preferable to carry out an operation to remove the grommet in such circumstances.

### *Grommet Migrating Inward instead of Outward*

The risk of the grommet falling into the middle ear and the eardrum healing over it is about 1 chance in 200. The grommet can be left alone if it is not causing any problems, or can be removed with a further operation if there are any problems.

### *Scarring*

A thickened scar on the eardrum (Tympanosclerosis) forms in up to 1 in 3 patients when the grommet falls out. This does not tend to cause any problems such as decreased hearing.

In up to a quarter of patients, part of the eardrum can heal with a very thin membrane. Again, this usually does not cause any problems.

It's important to note that both of these situations can also often occur as the result of repeated infections.

### *Perforation*

In 1 in 50 cases, there can be a hole that remains in the eardrum when the grommet falls out. The hole can vary in its size and position and can lead to mild hearing loss and recurrent discharge. It is possible to repair the hole with an ear operation called a Myringoplasty, but this is usually not considered until the age of 8 years.

Often a perforation does not cause any problems although ongoing care with water exposure is required. In fact, a hole in the eardrum can act just like a grommet and in some circumstances this can be beneficial.

### *Cholesteatoma*

This is a significant disease of the ear where skin migrates into the middle ear instead of migrating outwards as it is supposed to. It can sometimes occur after a grommet has been inserted and the risk is in the order of 1 chance in 200. Treatment involves more extensive ear surgery.

### *Poor Hearing*

Rarely, an operation on the ear can lead to a decline in hearing that can be significant and permanent. This is incredibly uncommon after simple grommet insertion. More commonly, removal of any fluid from the middle ear may “uncover” an undiagnosed nerve-related hearing loss.