



The pillars defining our quality care

We Care Together!



#### **Ear Tubes**

Painful ear infections are quite common for children and by the age of five, nearly every child has experienced at least one episode. Most ear infections either resolve on their own (viral) or are effectively treated by antibiotics (bacterial). But sometimes ear infections and/or fluid in the middle ear may become a chronic problem leading to other issues, such as hearing loss, poor school performance, or behavior and speech problems. In these cases, insertion of an ear tube by an otolaryngologist (ear, nose, and throat specialist) may be considered.

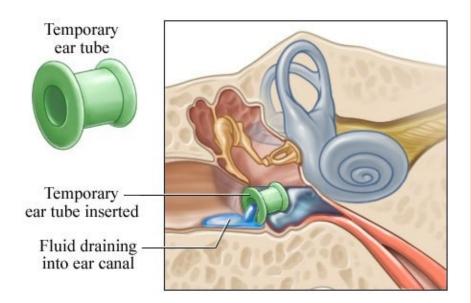
## What are ear tubes?

Ear tubes are tiny cylinders placed through the ear drum (tympanic membrane) to allow air into the middle ear and prevent ear infections and hearing loss.

These tubes come in two basic types: short-term and long-term. Shortterm tubes are smaller and typically stay in place for six to eighteen months before falling out on their own. Long-term tubes are larger and have flanges that secure them in place for a longer period of time. Long-term tubes may fall out on their own, but removal by an otolaryngologist may be necessary.

# Who needs ear tubes and why?

Ear tubes may be recommended when a person experiences repeated middle ear infection (acute otitis media) or has hearing loss caused by persistent middle ear fluid (otitis media with effusion). These conditions most commonly occur in children, but can also be present in teens and adults and can lead to speech and balance problems, hearing loss, poor school performance, or changes in the structure of the ear drum.



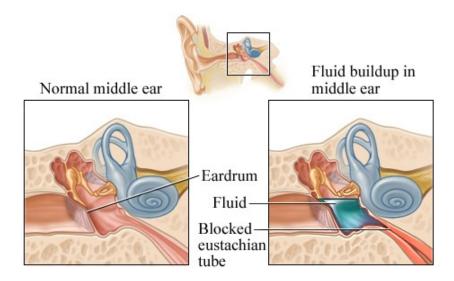
Inserting ear tubes may:

- Reduce the risk of future ear infection;
- Restore hearing loss caused by middle ear fluid;
- Improve speech problems and balance problems;
- Improve behavior and sleep problems caused by chronic ear infections;
- Help children do their best in school.

#### How are ear tubes inserted in the ear?

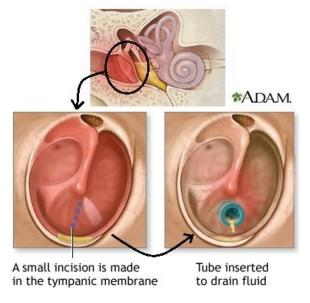
Ear tubes are inserted through an outpatient surgical procedure called a myringotomy.

A myringotomy refers to an incision (small opening) in the ear drum or tympanic membrane, which is most often done under a surgical microscope with a small scalpel. If an ear tube is not inserted, the hole would heal and close within a few days. To prevent this, an ear tube is placed in the hole to keep it open and allow air to reach the middle ear space (ventilation).



## What happens during surgery?

Children require general anesthesia . Adults may also be able to tolerate the procedure without anesthetic. A myringotomy is performed and the fluid behind the ear drum (in the middle ear space) is suctioned out.



The ear tube is then placed in the opening. Ear drops may be administered after the ear tube is placed and may be prescribed for a few days. The procedure usually lasts less than 15 minutes and patients recover very quickly.

Sometimes the otolaryngologist will recommend removal of the adenoid tissue (lymph tissue located in the upper airway behind the nose) when ear tubes are placed for persistent middle-ear fluid. This is effective for children four years or older and is often considered when a repeat tube insertion is necessary. Current research indicates that removing adenoid tissue concurrent with placement of ear tubes for persistent middle-ear fluid can reduce the risk of recurrent ear infections and the need for repeat surgery in children four years and older.

# What happens after surgery?

After surgery, the patient is monitored in the recovery room (if general anesthesia was used) and will usually go home within an hour or two if no complications occur. Patients usually experience little or no postoperative pain, but grogginess, irritability, and/or nausea from the anesthesia can occur temporarily. When done in the office recovery is immediate.

Hearing loss caused by the presence of middle ear fluid is immediately resolved by surgery. Children with speech, language, learning, or balance problems may take several weeks or months to fully improve.

The otolaryngologist will provide specific postoperative instructions, including when to seek attention and to set follow-up appointments. He or she may also prescribe an antibiotic ear drops for a few days. An audiogram should be performed after surgery, if the hearing seems to be not improved.

Although the tube does have a small opening that could allow water to enter the middle ear, research studies show no benefit in keeping the ears dry and current guidelines do not recommend routine water precautions. Therefore, you do not need to restrict swimming or bathing while tubes or in place and do not need to use earplugs, head bands, or other water-tight devices unless specifically recommended by your doctor.



Audiogram test

Consultation with an otolaryngologist (ear, nose, and throat specialist) may be warranted if you or your child has experienced repeated or severe ear infections, ear infections that are not resolved with antibiotics, hearing loss due to fluid in the middle ear, barotrauma, or have an anatomic abnormality that inhibits drainage of the middle ear.

### **Possible complications**

Myringotomy with insertion of ear tubes is an extremely common and safe procedure with minimal complications. When complications do occur, they may include:

 Perforation: This can rarely happen when a tube comes out or a longterm tube is removed and the hole in the tympanic membrane (ear drum) does not close. The hole can be patched through a surgical procedure called a tympanoplasty or myringoplasty.

- Scarring: Any irritation of the ear drum (recurrent ear infections), including repeated insertion of ear tubes, can cause scarring called tympanosclerosis or myringosclerosis. In most cases, this causes no problem with hearing and does not need any treatment.
- Infection: Ear infections can still occur with a tube in place and cause ear discharge or drainage. However, these infections are usually infrequent, do not cause hearing loss (because the infection drains out), and may go away on their own or be treated effectively with antibiotic ear drops. Oral antibiotics are rarely needed.
- Ear tubes come out too early or stay in too long: If an ear tube expels from the ear drum too soon (which is unpredictable), fluid may return and repeat surgery may be needed. Ear tubes that remain too long may result in perforation or may require removal by an otolaryngologist.

#### **Contact information**

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A publication of SMMC - September 2018