
WHAT ARE TYMPANOSTOMY TUBES AND WHY ARE THEY USED?

Tympanostomy tubes, also called ear tubes, are very small plastic tubes, which sit in a hole in the eardrum. They let air get in and out of the ear and drain fluid from the ear. Some children get fluid behind the eardrum or lots of ear infections. We do not know exactly what causes this. Most young children will have fluid at some time, but it does not always cause problems. The fluid in the ear only needs to be treated if it is causing problems with hearing, speech, balance or if your child is having a lot of ear infections.

Ear tubes usually fall out by themselves. They may stay anywhere between six months to a year, or sometimes even longer. Because the tubes are so tiny, you may not notice when they drop out. Sometimes the fluid and or the ear infections may come back when the tubes fall out. This happens to one child out of every four or five who have tubes put in.

Sometimes the doctor will recommend removal of the adenoid tissue (lymph tissue located in the upper airway behind the nose) when ear tubes are placed. This is often considered when a second or third tube insertion is necessary. Current research shows that removing adenoid tissue at the same time as placement of ear tubes can lower the risk of repeated ear infections and the need for repeat surgery.

What does the operation involve?

Usually the operation is done as day surgery. This means that your child will have the operation and go home the same day. The operation is done while your child is under general anesthetic. The procedure usually lasts less than 15 minutes and patients awaken quickly.

Ear tubes are inserted during a surgical procedure called a myringotomy. A myringotomy refers to an incision (small hole) in the eardrum or tympanic membrane. The fluid behind the eardrum (in the middle ear space) is suctioned out. The ear tube is then placed in the hole. 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). Ear drops may be administered after the ear tube is placed and may be prescribed for a few days.

What are the risks?

The procedure to insert ear tubes is an extremely common and safe procedure with minimal complications. When complications do occur, they may include:

- Tear in the eardrum. This can happen when a tube falls out or a long-term tube is removed and the hole does not close. This usually heals up with time, and we rarely need to operate to close the hole. The tube can leave some scarring in the eardrum. This does not usually affect the hearing.
- Scarring. Any irritation of the eardrum (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.
- Infection. Ear infections can still occur in the middle ear or around the ear tube. However, these infections are usually less frequent, resulting in less hearing loss, and are easier to treat, often only with ear drops. Sometimes an oral antibiotic is still needed.
- Ear tubes come out too early or stay in too long. If an ear tube fall out of the eardrum too soon (which is unpredictable), fluid may return and repeat surgery may be needed. Ear tubes that remain too long may result in a tear and may require removal.

What happens after the operation?

Tympanostomy tubes are not usually sore at all. You can give your child over the counter pain killers like acetaminophen (Tylenol, Tempra) or Ibuprofen (Advil, Motrin) if you need to. The ear tubes should improve your child's hearing and infections quickly. Sounds may seem too loud until they get used to having normal hearing again. This usually takes only a few days.

What else should I know about tympanostomy tubes?

- Air travel. It is okay to fly in an airplane with tympanostomy tubes. The pain from the change in pressure in the airplane cannot happen when the tubes are working.
- Ear infections. Most people with tympanostomy tubes do not get any ear infections. However, if you see yellow fluid coming out of the ear, it may be an infection. It will not be as sore as before and your child will not be as ill. The use of prescription ear drips will treat the ear infection quickly. Sometimes antibiotics may be given by mouth, instead of antibiotic ear drops.
- Water sports. Your child can start swimming a couple of weeks after the operation, as long as they do not dive under the water. You must avoid getting dirty or soapy water into the ear. Before bathing or showering, plug your child's ears with ear plugs or a cotton-wool ball covered with petroleum jelly, such as Vaseline.
- School or daycare. Your child should be able to go back to school or daycare after the operation, as long as he or she is not taking any pain medication.

After your child's surgery, and before you go home, your nurse will give you instructions on how to care for your child at home and when to return to the hospital for a follow-up visit. Your child's hearing needs to be checked to make sure that his or her hearing is better after tubes have been put in.