



## Pre-Operative/Post-operative: Ear Tube Placement

Ear infections are common in children-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). Sometimes, ear infections and/or fluid in the middle ear may become a recurrent or chronic problem causing hearing loss and speech problems. In these cases, insertion of ear tubes by an Ear, Nose and Throat surgeon (ENT) may be considered.

### What are ear tubes?

Ear tubes are tiny cylinders placed in the ear drum (tympanic membrane) to allow drainage of air/fluid behind the eardrum. Ear tubes can also be called: tympanoplasty tubes, myringotomy tubes, ventilation tubes, or PE (pressure equalization) tubes. The tubes are made out of silicone, metal, or Teflon® and are usually 2mm long x 1.5 mm wide.

There are two types of ear tubes:

1. Short-term: used for most patients and usually stay in around 6-18 months before they painlessly fall out.
2. Long-term or T-tubes: secured in place by phalanges. They may fall out on their own but removal by an ENT surgeon is often necessary.

### Who is a candidate for ear tubes?

Anyone with:

- Repeated middle ear infections (acute otitis media). More than 4 in 6 months or 6 in 12 months.
- Chronic middle ear fluid (otitis media with effusion) with hearing loss, speech delay, developmental delay, or chronic weakening of the eardrum.
- Congenital malformations of the ear drum, Down Syndrome, cleft palate
- Chronic Eustachian tube dysfunction that does not respond to medications

### How are ear tubes inserted?

Ear tube placement is usually performed under a light, general anesthetic administered by an anesthesiologist. Adults tolerate the procedure in the office with only topical anesthetic. Ear tubes are

inserted after making a myringotomy (hole) in the ear drum with a tiny blade under a surgical microscope. If an ear tube was not inserted, the hole would close in a few days. After the tube is inserted, any fluid behind the eardrum is suctioned out and antibiotic ear drops are placed. The procedure usually lasts less than 10 minutes.

### What to expect after ear tube surgery under anesthesia?

Surgical recovery takes about 45 minutes. Children can have a bottle 15-20 minutes after the surgery is over.

There is little or no postoperative pain, but anesthesia-related grogginess, irritability, and/or nausea may occur.

Hearing loss due to middle ear fluid is immediately resolved by surgery, and some children will complain normal sounds are too loud.

Some children may dig their fingers into their ear for a few days because everything feels different.

### Restrictions after surgery

Wear earplugs when swimming in dirty water (lake, ocean, or river) to prevent the water from getting in the ear.

### Post-operative medications:

Pain after surgery is minimal (like an ear infection) and lasts for 1 day. Use acetaminophen or ibuprofen (Tylenol® or Advil®).

Antibiotic ear drops are used to keep the tubes from becoming blocked and/or to treat an ongoing infection.

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A bottle of ear drops will be given to you the day of surgery. Drops will be placed for the next 10 days.

### Tips to use the eardrops:

- Place the bottle in your pocket for 10 minutes to warm it to body temperature (cold drops sting)
- Place the child on his/her side, lying with the affected ear up.



- Put the bottle in the ear canal and squeeze 4-5 drops.
- Pump the tragus (triangle shaped cartilage in front of the ear canal) 5 times to force the drops through the tube. Repeat this on the other ear if needed.

**Possible complications (from common to least common)**

*Ear drainage (otorrhea):* 10% of children will get this once during the life of their tubes.

*Scarring of the eardrum:* 5% of children will get this. It is usually cosmetic and does not affect the hearing.

*Ear tubes that stay in too long or come out too early:* 1% of children will have this problem

*Ear drum perforation:* 0.5% of children will have this problem. If the hole doesn't heal in three months; it should be patched.

**Follow-up visits**

Ear tubes must be checked by an ENT every 6 months until they fall out. If ear tubes do not fall out on their own they may need to be removed surgically.

**When to call the surgeon:**

Persistent ear bleeding

Persistent pain not relieved by medication

Temperature of 101.5°F or greater orally

Nausea/vomiting for more than 4 hours after you leave the hospital.