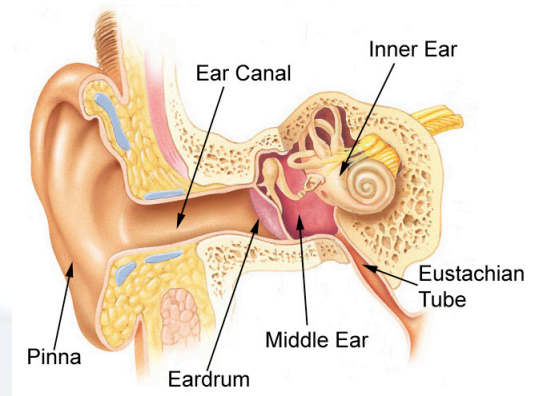




## Ear Tubes

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Recurrent ear infections are very common; 90% of children will have at least 1 ear infection during childhood. In some cases, fluid in the middle ear persists after the infection has cleared up and the presence of fluid behind the eardrum may interfere with hearing. If the fluid persists for long periods of time, it may result in delayed language development, among other issues. The cause of recurrent ear infections with persistent fluid is essentially an underdeveloped eustachian tube or failure of the body's natural drainage pathway. This tube drains from the ear to the back of the nose where the nose meets the throat.

**CAUSES OF EUSTACHIAN TUBE DYSFUNCTION** Immaturity; this tube often is not well developed in young children. Obstruction; usually due to large adenoids in the back of the nose. Anatomic; smaller horizontal tubes in young children or more severe issues like cleft palate, craniofacial abnormalities or Downs Syndrome. Genetics; family history of ear disease. Inflammation; usually temporary following an infection.

**WHEN AND WHY ARE TUBES RECOMMENDED** Tubes are recommended when ear infections become recurrent or chronic, requiring back to back or multiple courses of oral antibiotics. Tubes are also recommended if the fluid does not drain from behind the eardrum leading to a conductive hearing loss which is typically corrected once the tubes are put into place. Once the microscopic (tiny) tube is inserted into the eardrum, fluid from the middle ear easily drains out. As the fluid drains, the eardrum is once again able to vibrate normally and hearing improves immediately. Placement of the tube will eliminate any pain or discomfort associated with future ear infections as the infection visibly drains from the ear and is unable to build up behind the eardrum. Since fluid drains to the outside, bacteria or germs cannot easily multiply in the middle ear to cause infection. It is uncommon for ear infections to persist once the tubes are inserted, however, they do occur. If this happens, you will see the infection drain out of the ear like a runny nose and the treatment is Ciprodex or Ofloxacin drops which you will be given at the time of surgery with plenty of refills. You will make sure you always have a bottle of Ciprodex or Ofloxacin on hand at all times.

**WHAT ARE EAR TUBES AND HOW ARE THEY USED** Ear tubes are little plastic tubes that are inserted into the eardrum using a microscope during a minor surgical procedure. This simple process is the most common type of surgery performed on children in North America. Children are given a mild inhaled anesthetic for the surgery which eliminates the need for an IV or breathing tube and the procedure takes approximately 10 minutes. This is done as an outpatient procedure and the child will be allowed to return home within a few hours. Many children are disoriented and upset after the anesthesia, but once this wears off, there is little to no pain and the child may normal activity by the end of the day.

**CARING FOR EAR TUBES** Drainage immediately after surgery is not uncommon and the color may vary from clear, yellow, green or red. This is treated with the ear drops prescribed after surgery and if drainage occurs after this period, immediately restart using the drops prescribed in the affected ear. If the drainage persists or the child spikes a high fever without any other symptoms, call the office and schedule an appointment. A follow-up visit is scheduled 3 weeks after the procedure and then the patient is seen every 4-6 months to monitor the tubes. A hearing test is scheduled at post op visit to ensure that hearing has been restored to normal. Because the ear tube opens a tiny hole between the outer and the middle ear, water can accidentally travel into the middle ear from the outside and introduce infection. This is usually only an issue when the ear is submerged in water containing bacteria, such as bath water, lakes or poorly chlorinated pools such as waterparks or public pools. Ear plugs are recommended when the head is submerged, but generally are not necessary for showering or bathing if the ears are not completely submerged. The patient must also avoid diving deeply under water.

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**EXPECTED COURSE AND COMPLICATIONS** Tubes usually stay in the eardrum for approximately one year and vary from 6-18 months. They fall out naturally into the outer ear canal as the eardrum seals itself shut. Complications are very uncommon. The most serious a complication related to the anesthetic, but serious complications from anesthesia are 1 in 20,000. Complications to the ear are also very uncommon. Drainage is the most common, and is discussed above. Rare complications include ear tubes falling out early or becoming non-functional, the tube not falling out, or the tube falling out but the eardrum not healing itself. All of these conditions can be remedied with simple procedures. Scarring on the eardrum is uncommon and does not interfere with hearing. A second set of tubes is necessary less than 20% of the time.

