



# Sound Source

Physician Newsletter | July 2023

## Developmental Concerns Related to Otitis Media with Effusion

Otitis media with effusion is the most common cause of hearing loss in children. Early identification and intervention is the best way to prevent long-term complications. Audiologists can be valuable partners in monitoring middle ear and hearing status in children with chronic middle ear dysfunction.

The following are common in these children:

### Hearing Loss

The majority of children with chronic middle ear fluid, with or without infection, experience some hearing loss—the average is a 24-decibel hearing loss (about the sound of a whisper) in patients with fluid in their ears. For patients with thicker fluid, the loss is closer to 45 decibels (the range of conversational speech), which has a **significant impact on their communication abilities and quality of life**. Usually, once the condition is treated, normal hearing will return.

An audiologist can monitor the impact of middle ear dysfunction on hearing status to help families and physicians decide if they should consider an ENT referral.




### Speech and Language Delays

Five in six children will experience at least one ear infection in their first three years of life, a time that is crucial for the development of appropriate language and speech skills. Even a few months of conductive hearing loss may result in **delayed speech and language development**, impacting a child's academic and social skills. These effects may be more severe in children with other special needs.

### Balance Disturbances

Chronic middle ear fluid can contribute to **delays in gross motor development**. Parents may report their child is late to crawl or walk or is clumsy when walking.

## WHEN TO MONITOR HEARING STATUS

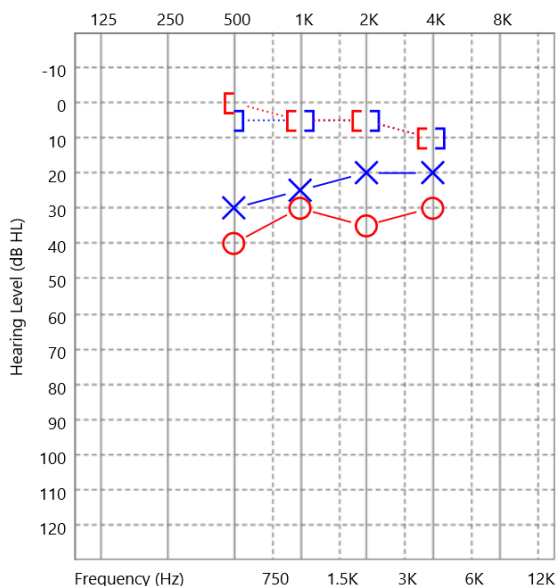
-  Otitis media lasting more than 6 weeks
-  Middle ear effusion lasting more than 3 months
-  Caregiver/family concern regarding hearing, speech-language, or gross motor development



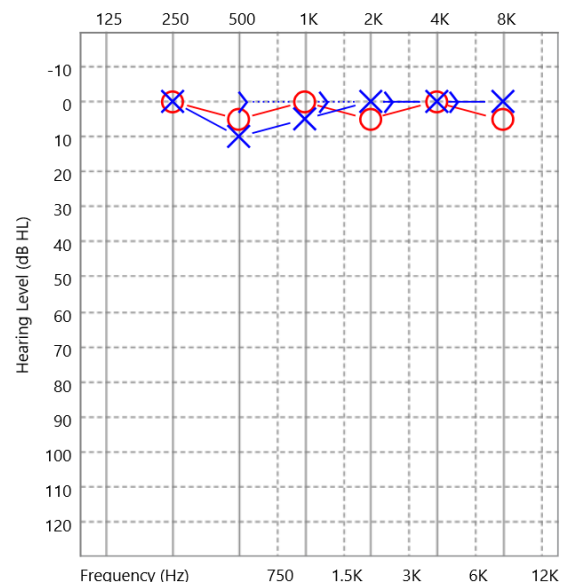
# Recommendations for Children with Transient/Fluctuating Conductive Hearing Loss

- 👂 Routine audiological monitoring (every 6-12 weeks) until resolved
- 👂 Request preferential seating at school
- 👂 Use good communication strategies
  - Get the child's attention before speaking
  - Enunciate clearly
  - Check for understanding when giving instruction
- 👂 Per JCIH 2019 Guidelines, if an infant is born with conductive hearing loss and it persists for 6 months, hearing aids should be considered, even if on a temporary basis. This may also be considered for toddlers awaiting medical intervention for ongoing conductive hearing loss.

## Typical Audiological Findings



The audiogram above shows a mild conductive hearing loss. Tympanometry revealed middle ear fluid in both ears. The pediatrician confirmed effusion with no infection. Hearing & middle ear status were monitored for 3 months and the physician and family agreed on an ENT referral when the loss did not resolve.



The audiogram above is from the same patient following bilateral PE tube placement. Hearing has returned to normal. Audiologic monitoring will continue as PE tubes are in place.

## Resources

1. Boston Medical Center. (n.d.). Ear infection and hearing loss. <https://www.bmc.org/patient-care/conditions-we-treat/db/ear-infection-and-hearing-loss#:~:>
2. National Institute on Deafness and Other Communication Disorders. Ear infections in children. <https://www.nidcd.nih.gov/health/ear-infections-children>
3. Roberts, J et al. (2002). Otitis media and children's language and learning. <https://leader.pubs.asha.org/doi/10.1044/leader.FTR2.07182002.6>
4. Year 2019 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs (2019). Journal of Early Hearing Detection and Intervention, 4(2), 1-44. <https://doi.org/10.15142/fptk-b748>

**If you have any questions or would like more information, contact our board certified pediatric audiologists at [Stephanie.Williams@utdallas.edu](mailto:Stephanie.Williams@utdallas.edu) or [Amanda.Frost@utdallas.edu](mailto:Amanda.Frost@utdallas.edu)**