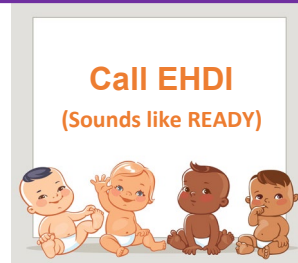


## Questions and Answers for Parents: Diagnostic Testing and Follow-Up



### When should a diagnostic hearing evaluation be performed?

Infants should be referred for diagnostic hearing evaluation, sometimes called a diagnostic *audiological* evaluation, following a “fail” or “refer” result on at least one hearing screening (i.e. initial newborn hearing screening and one follow-up rescreening), which should occur before the age of 1 month. The diagnostic hearing evaluation should be completed by the age of 3 months.

### Who should complete the diagnostic hearing evaluation?

The diagnostic hearing evaluation should be completed by a *pediatric* audiologist (hearing specialist that works with infants and children). A pediatric audiologist is trained, has the technical expertise, and desire to work with the infant population. The pediatric audiologist is well-versed in developmentally appropriate test techniques, general child development, and parent counseling. Audiologists who perform the hearing evaluation must hold a current license in Audiology issued by the North Carolina Board of Examiners for Speech and Language Pathologists and Audiologists.

### Where should the diagnostic hearing evaluation be scheduled?

The diagnostic hearing evaluation should be scheduled with a pediatric audiologist in a clinical setting where they have the type of special equipment used to test infants. ***If a provider does not have the expertise and equipment required, the infant and family should be referred elsewhere.*** A list of approved diagnostic audiology sites for infants in North Carolina can be found at [www.ncnewbornhearing.org](http://www.ncnewbornhearing.org)

### Does insurance cover the cost of the diagnostic audiological evaluation?

Most insurance companies do cover this evaluation, although you may need an appropriate referral from your primary care physician. However, you should consult your insurance carrier to verify this information. If your child is uninsured or you have questions about financial assistance, the Children and Youth with Special Health Care Needs Help Line (1-800-737-3028) is a toll-free contact for North Carolina residents. Callers can learn about health care programs and available funding resources. They can also be contacted via email at [CYSHCN.helpline@dhhs.nc.gov](mailto:CYSHCN.helpline@dhhs.nc.gov)

### Why is it important to have the testing done as soon as possible?

Part of the test must be completed while your baby is sleeping and can take up to 1-2 hours. Children older than 2-3 months of age are not likely to sleep naturally long enough for the testing to be completed. If a child is too old to sleep for testing, the provider may recommend the test be completed under sedation. If sedation (or anesthesia) is required

There are safe, accurate, and effective ways to determine how well your child hears at any age. Pediatric audiologists are trained to test hearing on children of all ages. Children with risk factors for hearing loss can and should have their hearing monitored periodically even if they passed a newborn hearing screening. Parental/caregiver concern about a child's hearing should always prompt further evaluation at any age.

## **What kinds of tests should be included in the diagnostic audiology evaluation?**

Your baby's entire auditory (ear) system should be evaluated. This includes the outer, middle, and inner ear as well as the auditory nerve. A complete diagnostic audiology evaluation for an infant should include:

**Auditory Brainstem Response (ABR)** – This is similar to the newborn screening ABR but gives much more information about the degree and type of hearing loss across different frequencies (itches) in each ear. Your baby will need to sleep for this test.

**Otoscopy** – The audiologist will view your baby's ear, ear canal, and eardrum with an otoscope

**Tympanometry** – This is used to determine middle ear function. The test places a small earphone in the baby's ear canal, gently changes the air pressure in the ear, and measures how much the eardrum moves. It is helpful in finding the presence of fluid and/or infection in the middle ear.

**Middle Ear Muscle Reflex** – There is a tiny muscle in the middle ear that will "jump" in response to loud sound in normal hearing ears. This is similar to when your doctor taps you on your knee and the knee jerks. This gives more information about type of hearing loss.

**Otoacoustic Emissions (OAEs)** - Soft beeping or clicking sounds are played into the baby's ear through a small earphone which also has a microphone in it. The microphone measures a response in the ear canal like an "echo". This information can help define the type of hearing loss.

## **What should I do if my baby has a hearing loss?**

There are many services to help a child and family when a hearing loss is diagnosed. Infants with hearing loss are often fitted with hearing aids or other hearing technology (amplification) and should be enrolled in early intervention as soon as possible. **The audiologist doing the evaluation will help connect you with the services and assistance you and your child need.** You and a team of professionals will work together to guide the services you and your child receive. Early interventions are designed to minimize or prevent developmental delays and to promote language development and access through high quality communicative interactions in the home. Links to referral forms as well as contact information for early intervention agencies can be found at [www.ncnewbornhearing.org](http://www.ncnewbornhearing.org)