

## Hearing assessments in infants up to 6 months

Audiology tests <i>performed by Audiologists</i>	Hearing screens <i>performed in Pediatrician offices</i>
<p><b>Diagnostic test battery for newborn</b></p> <ul style="list-style-type: none"> <li>• <b>Brainstem Auditory Evoked Response (BAER) or Auditory Brainstem Response (ABR)</b> to estimate hearing thresholds – uses a click to assess neural synchrony and tones to estimate hearing levels</li> <li>• <b>OAE</b> assesses cochlear response to multiple frequencies to assist in identifying the type of hearing loss</li> <li>• <b>Tympanometry (high frequency probe tone)</b> assesses middle ear status to rule out middle ear involvement and determine the type of hearing loss</li> <li>• <b>Middle Ear Muscle Response (MEMR)</b></li> <li>• <b>Acoustic Reflex testing</b> assists in diagnosis of the type of hearing loss</li> </ul>	<p><b>Refer to a <u>pediatric audiologist</u> for hearing assessments in this age child.</b> For locations see the NC Infant Diagnostic Audiological Evaluation Site list which can be found on the NC Early Hearing Detection &amp; Intervention (EHDI) program website: <a href="http://www.ncnewbornhearing.org">www.ncnewbornhearing.org</a></p> <p>Some pediatrician offices may have</p> <ul style="list-style-type: none"> <li>• <b>OAE</b> (Otoacoustic Emissions) screening. Note: this is not appropriate follow up to failed AABR (Automatic Auditory Evoked Response) initial hearing screen</li> <li>• <b>If abnormal refer to pediatric audiologist as soon as possible</b></li> </ul>

## Hearing assessments in infants 6 months to 2 years

Audiology tests <i>performed by Audiologists</i>	Hearing screens <i>performed in Pediatrician offices</i>
<p><b>Diagnostic test battery for 6mos-2yrs</b></p> <ul style="list-style-type: none"> <li>• <b>Ear specific Visual Reinforcement Audiometry (VRA)</b> can be performed once a child is at 6 months developmental age and assesses hearing thresholds or lowest response levels to sounds</li> <li>• <b>Sound field VRA</b> provides information on hearing using both ears together, but may miss hearing loss in one ear</li> <li>• <b>OAE</b> (same as above and for verifying VRA results)</li> <li>• <b>Tympanometry (low frequency probe tone), Acoustic Reflex testing</b> same purpose as above</li> <li>• <b>ABR</b> (natural sleep or sedated if difficult to test)</li> </ul>	<p>Typically need to refer to a pediatric audiologist for hearing assessments in this age child</p> <p>Some offices may have</p> <ul style="list-style-type: none"> <li>• <b>Tympanometry</b> to assess middle ear status</li> <li>• <b>OAE</b> screening</li> </ul> <p><b>If either of these are abnormal</b></p> <ul style="list-style-type: none"> <li>• <b>Repeat testing in 4-6 weeks</b></li> <li>• <b>If still abnormal refer to pediatric audiologist or ENT</b></li> </ul>

## Hearing assessments in children 3 to 5 years

Audiology tests <i>performed by Audiologists</i>	Hearing screens <i>performed in Pediatrician offices</i>
<p><b>Diagnostic test battery for 3yrs-5yrs</b></p> <ul style="list-style-type: none"> <li>• <b>Play Audiometry</b> measures the softest sounds a child can hear at several frequencies. This test is performed once children are able to follow some simple directions. This is more of an adult like test than VRA (above). It also can measure word recognition (child repeats or points to pictures)</li> <li>• <b>OAE</b> (same as above and for verifying VRA results)</li> <li>• <b>Tympanometry (low frequency probe tone), Acoustic Reflex testing</b> same purpose as above</li> <li>• <b>ABR</b> (natural sleep or sedated if difficult to test)</li> </ul>	<p><b>Pure tone hearing screen</b> Children must be able to follow instructions and respond when tones are heard – typically can be performed reliably at age 4-5 years of age.</p> <ul style="list-style-type: none"> <li>• Pass / Refer</li> <li>• If abnormal refer to audiologist</li> </ul> <p>Some offices may have</p> <ul style="list-style-type: none"> <li>• <b>Tympanometry</b> to assess middle ear status</li> <li>• <b>OAE</b> screening (use only if child cannot follow instructions for pure tone hearing screening)</li> </ul> <p><b>If either of these are abnormal</b></p> <ul style="list-style-type: none"> <li>• <b>Repeat testing in 4-6 weeks</b></li> <li>• <b>If still abnormal refer to pediatric audiologist or ENT</b></li> </ul>