

Newborn Hearing Screening in Connecticut **Connecticut Pediatric Otolaryngology**

Every year, there are approximately 5/1000 babies born with hearing loss in the US. Connecticut requires that all children born in Connecticut have hearing screening prior to leaving the hospital. This is accomplished by the administration of one of two hearing tests: otoacoustic emission (OAE) or Brainstem Evoked Response (BSER).

Hearing is an important tool in communication. Early identification of hearing problems in children will enable earlier intervention with speech and language services as well as any necessary assistive devices (e.g. hearing aid). Delayed identification of even of mild hearing loss may result in language delays and behavior problems.

Otoacoustic Emission (OAE)

The most common test performed is the OAE. This is done by placing a small probe into the child's ear canal. A series of sounds (clicks) are produced in the ear through the probe that gives information about the functioning of tiny hair cells located in the cochlea (hearing organ). The test can be done while your baby sleeps and does not cause any discomfort.

OAEs only occur in normal to near normal hearing. To obtain an OAE, one needs an unobstructed outer ear canal, absence of significant middle ear disease and fluid and functioning cochlear hair cells. It provides information on the frequency range from 1000 to 4000 Hz.

Brainstem Evoked Response (BSER)

The Brainstem evoked response (BSER) is another type of hearing screening. This test measures the brainstem's responses to clicking sounds which checks the auditory (hearing) pathways of the brainstem. It is often performed as the second test if a child does not pass OAEs. This test is often referred to by many different names, however they are all the same test:

- brainstem auditory evoked response (BAER)
- brainstem auditory evoked potential (BAEP)
- auditory brainstem response (ABR)
- automated auditory brainstem response
- evoked auditory potential
- evoked response audiometry

The test is performed with the child laying still (or sleeping) and remaining quiet. Electrodes are placed on the child's forehead, neck and shoulder. The child will hear clicking sounds or tone bursts through rubber earphones, and the electrodes will pick up the brain's responses to the sounds and record it on a graph.

Repeat screening

Often, children do not pass their initial hearing screening. This may be due to fluid in the baby's ear or because the baby made noise during the first screening. A second test is routinely done if a child does not pass their initial screening. If the baby does not pass the second screening, the baby will be referred to an otolaryngologist (ENT) and an audiologist for further evaluation.

**If you ever have questions or concerns, we would be happy to talk to you
or see your child at anytime.
(203)245-0496.**