



## The Necessity of Early Intervention in Hearing to Optimize Hearing Health

### *Why Is Early Childhood Hearing Screening Important For Your Child?*

Everyday in the United States, approximately 1 in 1,000 newborns (or 33 babies every day) is born profoundly deaf with another two to three out of 1,000 babies born with partial hearing loss, making hearing loss the number one birth defect in America. Many studies have shown that early diagnosis of hearing loss is crucial to the development of speech, language, cognitive, and psychosocial abilities. Treatment is most successful if hearing loss is identified early, preferably within the first month of life. Still, one in every four children born with serious hearing loss does not receive a diagnosis until age three or older.

### *Why is it Important to Have My Baby's Hearing Screened Early?*

The most important time for a child to be exposed to and learn language is in the first three years of life. In fact, children begin learning speech and language in the first six months of life. Research suggests that those who have hearing impairment and get intervention have better language skills than those who don't. The earlier you know about deafness or hearing loss, the sooner you can make sure your child benefits from strategies that will help him or her learn to communicate.

### *How Early Should I Have My Baby's Hearing Screened?*

The first opportunity to test a child's hearing is in the hospital shortly after birth. If your child's hearing is not screened before leaving the hospital, it is recommended that screening be done within the first month of life. If hearing loss is suspected, make sure an otolaryngologist orders tests for your baby's hearing by three months of age. If hearing loss is confirmed, it's important to consider the use of hearing devices and other communication options by six months of age.

### *Is Early Hearing Screening Mandatory?*

In 2003, more than 85 percent of all newborns in the United States were screened for hearing loss. In fact, some 39 states have passed legislation requiring some form of hearing screening of newborns before they leave the hospital. This still leaves more than a million babies who are not screened for hearing loss before leaving the hospital.

### *How Is Screening Done?*

Two tests are used to screen infants and newborns for hearing loss. They are:

Otoacoustic Emissions (OAE): Involves placement of a sponge earphone in the ear canal to measure whether the ear can respond properly to sound. In normal-hearing children, a measurable “echo” should be produced when sound is emitted through the earphone. If no echo is measured, it could indicate a hearing loss.

Auditory Brain Stem Response (ABR): Earphones are placed on the ears and electrodes are placed on the head and ears. Sound is emitted through the earphones while the electrodes measure how your child’s brain responds to the sound.

### ***Signs of Hearing Loss in Children***

Hearing loss can also occur later in childhood, after a newborn leaves the hospital. In these cases, parents, grandparents, and other caregivers are often the first to notice that something may be wrong with a young child’s hearing. Even if your child’s hearing was tested as a newborn, you should continue to watch for signs of hearing loss including:

- Not reacting in any way to unexpected loud noises
- Not being awakened by loud noises
- Not turning his/her head in the direction of your voice
- Not being able to follow or understand directions
- Poor language development
- Speaking loudly or not using age-appropriate language skills

If your child exhibits any of these signs, report them to your doctor.

### ***What Happens If My Child Has Hearing Loss?***

Hearing loss in children can be temporary or permanent. It is important to have hearing loss evaluated by a physician who can rule out medical problems that may be causing the hearing loss, such as otitis media (ear infection), excessive earwax, congenital malformations, or a genetic hearing loss. If it is determined that your child’s hearing loss is permanent, hearing aids may be recommended to amplify the sound reaching your child’s ear. Ear surgery may be able to restore or significantly improve hearing in some instances.

For those with certain types of profound hearing loss who do not benefit sufficiently from hearing aids, a cochlear implant may be considered. Unlike a hearing aid, a cochlear implant bypasses damaged parts of the auditory system and directly stimulates the hearing nerve and allows the child to hear louder and clearer sound.

You will need to decide whether or not your deaf child will communicate primarily with oral speech and/or sign language, and seek early intervention to prevent language delays. Research indicates that habilitation of hearing loss by age six months will prevent subsequent language delays. Other communication strategies such as auditory verbal therapy, lip reading, and cued speech may also be used in conjunction with a hearing aid or cochlear implant, or independently.



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## ***Is My Baby's Hearing Normal?***

If you think that your child has hearing loss, you might be right. The following checklist will assist in determining whether or not your child might have a hearing loss. Please read each item carefully and check only those factors that apply to you, your family or your child.

### **During pregnancy did...**

- Mom have German measles, a viral infection, or flu?
- Mom drink alcoholic beverages?

### **Did your newborn baby (birth to 28 days of age)...**

- Weigh less than 3.5 pounds at birth?
- Have an unusual appearance of the face or ears?
- Have jaundiced (yellow skin) at birth and had an exchange blood transfusion?
- Stay in neonatal intensive care unit (NICU) for more than five days?
- Receive an antibiotic medication given through a needle in a vein?
- Have meningitis?
- Fail newborn hearing screening test?

### **Did your infant baby (29 days of age to two years)...**

- Received an antibiotic medication given through a needle in a vein?
- Have meningitis?
- Have a neurological disorder?
- Have a severe injury with a fracture of the skull with or without bleeding from the ear?
- Have recurring ear infection with fluid in ears for more than three months?

### **Does one or more individual(s) of your family...**

- Have permanent or progressive hearing loss that was present or developed early in life?

## ***Response to the Environment (Speech and Language Development)***

### **My Newborn (Birth to 6 months)...**

- Does not startle, move, cry or react in any way to unexpected loud noises
- Does not awaken to loud noises
- Does not freely imitate sound
- Cannot be soothed by voice alone



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- Does not turn his/her head in the direction of my voice

**My Young Infant (6 through 12 months)...**

- Does not point to familiar persons or objects when asked
- Does not babble or babbling has stopped
- By 12 months does not understand simple phrases such as “wave bye-bye,” “clap hands” by listening alone

**My Infant (13 Months through two Years)...**

- Does not accurately turn in the direction of a soft voice on the first call
- Is not alert to environment sounds
- Does not respond on first call
- Does not respond to sounds or does not locate where sound is coming from
- Does not begin to imitate and use simple words for familiar people and things around the home
- Does not sound like or use speech like other children of similar age
- Does not listen to TV at a normal volume
- Does not show consistent growth in the understanding and the use of words to communicate

If your child has one of more of these indicators you should take him or her to a physician, preferably an otolaryngologist, for an ear examination and a hearing test. This can be done at any age, as early as just after birth.



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