

# Newborn Hearing Screening and Your Baby



Before you bring your newborn home from the hospital, your baby needs to have a hearing screening. Although most babies can hear normally, 2 to 3 of every 1,000 babies are born with some degree of hearing loss. Without newborn hearing screening, it can be difficult to detect hearing loss in the important first months and years of your baby's life. About half of the children with hearing loss have no risk factors for it.

Newborn hearing screening can detect possible hearing loss in the first days of a baby's life. If a possible hearing loss is found, further tests will be done to confirm the results. If a hearing loss is confirmed, treatment and early intervention can start promptly. Early intervention helps babies with hearing loss and their families learn important communication skills.

That is why the American Academy of Pediatrics (AAP) recommends that all babies receive newborn hearing screening before they go home from the hospital.

## What is hearing loss?

Hearing loss is the decreased ability to hear sounds. It may be mild to profound (severe), temporary or permanent, and can make it difficult to hear different kinds of sounds (especially consonants), which are essential in learning to talk.

It can affect one or both ears, and can occur anywhere along the hearing channel, including the following:

- **Outer ear** (eg, because of too much wax or a block in the outside ear canal)
- **Middle ear** (eg, because of an infection or fluid in the middle ear)
- **Cochlea** (inner ear), where sound waves are detected and passed on to the hearing nerve
- **Hearing nerve**, which connects to the brain
- **The hearing center in the brain**

## Why do newborns need hearing screening?

Babies learn from the time they are born. One of the ways they learn is through hearing. If they have problems with hearing and do not receive the right treatment and early intervention services, babies will have trouble with language development. For some babies early intervention services may include the use of sign language and/or hearing aids. Studies show that children with hearing loss who receive appropriate early intervention services by age 6 months usually develop good language and learning skills.

Some parents think they would be able to tell if their baby could not hear. This is not always the case. Babies may respond to noise by startling or turning their heads toward the sound. This does not mean they have normal hearing. Most babies with hearing loss can hear some sounds but still not hear enough to develop full speaking ability.

Timing is everything. Your baby will have the best chance for normal language development if any hearing loss is discovered and treated by the age of 6 months—and the earlier, the better.

## How is newborn hearing screening done?

There are 2 screening tests that may be used.

**Auditory brainstem response (ABR)**—This test measures how the brain responds to sound. Clicks or tones are played through soft earphones into the baby's ears. Three electrodes placed on the baby's head measure the brain's response.

**Otoacoustic emissions (OAE)**—This test measures sound waves produced in the inner ear. A tiny probe is placed just inside the baby's ear canal. It measures the response (echo) when clicks or tones are played into the baby's ears.

Both tests are quick (about 5 to 10 minutes), painless, and may be done while your baby is sleeping or lying still. Either or both tests may be used.

## Can I assume that my hospital will screen my newborn's hearing?

It is best to ask. Most hospitals do hearing screening for all newborns. Some only screen newborns who are considered high risk, such as those with a family history of hearing loss.

Most states now have Early Hearing Detection and Intervention (EHDI) programs. Such programs try to ensure that all newborns in the state are screened for hearing loss and that those who need help get it.

## What if my baby passes the hearing screening?

If your baby does not have any risk factors for hearing loss and has passed the newborn screening test, then your baby's pediatrician still will look at your baby's hearing and speech/language development along with other milestones at each of your baby's regular visits. Keep in mind that some forms of hearing loss develop as a child gets older.

If your baby has certain risk factors (eg, family history of hearing loss, premature birth, face/skull deformities), your baby's pediatrician should arrange for regular hearing tests to make sure that your baby continues to hear well.

## What if my baby does not pass the hearing screening?

If your baby does not pass the hearing screening at birth, it does not mean that your baby has hearing loss. In fact, most babies who do not pass the screening test have normal hearing. But to be sure, it is extremely important to have further testing. This should include a more thorough hearing evaluation and a medical evaluation. These tests should be done as soon as possible, but definitely before your baby is 3 months old. These tests can confirm whether hearing is normal or not.

## If hearing loss is found, what can be done?

This depends on the type of hearing loss that your baby has. Every baby with hearing loss should be seen by a hearing specialist (audiologist) experienced in testing babies and a pediatric ear/nose/throat doctor (otolaryngologist).

Special hearing tests can be performed by the audiologist who, together with the otolaryngologist, can tell you the degree of hearing loss and what can be done to help.

If the hearing loss is permanent, hearing aids and speech and language services may be recommended for your baby. The Individuals with Disabilities Education Act (IDEA) requires that free early intervention programs be offered to children with hearing loss, beginning at the time the child's hearing loss is identified.

The outlook is good for children with hearing loss who begin an early intervention program before the age of 6 months. Research shows these children usually develop language skills on par with those of their peers.

### **What if I do not receive my baby's hearing screening results?**

Usually parents receive the results of their babies' hearing screening before mother and baby leave the hospital. If you did not get the results of your baby's hearing screening, call your baby's pediatrician to confirm the results.

### **How will I pay for newborn hearing screening and early intervention services?**

Hearing screening tests usually cost between \$25 and \$40. Check with your health insurance company to see if it will cover the cost of newborn hearing screening and follow-up services. In some cases, your local school system, state programs, or local service clubs may cover the cost.

### **What if my baby did not receive hearing screening as a newborn?**

If your baby did not receive hearing screening as a newborn in the hospital, call your baby's pediatrician and ask to have your baby screened (with ABR and/or OAE) as soon as possible. It is important to know that hearing can be tested at any age. Talk to your baby's pediatrician if you are concerned at any time about your baby's hearing or speech development.

### **Resources**

Alexander Graham Bell Association for the Deaf and Hard of Hearing  
202/337-5220  
[www.agbell.org](http://www.agbell.org)

American Society for Deaf Children  
Voice/TTY: 800/942-2732  
[www.deafchildren.org](http://www.deafchildren.org)

American Speech-Language-Hearing Association  
Voice/TTY: 800/638-8255  
[www.asha.org](http://www.asha.org)

Family Voices  
888/835-5669  
[www.familyvoices.org](http://www.familyvoices.org)

Medem (an e-health network)  
[www.medem.com](http://www.medem.com)

National Association of the Deaf  
Voice: 301/587-1788  
TTY: 301/587-1789  
[www.nad.org](http://www.nad.org)

National Center for Hearing Assessment and Management  
Voice/TTY: 435/797-3584  
[www.infantheating.org](http://www.infantheating.org)

National Institute on Deafness and Other Communication Disorders  
Voice: 800/241-1044  
TTY: 800/241-1055  
[www.nidcd.nih.gov](http://www.nidcd.nih.gov)

**Please note:** Inclusion on this list does not imply an endorsement by the American Academy of Pediatrics. The AAP is not responsible for the content of the resources mentioned above. Addresses, phone numbers, and Web site addresses are as current as possible, but may change at any time.

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