



NIDCD Fact Sheet

It's Important to Have Your Baby's Hearing Screened

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES · NATIONAL INSTITUTES OF HEALTH · NATIONAL INSTITUTE ON DEAFNESS AND OTHER COMMUNICATION DISORDERS

Most children hear and listen to sounds from birth. They learn to talk by imitating the sounds around them and the voices of their parents and caregivers. But that's not true for all children. In fact, about two or three out of every 1,000 children in the United States are born deaf or hard-of-hearing. More lose their hearing later during childhood. Many of these children may need to learn speech and language differently, so it's important to detect deafness or hearing loss as early as possible.

For this reason, universal newborn hearing screening programs currently operate in all U.S. states and most of the territories. With help from the federal government, every state has established an Early Hearing Detection and Intervention program as part of its public health system. As a result, more than 95 percent of babies have their hearing screened soon after they are born.

When will my baby's hearing be screened?

Your baby's hearing should be screened before he or she leaves the hospital or birthing center. If you and your baby are already home and you haven't been told the results of the hearing screening, ask your doctor. If the results indicate your baby may have hearing loss, it's important to work with your doctor to make an appointment with a hearing expert, called an audiologist (aw-dee-AH-luh-jist), to perform a more thorough hearing test before your baby is 3 months old.

How will my baby's hearing be screened?

Two different tests are used to screen for hearing loss in babies. In both tests, no activity is required from your child other than lying still.

- The **otoacoustic emissions (OAE)** test shows whether parts of the ear respond properly to sound. During this test, a soft sponge earphone is inserted into your baby's ear canal and emits a series of sounds to measure an "echo" response that occurs in normal hearing ears. If there is no echo, it could indicate hearing loss.
- The **auditory brain stem response (ABR)** test checks how the auditory brain stem (the part of the nerve that carries sound from the ear to the brain) and the brain respond to sound by measuring their electrical activity as your child listens. During this test, your baby wears small earphones in the ears and electrodes on the head. Your baby might be given a mild sedative to keep him or her calm and quiet during the test.

If your child doesn't respond consistently to the sounds presented during either of these tests, your doctor will suggest a follow-up hearing screening and a referral to an audiologist for a more comprehensive hearing evaluation. If hearing loss is confirmed, it's important to consider the use of hearing devices and other communication options before your baby is 6 months old.



NIDCD Fact Sheet

It's Important to Have Your Baby's Hearing Screened

Why is it important to have my baby's hearing screened early?

The most important time for a child to learn language is in the first 3 years of life. In fact, children begin learning speech and language in the first 6 months of life. Research suggests that children with hearing loss who get help early develop better language skills than those who don't. The earlier you know about a child's hearing loss, the sooner you can make sure your child benefits from strategies that will help him or her learn to successfully communicate.

How can I recognize if my child develops hearing loss later in childhood?

Even though the screening tests are designed to detect hearing loss as early as possible, some children may not develop hearing loss until later in childhood. In those instances, parents, caregivers, or grandparents are often the first to notice. This means that, even if your baby has passed the hearing screening, you should still continue to look for signs that your baby is hearing well.

For example, during the first year, notice whether your baby reacts to loud noises, imitates sounds, and begins to respond to his or her name. When your child is age 2, ask yourself whether he or she makes playful sounds with his or her voice, imitates simple words, and enjoys games like peek-a-boo and pat-a-cake. Is he or she using two-word sentences to talk about and ask for things? When your child is age 3, notice whether he or she begins to understand "not now" and "no more" and follows simple directions. The NIDCD fact sheet *Your Baby's Hearing and Communicative Development Checklist* is a handy reference for children from birth to 5 years of age. If for any reason you think your child is not hearing well, talk to your doctor.

If my child has hearing loss, can hearing be improved?

A variety of assistive devices and strategies are helpful for children who are hard-of-hearing. Some examples of these devices are listed here. An audiologist can help you determine whether these or other devices will help your child.

- **Hearing aids** are devices that make sounds louder. They are worn in or behind the ear and come in several different shapes and sizes. Hearing aids can be used for varying degrees of hearing loss from mild to severe. An audiologist will fit a hearing aid that will work best for your child's degree of loss. Hearing aids can be expensive, so you'll want to find out whether they have a warranty or trial period. You'll also want to talk with your insurance provider to understand what, and how much, it will pay for. To learn more about different types of hearing aids, read the NIDCD fact sheet *Hearing Aids*.
- **Cochlear implants** are small electronic devices that help provide a sense of sound to people who are profoundly deaf or hard-of-hearing. They consist of a microphone worn just behind the ear, which picks up sound from the environment; a speech processor, which selects and arranges the sounds; a transmitter and receiver/stimulator, which receive signals from the speech processor and convert them into electric impulses; and an implanted electrode array, which collects the impulses from the stimulator and sends them to the auditory nerve.

Not all children who have hearing loss should get cochlear implants. Doctors and hearing experts think they're best for children who have such severe hearing loss that they can't benefit from hearing aids. Some doctors now recommend the use of two cochlear implants, one for each ear, to help children identify the directions of sounds. To learn more, read the NIDCD fact sheet *Cochlear Implants*.

As children get older, many other devices are available to help their hearing. Some devices help children hear better in a classroom. Others make talking on the phone or watching television easier. For example, induction loop systems and FM systems can help eliminate or reduce distracting noises and make it easier to hear individual voices in a crowded room or group setting. Others, such as personal amplifiers, are better for one-on-one conversations.

How can I help my child communicate?

There are a variety of ways to help children with hearing loss express themselves and interact with others. The main options are listed below. The option you choose will depend on what you think is best for your child. Find out as much as you can about all of the choices, and ask your doctor to refer you to experts if you want to know more.

- **Auditory-oral and auditory-verbal options** combine natural hearing ability and hearing devices such as hearing aids and cochlear implants with other strategies to help children develop speech and English-language skills. Auditory-oral options use visual cues such as lipreading and sign language, while auditory-verbal options work to strengthen listening skills.
- **American Sign Language (ASL)** is a language used by some children who are deaf and their families. ASL consists of hand signs, body movements, and facial expressions. ASL has its own grammar and syntax, which are different from English, but it has no written form.
- **Cued speech** is a system that uses handshapes along with natural mouth movements to represent speech sounds. Watching the mouth movements and the handshapes can help some children learn to

speech-read English; this is especially important in discriminating between sounds that look the same on the lips.

- **Signed English** is a system that uses signs to represent words or phrases in English. Signed English is designed to enhance the use of both spoken and written English.
- **Combined options** use portions of the various methods listed above. For example, some deaf children who use auditory-oral options also learn sign language. Children who use ASL also learn to read and write in English. Combined options can expose children who are deaf or hard-of-hearing to many different ways to communicate with others.

Will my child have a tough time in school?

Just like other children, children who are deaf or hard-of-hearing can develop strong academic, social, and emotional skills and succeed in school. You can do a lot to make sure this happens. Find out how your school system helps children with hearing loss. With your input, your child's school will develop an Individualized Education Program for your child. Explore programs outside of school that may help you and your child, and talk with other parents who have already dealt with these issues. Remember, the Individuals with Disabilities Education Act ensures that children with hearing loss receive free, appropriate, early intervention services from birth throughout the school years. Consult the U.S. Department of Education, along with other resources below.





hearing, balance



smell, taste



voice, speech, language

NIDCD supports and conducts research and research training on the normal and disordered processes of hearing, balance, smell, taste, voice, speech, and language and provides health information, based upon scientific discovery, to the public.

Where can I get more information?

The NIDCD maintains a directory of organizations that provide information on the normal and disordered processes of hearing, balance, smell, taste, voice, speech, and language. Please see the list of organizations at <http://www.nidcd.nih.gov/directory>.

Use the following keywords to help you search for organizations that can answer questions and provide printed or electronic information on infant hearing screening:

- Newborn hearing screening
- Early identification of hearing loss in children
- Hereditary hearing loss

For more information, additional addresses and phone numbers, or a printed list of organizations, contact:

NIDCD Information Clearinghouse

1 Communication Avenue
Bethesda, MD 20892-3456
Toll-free Voice: (800) 241-1044
Toll-free TTY: (800) 241-1055
Fax: (301) 770-8977
E-mail: nidcdinfo@nidcd.nih.gov

NIDCD Fact Sheet: It's Important to Have Your Baby's Hearing Screened

NIH Publication No. 11-4968

May 2011

For more information, contact:

NIDCD Information Clearinghouse

1 Communication Avenue

Bethesda, MD 20892-3456

Toll-free Voice: (800) 241-1044

Toll-free TTY: (800) 241-1055

Fax: (301) 770-8977

E-mail: nidcdinfo@nidcd.nih.gov

Internet: <http://www.nidcd.nih.gov>

The NIDCD Information Clearinghouse is a service of the National Institute on Deafness and Other Communication Disorders, National Institutes of Health, U.S. Department of Health and Human Services.