

Newborn Hearing Screening

What is Newborn Screening?

Simple tests can be used to check a baby's hearing right after birth. We don't have to wait until children are older to check for hearing loss. Newborn hearing tests are important because a lot of help is available even when a hearing loss is found early in a baby's life.

Hearing screening programs are called "universal" because they are set up to test all babies. All babies can have their hearing tested before they leave the hospital, or within 3 weeks of leaving the hospital. If a baby is born at home, a hearing test should be completed before he or she is 2 months old.

If a hearing loss is found, then hearing aids and therapy services are started to help the baby learn to listen and speak.

The following links may be helpful:

www.infanthearing.org

www.colorado.edu/slhs/mdnc/

www.infanthearing.org/ehdi.html

Why is Universal Newborn Hearing Screening Important?

It is important to find hearing loss as early as possible, because babies start learning how to use sound as soon as they are born. Listening in the first months of life prepares babies to speak.

By their first birthday, babies are already learning what words mean. Babies start by babbling, using many of the sounds they hear spoken around them. These early steps are building blocks for communication.

Babies learn to talk by listening to their families talk around them. Imagine that a baby has a hearing loss, but no one knows about it. This can lead to slow development of speech. These delays can lead to problems in school later on. Finding hearing loss early can help prevent delays in speaking and learning.

Hospitals regularly screen newborn babies for a number of conditions, such as genetic disorders. It is interesting to know that hearing loss happens more often than any other problems or conditions that are screened at birth. About one to three babies out of every 1000 will be born with a permanent hearing loss. Because of this number, many hospitals offer hearing screening programs.

How Does Newborn Hearing Screening Testing Work?

Two different types of hearing screening tests are used to screen hearing in babies. Both of these tests are safe and comfortable. At Parkway we choose to use the test used by most hospitals in the United States, Called **Otoacoustic Emissions test** or OAE. For this test, a miniature earphone and microphone are placed in the ear, sounds are played and a response is measured. If a baby hears normally, an echo is reflected back into the ear canal and measured by the microphone. When a baby has a hearing loss, no echo can be measured on the OAE test. In order to do this test, the infant should be in a quiet room, and not crying. Because the success of the test depends on testing a quiet baby, it sometimes cannot be completed during your stay. In this case your doctor will recommend returning for a repeat testing session in a week or so.

What Does it Mean if a Baby Fails the Newborn Hearing Screening Test?

When a baby fails the newborn hearing screening, it does NOT necessarily mean that he or she has a hearing loss. Between 2 and 10 percent of all babies across the US do not pass their first hearing screening. Less than 1 percent will have a permanent hearing loss. Many of the babies who need follow-up testing will have normal hearing.

You may wonder why a baby with normal hearing would fail the newborn hearing-screening test. Some common reasons are:

- Vernix in the ear canal
- Fluid in the middle ear
- Movement and/or crying during the test

Even though most babies will pass the follow-up hearing testing, it is VERY important to take your baby for follow-up testing. This is the best way to be SURE about your baby's hearing.

Can a Baby Pass the Test and Still Have Hearing Loss?

Although it doesn't happen very often, sometimes babies can pass a hearing test and still have hearing loss. Some mild hearing losses or losses that affect only some pitches may not be picked up by the screening test.

Some infants have hearing loss that is not present at birth. These babies are born with normal hearing, but develop a hearing loss later. This may happen because of illness or because of some genetic condition.

Hearing loss after the newborn period might also happen because of the use of certain medications or from an accident or disease.

If your baby has risk factors for a later-occurring hearing loss or if you have concerns about your child's responses to sound or speech development, you should discuss this with your baby's doctor.

It is important to keep in mind that regardless of your baby's age, there are safe and accurate tests that can be used to measure how your baby hears.

What Should I Do If My Baby Fails the Test?

If your baby does not pass the newborn hearing screening, please talk with your doctor. The doctor should refer your baby to a pediatric audiologist for follow-up testing.

The First Step

For many babies, the first step of follow-up starts with one more screening using tests similar to the ones used in the hospital. If a baby does not pass the follow-up screening, diagnostic testing is completed. Some hospitals or clinics will complete a diagnostic test at the time of follow-up, instead of rescreening.

The ABR is used for diagnostic testing because it can measure the softest level that the ear responds to sounds using different pitches or tones. Diagnostic ABR testing should test low, middle and high-pitched sounds in order to measure how the ear responds to different parts of speech.

If follow-up testing is done before a baby is 2 months old, all testing can be done while the baby sleeps naturally. For older or very active babies, a liquid medicine may be used to help them sleep during testing. It is important that babies are quiet and still for OAE and ABR testing.

The Second Step

If diagnostic testing shows that your baby has a hearing loss, a number of professionals will help your baby and your family. Some of the people you may meet include the following:

- **Services Coordinator** - This person works with early intervention programs. He or she works closely with families to identify their needs and to make sure that providers work together.
- **Early Intervention Specialist** - A teacher who specializes in working with infants who have hearing loss.
- **Pediatric Audiologist** - A professional who specializes in testing the hearing of infants and children and recommends hearing aids.
- **Ear, Nose and Throat Physician** - A doctor who specializes in problems of the ear, nose and throat.
- **Pediatrician or Family Practitioner** - A doctor who provides health care for infants and children.

If your baby has a hearing loss, these professionals will be eager to provide support to your family. Their main goal will be to work together to help your baby's development. It is important that services for your baby begin as soon as hearing loss is found.

The following link may be helpful.

www.cdc.gov/ncbddd/ehdi/