Types of Hearing Tests

- **Auditory Brainstem Response (ABR)** is a test done while your baby is sleeping. ABR helps determine the type and degree of hearing loss.
- **Otoacoustic Emissions (OAE)** testing uses a microphone and measures sound coming out of the inner ear to test the hair cells in the cochlea.
- **Tympanometry** is used to measure how well the eardrum is working. This test helps determine if there is fluid in the middle ear. It does not measure hearing.
- **Audiometry** is testing usually conducted in a sound-proof booth to determine a child's response to sounds presented at different frequencies and volume levels.
- **Behavioral testing** is used when children are older and can be trained to respond.

Next Steps

The audiologist will help you understand your child's hearing loss and will recommend what to do next. Often, hearing aids will be recommended. Depending on the degree of your child's hearing loss, your audiologist may discuss the possible benefits of cochlear implants. You will be referred to the Early Intervention (Kentucky Early Intervention System/KEIS) team in your area. One member of the KEIS team may be a Speech-language Pathologist, who can help you learn best how to communicate with your child. You will help your child develop the skills necessary to reach their full communication potential if you:

- Understand your child's hearing loss
- Make sure that hearing aids or cochlear implants are worn during waking hours
- Apply what you learn about communicating with your child during everyday activities

Office for Children with Special Health Care Needs
Early Hearing Detection and Intervention Program
310 Whittington Parkway Suite 200
Louisville KY 40222
1-877-757-4327
502-429-4430 ext. 2027

http://chfs.ky.gov/ccshcn
KENTUCKY CABINET FOR HEALTH & FAMILY SERVICES
Equal Opportunity Employer M/D/F
Printed with state funds. 08/22

TEAM KENTUCKY®
CABINET FOR HEALTH AND FAMILY SERVICES

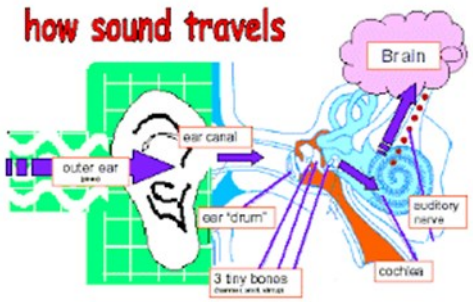
TEAM KENTUCKY®
CABINET FOR HEALTH AND FAMILY SERVICES

Early Hearing Detection and Intervention

Bilateral Hearing Loss: A Parent's Guide

KENTUCKY EHDI
EARLY HEARING DETECTION & INTERVENTION

How We Hear



- Sound waves are gathered by the outer ear and funneled through the ear canal.
- The sound waves strike the eardrum causing it to move. This, in turn, causes tiny bones to vibrate.
- This vibration creates movement of the fluid in the inner ear, causing the delicate hair cells in the cochlea to bend.
- This movement of the hair cells changes sound, into electrical signals, which are sent along the auditory nerve to the brain. The brain interprets these signals as sound.

Types of Hearing Loss

Conductive Hearing Loss
Conductive hearing loss is caused by a problem in the outer or middle ear that blocks the normal flow of sound to the inner ear. This type of hearing loss is often medically or surgically treatable.

Some causes of conductive hearing loss are:

- Wax in the ear canal
- Fluid in the middle ear
- A hole in the eardrum
- Malformed middle ear bones
- Complete closure (atresia) of the ear canal

Sensorineural Hearing Loss (SNHL)
Sensorineural hearing loss is most often caused by a problem in the inner ear. This type of hearing loss Is often permanent and cannot be medically corrected.

Causes of Sensorineural Hearing Loss include:

- Genetic factors
- Lack of oxygen during birth
- Prenatal infections
- Infections after birth

About half of all sensorineural hearing loss in infants has a genetic cause. About one quarter of all hearing loss is nongenetic (infections or illness) and another quarter has unknown reasons.

Types of Hearing Loss (continued)

Mixed Hearing Loss
Mixed Hearing Loss is caused by a combination of both conductive and sensorineural hearing loss in the same ear. One example is having a sensorineural hearing loss and an ear Infection at the same time.

Auditory Neuropathy
Auditory neuropathy, (also called auditory desynchrony) occurs when the inner ear is receiving sound properly, but the signals are not reaching the hearing nerve in the proper way. Sounds are either distorted or not heard at all.

Degree of Hearing Loss
The amount of hearing loss your child has is called the "degree" of hearing loss. The degree of hearing loss can be mild, moderate, severe, or profound. With a mild hearing loss, your child will have trouble hearing and understanding soft or distant speech. With a moderate hearing loss, your child will have trouble hearing speech at a normal conversation level. A child with severe or profound hearing loss will have trouble hearing loud speech or environmental sounds. It is important to understand that even a "mild" hearing loss can affect your child's speech and language skills.