



My Child Has a Hearing Loss: A Parent/Caregiver's Guide



NATIONWIDE CHILDREN'S®

When your child needs a hospital, everything matters.



Types of Hearing Loss

The 3 main types of hearing loss are:

Sensorineural Hearing Loss (SNHL)

SNHL is caused by a problem in the inner ear or with the hearing nerve. Most of the time, SNHL is lifelong. Causes of SNHL may be:

- Genetic syndromes or family-related hearing loss
- Severe jaundice (yellowing of skin) at birth
- Loud noises
- Infections
- Diseases during pregnancy
- Head injury
- Low birth weight
- Problems with ear development

Conductive Hearing Loss (CHL)

CHL is caused by a problem in the outer or middle ear. CHL may be short-term or lifelong. The most common causes of short-term CHL are ear infections and ear wax buildup. Lifelong conductive hearing loss in children is most often caused by a difference in the way the outer or middle ear was formed.

Mixed Hearing Loss (MHL)

MHL happens when a SNHL and CHL happen at the same time. For example, when a child who has a SNHL also has an ear infection. This is a MHL.

Other Types of Hearing Loss

Auditory Neuropathy Spectrum Disorder (ANSD)

ANSD occurs when the inner ear has trouble sending sound to the brain. This means the sound does not travel to the brain in a way that the brain can understand. Children with this type of hearing loss can have different degrees of hearing loss and hearing can improve or worsen over time. A child with ANSD must complete a behavioral hearing test to better understand their hearing loss.

Children with ANSD can develop speech and language skills with the help of hearing devices. Speech language therapy and visual communication like lipreading or sign language may be needed.

Unilateral Hearing Loss (UHL)

UHL means hearing is normal in one ear and not normal in the other ear. A child with this type of hearing loss can hear, but will have a hard time finding where sounds are coming from. Listening in noisy places and to soft speech, especially when sounds are coming from the side with hearing loss, will also be hard.

Speech and language skills can develop normally, but seeing a speech-language pathologist may be suggested. It is important to monitor hearing in both ears as hearing can worsen over time. A hearing device may be needed.

Reverse Slope Hearing Loss (RSHL)

Children with RSHL may have trouble hearing quiet speech or someone who is far away. These children also have more trouble listening in noisy places like at school. Some speech sounds, especially vowel sounds, may be hard for these children to learn.

Degree of Hearing Loss

Minimal Hearing Loss - 16-25 dB HL

Children with minimal hearing loss may have trouble hearing someone talking softly or far away. They will also struggle to hear in places with a lot of background noise. They can get tired easily because they have to work harder to understand speech.

Mild Hearing Loss - 26-40 dB HL

Children with mild hearing loss can “hear”, but often miss parts of speech. As a result, they may often not understand speech. They may also have problems with learning early reading skills, such as matching sounds to letters. These children can tire easily because they have to work much harder to hear and understand speech. Early Intervention programs or a speech-language pathologist may be needed.

Moderate Hearing Loss - 41-55 dB HL

Children with moderate hearing loss will miss most of a conversation and have speech and language delays without the use of a hearing device. When these children get a hearing device at a young age, they can learn to listen and talk like children with normal hearing.

Children with moderate hearing loss may benefit from using visual communication to aid learning to listen and talk. Early Intervention programs or a speech-language pathologist may be needed.

Moderately-Severe Hearing Loss - 56-70 dB HL

Children with moderately-severe hearing loss will miss most speech sounds unless the speech is very loud. These children will have a hard time hearing in most listening situations. Speech and language skills will not develop without the use of a hearing device. Visual communication like lipreading or sign language may be helpful when learning to listen and talk. Early Intervention programs or a speech-language pathologist may be needed.

Severe to Profound Hearing Loss - 71-91+ dB HL

Children with severe to profound hearing loss will have problems hearing most sounds including very loud sounds. These children may respond to things that they can see or vibrations (shaking) that they feel.

Speech and language skills cannot develop without the use of a hearing device. A speech-language therapist or other special therapies may be suggested to provide other communication methods for the patient.

Types of Amplification for Infants and Toddlers with Hearing Loss

Hearing aids

A hearing aid is an electronic device that makes sounds louder (amplification). Hearing aids can be fitted on infants and toddlers as soon as they are diagnosed with hearing loss. The process for fitting a hearing aid can begin as early as 1 month old. Infants and toddlers are fitted with behind-the-ear (BTE) style hearing aids. These hearing aids can be used for any degree of hearing loss and will need less repairs than other types of hearing aids. The hearing aid is fitted to the ear with a custom ear mold that is made from an imprint of the ear. Ear molds can be made easily and may be done often as an infant's ear grows. A BTE hearing aid is perfect for infants and young children because of its strength and how easily it can be programmed to meet the needs of a growing child.



This child is wearing a hearing aid.

Bone conduction hearing aids

A bone conduction hearing aid shakes (vibrates) the bones of the skull to send a sound signal directly to the hearing organ, the cochlea. This device is most often recommended for children who cannot use normal hearing aids due to constant ear draining, ear defects or a major hearing loss in one ear (Single-sided deafness). Bone conduction hearing aids can be surgically implanted. The Food and Drug Administration (FDA) states that children under the age of 5 cannot have implants due to the small size of their head. Infants and toddlers can wear a bone anchored device on a soft headband called a "softband" until they are ready for surgery. A child may be fitted with a bone anchored device as soon as their hearing loss is diagnosed. Infants are most successful with a bone anchored device when they are closer to 5-6 months of age and can sit up without help. Younger infants can use a bone anchored device, but fit and placement of the device may need to be adjusted until the child is older.

Cochlear implants

Cochlear implants are made for children with severe to profound hearing loss. Currently, the FDA does not allow children under the age of 9 months to get a cochlear implant. Infants who need cochlear implants often wear hearing aids until their surgery takes place.

Cochlear implants replace the part of the ear that is not working. The implant sends an electric pulse up the auditory nerve to the brain and the brain recognizes the signal as sound. Because the cochlear implant is sending a new and different signal to the brain, the brain needs time to learn how to "hear" the new signal. Families who choose cochlear implants for their child should be aware of the time and effort that it will take to train their child's brain to hear.



This child is wearing a cochlear implant.

Remote Microphone (RM) systems

RM systems can be used with hearing aids, cochlear implants and bone anchored devices. A common RM system is known as a Frequency Modulation (FM) system. An RM system has a transmitter (microphone) and a receiver. The receiver can be attached to the child's personal hearing device or may be part of the hearing device. A family member can wear the microphone to communicate with the child. The RM system can help a child to hear in

The RM system can help a child to hear in difficult listening environments, such as when someone is far away or in a noisy place. An RM system can be used anytime a child is not within 3 feet of a parent or family member. For example, when parents are talking in the kitchen while their child is in the next room, the parent can wear the microphone and the child can hear what the parents are saying. An RM system gives young children better access to spoken language and learning by overhearing (incidental learning). RM systems can also be helpful for daycare or preschool teachers when the child is old enough to attend.

For more information and to find out the best amplification options for your child, talk with your child's hearing team!

How Will My Child Communicate?

	Auditory-Oral/ Auditory-Verbal	American Sign Language	Total Communication	Cued Speech*
Definition	Focuses on using spoken language and developing spoken language skills through the use of hearing devices and listening.	Because ASL is visual, it can be used and understood by people with all degrees of hearing loss, including those with severe to profound hearing loss, with or without a hearing device. How a child hears does not change how they learn ASL.	An auditory and visual type of communication that uses spoken language and an English based sign language and/or other visual communication systems at the same time.	An auditory and visual type of communication that uses hand signals for different sounds. Different hand shapes in different positions near the mouth help the child understand what sound is being said.
Goals	To develop spoken language by using listening and natural gestures.	To give a child with hearing loss access to early language learning and help the brain develop with or without the use of a hearing device.	To support listening skills and spoken language while also giving the child a way to communicate with family, friends and teachers.	To support listening skills and spoken language and early reading skills, such as knowing which sound goes with which letter.
Hearing	Consistent, early and correct use of hearing devices are needed to develop this type of communication skill. Audiologic monitoring and management is important.	How a child hears does not change how they learn ASL. With the use of a hearing device, a child can learn to listen and talk in addition to using ASL.	Ongoing use of hearing devices is strongly encouraged to help with the development of the child's listening and spoken language skills.	Early and regular use of hearing devices is important if the main goal is for the child to use listening and spoken language to communicate.
Family Commitment	Families will need to work with their child's teachers and therapists to learn how to support listening and spoken language development at home.	Families will also need to learn ASL and use it all the time in the home. Children learn most of their language skills by communicating with people in their family, so it is important that everyone in the family uses the same mode of communication!	Families will need to learn and always use a visual communication system. These families will also need to work with their child's teachers and therapists to learn how to support listening and spoken language development at home.	Families will need to learn the hand signals or "cues" that make up the cued speech system and will need to always use them when communicating with their child.

** Cued Speech is not currently a communication mode offered by Nationwide Children's Hospital Hearing Team, but it is a widely used communication mode for children with hearing loss*



Why is Working with a Speech Language Pathologist Important?

The speech language pathologists in the Hearing Program at Nationwide Children’s Hospital work with each child to help their family choose the best mode of communication for the child. They help that child develop communication skills by:

- Teaching parents and caregivers ways to help children learn to listen and talk
- Doing listening checks to see if a child’s hearing devices are working
- Helping children learn to listen with their hearing device(s)
- Helping children make their speech sounds correctly
- Helping children learn to understand and use language
- Helping children learn the skills needed for reading

The audiologists and speech pathologists in the Hearing Program at Nationwide Children’s Hospital work with each other to track a child’s progress and make changes to their hearing device or therapy to best serve the child and their family.

Your health care provider will make a referral to one of the speech specialists from the Hearing Program. Our speech specialists will then assess your child’s current speech, language, and auditory skills and decide if your child could benefit from therapy. The speech team can start working with your child as early as 3 months of age.

To contact the speech department for more information please call 614-722-2200.

Helping My Child Learn to Listen

These are some ways that you can help your child develop auditory skills at home:

Speak at a regular volume

Shouting or speaking loudly will change the sound received through the hearing aid(s).

Speak close to the microphone

As often as possible, speak no farther than 3 feet from the microphone. This is the best distance for listening.

Call out sounds in and around the home

Call attention to and name sounds, such as telephones, dogs barking, doorbells, doors closing, etc. Talk to the child about those sounds and show them what makes the sound to help with sound-object connection.

Play with objects that make sounds

For example, play with an airplane and say “ahhh”, or with a cat and say “meow”. Encourage your child to connect a sound with an object and link meaning to the sound. Remember to make the sound before you show them what is making the sound. This will help develop the auditory memory and the auditory feedback loop.

Use exaggerated and varied intonation

Exaggerated or varied pitch (intonation) or “parentese” assists children with speech discrimination (ability to tell sounds apart), receptive language and speech production.

Auditory first and last

If you must provide visual or physical examples to prompt a sound or word, be sure to repeat it again in auditory only conditions. Think of it as an “auditory sandwich”:

- First — Auditory cue only (you say it)
- Second — Visual cue/physical examples/sign (show or demonstrate it)
- Third — Auditory cue only again (say it again)

Cue your child to listen

Always point to your own ear and say “listen” before starting to speak. Be sure you have your child’s attention before speaking.

Cue your child to take a turn talking

Teach your child to listen to your voice by putting your hand or toy in front of your mouth. Then tell your child what you want them to repeat. Point to them and say “your turn” moving your hand or toy in front of their mouth.

Take listening walks

As sounds occur in different places like outside or inside, point to your ear and say “I hear that!” Then ask “do you hear that?” Remember to call attention to different sounds from loud to soft and low to high pitch.

Learn the power of pause

Let your child try to respond and communicate with you before jumping in to help. Silently count to ten before taking your turn in the “conversation”.

Use acoustic highlighting

Acoustic highlighting is anything that helps to highlight sounds or words of spoken language:

- “b-b-b-ball”, “mmmmmmeee”
- “Give me the (pause) BALL” or “Give (pause) ME the ball”

Give words for your child’s movements

If your child is reaching for a toy, you can say “BALL? You want the BALL?” See if your child will copy the word. Always accept similar words when teaching a new word.

Talk slowly

Talk to your child in a slow manner. Children who have hearing impairments often have trouble following and understanding fast speech.

Let your child take the lead

Follow your child’s lead by playing with them and talking about things they like.

Narrate life

Talk about what you are doing as you do it.

Describe objects of interest

Talk about different things, such as color, size, smell, texture, taste, parts of an object, kind of object, what it is made of, what sound it makes, etc.

Read to your child EVERY DAY!



Family Resources

If you are looking for more information about hearing loss, amplification and communication, or some basic resources for your family as you begin this journey, the following websites are great places to start!

Informational Resources:

- AG Bell Association for the Deaf and Hard of Hearing
 - www.agbell.org
- American Society for Deaf Children
 - www.deafchildren.org
- Beginnings
 - www.ncbegin.org
- Hearing First
 - www.hearingfirst.org
- My Baby’s Hearing – Boy’s Town National Research Hospital
 - www.babyhearing.org
- National Center for Hearing Assessment and Management (NCHAM) – Utah State University
 - www.infanthearing.org
- Success for Children with Hearing Loss
 - www.successforkidswithhearingloss.com

Parent-to-Parent Support

- Hands and Voices
 - www.handsandvoices.org

Learning to Listen at Home

- Communication Corner – Cochlear Americas
 - www.cochlear.com/us/communication-corner
- Baby Beats – Advanced Bionics
 - www.advancedbionics.com/sg/en/home/support/rehab/baby-beats

Notes

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