HASSENFELD
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Hearing Loss In Children: A Guide For Parents

What is Hearing Loss?

Hearing loss happens when there is a problem with any part of the ear.

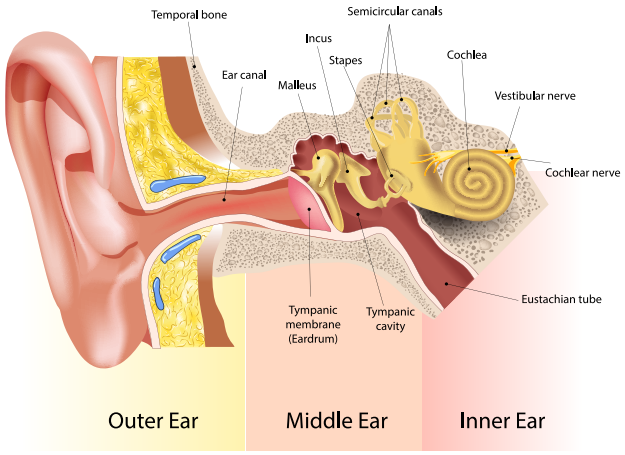
A child won't be able to hear sounds at a normal range of loudness. The level of severity can range from moderate hearing loss to severe hearing loss.

Hearing loss affects a child's quality of life, speech, growth learning language and performance in school. It can also affect the child's ability to develop social skills.

The earlier the problem is found and treated, the better the results for your child.

How does Hearing Work?

The ear has an outer ear, the middle ear, and the inner ear.



The outer ear guides the sound wave through the ear canal to reach the middle ear

The middle ear starts with the tympanic membrane (ear drum). The sound wave reaches the ear drum leading to vibration of the membrane and the ossicles.

The cochlea is within the inner ear and is filled with fluid. The vibration leads to transmission of a wave in this fluid which is turned into to signals transmitted to the brain by the auditory nerve.

What Are The Signs That My Child Might Have Hearing Loss?

Signs in Babies:

- Does not turn head to sound
- Does not say any simple words
- Does not babble
- Does not startle at loud noises

Signs in Toddlers:

- Does not react to sounds
- Does not respond to their name
- Does not babble
- Is not saying any new words

Signs in Children:

- Has speech delay or problems saying words
- Asks for repetition
- Does not follow simple commands and does not understand what is being said
- Listens to music or TV at high volume
- Gives inappropriate answers to simple questions.
- Has social difficulties
- Has difficulty reading and has poor academic performance

What Could Be Causing Hearing Loss In My Child?

There are different types of hearing loss: conductive, sensorineural, or mixed.

Conductive hearing loss: an abnormality within the outer ear or middle ear.

- Malformation of their outer ear
- Genetic syndromes
- Ear wax
- Ear infections
- Trauma to the ear drum and/or ossicles,
- Abnormal chain of ossicles

Sensorineural hearing loss: an abnormality within the inner ear or brain.

- Genetic causes
- Infections during pregnancy
- Toxic medications
- Premature birth
- Lack of oxygen
- Injury to the head
- Neurological disorders
- Exposure to loud noises
- Infections of the ear or the brain

How Can I Confirm If My Child Has Hearing Loss?

If there is a concern for hearing loss, your child should be evaluated by their pediatrician and by an otolaryngologist. When needed, the provider will order a hearing test for a better evaluation.

All newborns are required to have hearing screening test before leaving the hospital. If your child fails the test on one or both sides, a second screening test is performed. If they do not pass the second test, a more detailed hearing test, is performed. ABR is done while your baby naps when they are younger than 6 months.

Visual reinforcement audiometry:
child's response to sounds on left and right sides is examined by rewarding them with a toy or light.

Play audiometry:
child's response to sound is examined by asking to play or perform a task.

Pure tone audiometry:
child wears headphones and raises a hand in response to speech and tone stimuli.

Further tests are sometimes required : genetic testing, scans, evaluation of vision, cardiac exam, testing for CMV

What Can Be Done To Help My Child?

If your child has hearing loss, there are different options to help them depending on the cause of the hearing loss and on its severity. The New York State Department of Health gives access to the Early Intervention Program (EIP) for all children. EIP offers hearing testing and services for children with developmental delay. It gives support for children with hearing loss to improve their speech and to learn language and communication skills.

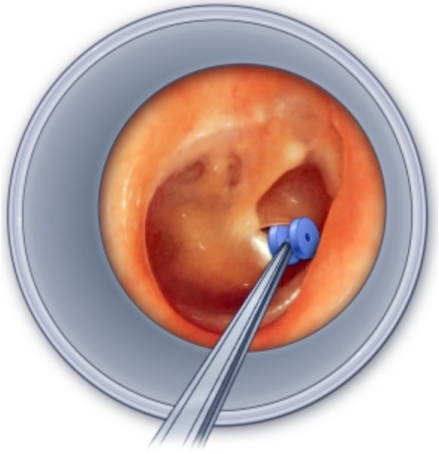
Frequency Modulated (FM) System: To help your child hear better in classroom settings. The teacher wears a microphone while your child has a speaker with him to hear better.

Hearing aids: To amplify the sound and improve hearing. There are different types and options of hearing aids. You can discuss with the specialist which option is best for your child.

An evaluation by an Otolaryngologist (ENT) doctor is needed to find the cause of the hearing loss and the right management. This might include imaging of the ear, more testing, and possible genetic testing.

For some children, the answer to their hearing loss could be a surgical procedure performed by an Ear, Nose, Throat specialist.

If your child has fluid behind their eardrum, they might need a simple procedure which includes inserting a small tube in their eardrum to help drain the fluid and improve their hearing.



For other children who have an opening in their ear drum or have an abnormality in their ossicles, they can be treated with a procedure to fix and close the opening, and to fix their ossicles.

Cochlear implant (CI)

If your child has moderate to severe hearing loss in one or both ears, a CI can be surgically placed to restore hearing. This surgery involves putting a small devices that stimulates the nerve responsible for hearing. These devices have a part hidden under the skin and directed into the inner ear and another part that is visible behind the ear or on the scalp.

Following surgery, your child will be closely followed with appointments to achieve the best outcome.

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