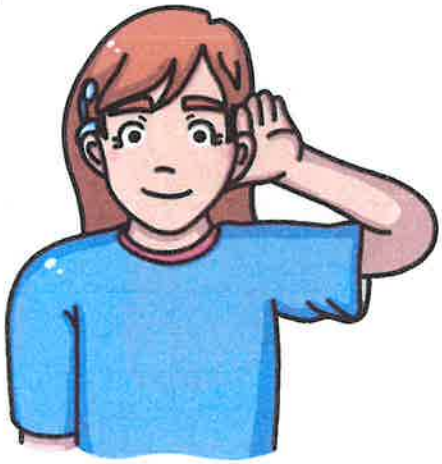
Things to Know About
Hearing Aids

Hearing Assistive Technology (HAT) such as DM systems help connect the voice of the speaker directly to the HA wearer's ears. DM stands for Digital Modulation.



DM Transmitter

The speaker wears a transmitter that channels their voice directly to the listener's ears. It has a microphone that amplifies the speaker's voice and should be worn as high up as it comfortably sits on the speaker's chest.

A receiver connects to a HA through the battery door. Some HAs need adaptors called audio shoes to connect the receiver, and some newer HAs can directly stream DM systems without the need for external receivers.

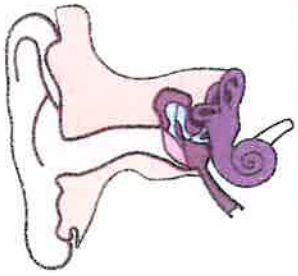
Receiver

Families should consult with their audiologists to ask about what hearing technology is available for their child based on the nuances of their individual hearing loss.

What is a Hearing Aid?

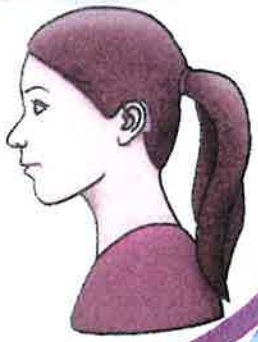
Hearing aids (HAs) function by amplifying sound that is received through a microphone. Pediatric hearing aids are typically worn behind the ear (BTE) and an ear mold is custom fitted to sit in the ear.

Hearing aids consist of:
-a microphone that picks up sound
- a mold that sits in the ear
- a volume control (typically disabled on pediatric hearing aids so that children cannot modify the quality of their sound input)
- a program button (often disabled on pediatric HAs)
- an ear hook and tube to connect the mold



Many HAs today are digital. This means that they can be specially programed and coded by audiologists to optimize sound for an individual based on their specific hearing loss. Digital HAs process sound and refine it before it turns back into sound, allowing for better sound quality and amplification.

Hearing aids can lock to prevent young children from taking out the battery. As children get older, promoting self advocacy by having them change their own batteries and report how their HAs are functioning can set them up for greater success.



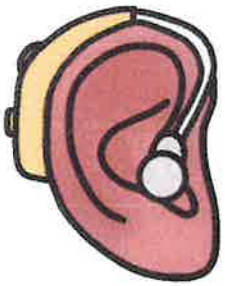
What is a Cochlear Implant?

Cochlear implants function by stimulating the auditory nerve and bypassing the damaged hair cells of the inner ear. Implants send electrical signals to the brain, which are then interpreted as sound.

Cochlear implants consist of:
-an internal magnet that is surgically implanted
-an external processor that sits behind the ear, connects to the internal magnet and uses a microphone to obtain sounds from the environment as well as convert signals from the speech processor into electrical impulses.

For pediatric patients, the FDA guidelines currently state that a child needs to be 12 months-17 years old, have a severe to profound sensorineural hearing loss, and be found to receive little to no benefit from hearing aids following a trial.

Hearing aids utilize residual hearing to amplify sounds and make them louder, whereas cochlear implants bypass any residual hearing and utilize the electrodes implanted in the cochlea to provide access to sound.



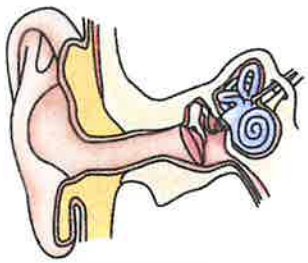
Things to Know About

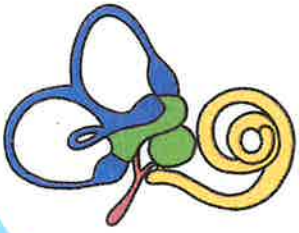
Cochlear Implants

Cochlear implants differ from hearing aids in that they do not amplify sound, but instead stimulate the auditory nerve to send electrical impulses to the brain which are then interpreted as sound.

For children who have a severe-profound hearing loss and gain little to no benefit from hearing aids, cochlear implants can help them access spoken language.

Early identification and amplification is vital for setting children up for success in developing strong listening and spoken language skills.





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