

Pediatric Amplification

There are two ways we hear sound-- through air conduction and through bone conduction. They both work together to help us listen to and perceive sound. However, when we hear ourselves speak, it is actually the enhancement of lower frequencies by vibrations in the bone that helps us perceive our 'normal' tone of voice.

Hearing aids are electronic or battery-operated devices that can amplify and change sound. A microphone receives the sound and converts it into sound waves. The sound waves are then converted into electrical signals. Children as young as 2 months can be fitted with hearing aids.

What are the different types of hearing aids?

Behind-the-ear (BTE) hearing aids

Behind-the-ear hearing aids, as the name implies, are worn behind the ear. This type of hearing aid, which is in a case, connects to a plastic earmold inside the outer ear. These hearing aids are generally used for mild to severe hearing loss. However, poorly fitted BTE hearing aids can cause feedback, an annoying whistling sound, in the ear.

Bone Conduction hearing aids

While a hearing aid tries to push sound through the damaged part of the ear, the bone conduction devices uses your natural ability to conduct sound through bone vibrations. Through bone conduction, sound bypasses the damaged outer or middle ear and sends clearer, more crisp sound directly to your inner ear.

Cochlear Implants

A cochlear implant is a surgically implanted neuroprosthetic device that provides a sense of sound to a person with severe to profound sensorineural hearing loss. Cochlear implants bypass the normal acoustic hearing process, instead replacing it with electric hearing. Namely, the sound sensation comes from the sound that is converted to electric signals, which directly stimulate the auditory nerve. The brain adapts to the new mode of hearing, and eventually can interpret the electric signals as sound and speech