

Assistive Technology: Hearing Aids

This section provides information about hearing aids, cochlear implants, FM systems and other assistive listening devices. Your audiologist will be able to give you more information and answer your questions. Assistive technology and assistive listening devices are also called amplification.

Does my child need assistive technology?

- Hearing loss decreases the amount of sound your child's ears and brain receive. If your child isn't able to hear some or all the sounds of speech, then she will have difficulty learning spoken language.
- If you want your child to learn to communicate with listening and spoken language, your child will need to use hearing aids, cochlear implants, BAHAs, and/or an FM system as recommended by your audiologist.
- The sooner you get amplification the sooner your child can begin hearing speech sounds.
- If you are considering cochlear implants, it is important to begin the cochlear implant candidacy process early. Speak with your child's audiologist about this process.
- Some parents may choose a communication option that uses only sign language and require the use of hearing aids or cochlear implants.

Hearing aids

What is a hearing aid?

- A hearing aid is a small electronic device that your child wears behind her ear(s). It makes some sounds louder.
- A hearing aid has three basic parts:
 - Microphone
 - Amplifier
 - Speaker
- The hearing aid receives sound through a microphone, which converts the sound waves to electrical signals and sends them to an amplifier. The amplifier increases the power of the signals and then sends them to the ear through a speaker.
- Hearing aids are secured to your child's ears with earmolds.

What are earmolds?

- An earmold is a small piece of soft plastic that is custom made for your child's ear.
- Earmolds fit inside your child's ear canal.
- The earmold helps hold the hearing aid in place.
- Because young children grow very fast, earmolds will need to be replaced as your child grows. Replacement will occur more often during early infancy.
- Earmolds will last longer for older children.

What are some different kinds of hearing aids?

There are many hearing aid styles. Your audiologist will help you select the best hearing aid for your child.

- Small children usually wear a behind the ear (BTE) hearing aids.
- Smaller, in the ear (ITE) hearing aids are not recommended for small children.
- Some children with conductive hearing losses, who can't wear a traditional hearing aid, may be fitted with a soft band retained sound processor (BAHA).

Hearing aid technology

There are also several kinds of technology for hearing aids. Types of hearing aids are:

Hearing aids

- Increase sound digitally.
- Your audiologist adjusts them using a computer.
- The hearing aid program can be customized to fit your child's hearing loss.
- Processes noise and speech in a way that may help your child understand speech better.
- Offer increased flexibility to accommodate changes in your child's hearing over time.

Soft band retained sound processor (BAHA)

- Soft band retained sound processors are used by some children with conductive hearing losses that cannot be medically or surgically corrected. Often, these children can't wear a BTE hearing aid.
- The processor transmits sound via a bone oscillator (vibrator) that sits on the bone behind the ear. This is mounted on a soft band.

Important features of hearing aids for infants and toddlers

- The hearing aid should have enough power to allow your child to hear speech sounds.
- It should have Direct Audio Input (DAI) and microphone–telecoil (M–T) switching options. These options allow the hearing aid to be paired with other listening devices, such as FM systems.
- It should be flexible to make changes in tone, output and gain. This allows audiologists to adjust them as they learn more information about your child's hearing.
- It should have tamper-resistant battery doors. This is important because hearing aid batteries are toxic and can harm your child, if swallowed.
- The hearing aid should have a microphone that is right for your child's listening needs:
- It should have comfortable, customized earmolds.
 - Because young children grow very fast, the earmolds may need to be replaced as recommended by your audiologist.

Your audiologist can talk to you about other accessories for your child's hearing aids. Accessories include battery testers, dehumidifiers, hearing aid stethosets (so you can listen to your child's hearing aids), safety clips and volume control covers.

Process for getting hearing aids

The process to fit your child with hearing aids will take a few weeks. This may seem like a long time but several steps must happen first.

- By law, your child must have approval or “medical clearance” from an Ear, Nose and Throat (ENT) doctor—an otolaryngologist—to wear hearing aids.
- The audiologist must make impressions of your child’s ears. These impressions will be used to make custom earmolds for your child.
- Your child must have a special measurement called the Real Ear to Coupler Difference (RECD) made with her earmolds in place. Your child’s RECD measurement helps the audiologist adjust her hearing aids. The RECD measurement are made before or at the same time as your child’s hearing aid fitting.
- Sometimes your child may have medical clearance and earmolds, but you may still be waiting for funding for the hearing aids. In these cases, your child’s audiologist may fit him with a “loaner” hearing aid during the waiting period. This is because it is important that your child start wearing amplification as soon as possible.

Tips for keeping hearing aids on infants and small children

Keeping hearing aids on your small child can be a challenge, especially at first. As your child gets used to her hearing aids, and learns that she hears better with them on, it will get easier. Here are a few tips that can help:

- [Babies \(0–12 months\)](#)
- [Toddlers \(12–24 months\)](#)
- [Preschoolers \(2 to 5 years\)](#)

Possible issues with your child’s hearing aids

Be sure to talk with your child’s audiologist if you have questions or any of the problems listed below.

Feedback

- Feedback is a normal function of any sound system. It occurs when sound travels through a microphone to a speaker and is reamplified. This creates a feedback loop that sounds like a squeal or fluttering sound. It happens when the hearing aid is turned on but not in the ear or if the hearing aid is touched while in the ear. If it occurs when your child has her hearing aids on, you can try these troubleshooting tips:
- Check to see if the earmold is inserted correctly. If feedback does not stop check to see if the earmold or earhook is damaged.
- Remove anything that is touching the hearing aid (for example a hat or blanket).
- Feedback can also be caused by an earmold that no longer fits your child or if your child has wax in her ear or earmold. Your audiologist can help you troubleshoot these issues.
- If you notice any redness or irritation from the earmold or hearing aid, notify your audiologist for adjustment.

Sore spots

- Sometimes new earmolds have uneven areas that can cause redness or a sore spot in your child's ear. If this happens, your audiologist can often file the earmold smooth. Check your child's ears for redness whenever she gets new earmolds.
- A sore spot may be the reason your child doesn't want to wear her hearing aids.

Ear infections

- If your child has an ear infection she may not want to wear her hearing aids because her ears hurt. If you think your child has an ear infection, be sure to talk to your child's doctor or audiologist. They may recommend that your child doesn't wear her hearing aids until the infection clears. If your child's ears are actively draining, remove the hearing aids until the ear infection clears.