

General Information for Parents

A Guide to Hearing Loss and Amplification Technology

Hearing Impairment

As a parent of a child with hearing loss, you probably have many questions. Fortunately, your child is living in an age when technology and support offer many excellent options. There is every reason to be optimistic about what can be done to help your child reach his/her highest potential.

The degrees of hearing loss are classified as mild, moderate, severe and profound. A relationship exists between the decibel hearing loss and the degree of functional difficulty. The table below offers a guide to the different degrees of hearing loss, the decibel level and an example to demonstrate the loudness of these levels. Each level brings different challenges and the need for different treatment and technology options.

Degrees of Hearing Loss

| Degree of hearing loss | Decibel level (HL) | Loudness example | Possible challenges and needs |
|--------------------------------|--------------------|--|---|
| Normal hearing | Up to 20 dB | Rustling leaves, clock ticking | Very few hearing related problems. |
| Minimal/mild hearing loss | 20 - 40dB | Quiet / whispered speech, clicking fingers | May have difficulty hearing quiet voices. Depending on where your child falls in this range, he or she may benefit from amplification or may require extra support in school. |
| Moderate | 40 - 60 dB | Quiet / normal conversational speech | Should understand conversational speech when facing the speaker and up close. Will need to use hearing instruments. May require extra support in school (e.g. FM/favorable seating). FM may also be helpful at home. |
| Moderately severe hearing loss | 60 - 75 dB | Normal/loud speech, doorbell | Conversation must be loud. With correctly programmed hearing instruments, will hear normal conversational voice. Will benefit from extra help in school (e.g. FM/ favorable seating). FM may also be helpful at home. |
| Severe hearing loss | 75 - 95 dB | Telephone ringing, thunder, baby crying | May hear loud voices up close. Will need to use hearing instruments in order to hear conversational speech. Will benefit from extra help in school (e.g. FM/ favorable seating). FM will also be helpful at home. |
| Profound hearing loss | 95 dB or more | Truck, chainsaw | Will need to wear appropriate amplification technology (e.g. hearing instruments, cochlear implant) in order to hear conversational speech. Will benefit from extra help at school and at home (e.g. FM). |

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Choosing the most suitable technology

Today, there is virtually no hearing loss which cannot benefit from the use of appropriate technology. Once a hearing loss is diagnosed, hearing instruments are usually tried first. The choice you make about which type of hearing instruments will depend on a number of factors: the level of your child's hearing, your child's needs and the needs of your family all play a role. Remember that you do not have to make these choices on your own.

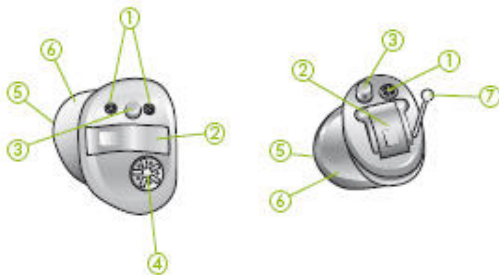
Hearing instruments have progressed a great deal in recent years and offer a whole range of technologies designed to meet each child's specific hearing needs. Young children will normally be fit with hearing instruments worn behind-the-ear (BTE) that come in compact sizes, a variety of bright, cheerful colors and can help a wide range of hearing losses.



1. Microphone inputs with Wind and Weather Protector for microphones
2. Program (TacTronic) switch (may be disabled for younger children)
3. Programming cover
4. Volume control (may be disabled for younger children)
5. Battery compartment with ON/OFF switch (younger children may have battery lock)
6. Hook/sound output
7. Individual earmold
8. Wind and Weather Protector for battery compartment

Older children may be candidates for in-the-ear hearing instruments (ITE), which are custom made and fit inside the ear. These can help with mild to moderate hearing losses.

In-the-Ear/In-the-Canal Hearing Instrument



1. Protected microphone inlet (two on models with directional technology)
2. Battery compartment with ON/OFF switch
3. Program switch (optional)
4. Volume control (optional)
5. Receiver (sound outlet) and wax protection system
6. Custom made shell
7. Removal handle (Exélia CIC/MC Petite)

FM Systems

Hearing instruments properly adjusted to your child's personal needs cannot always guarantee good hearing in all listening situations. Noise or room acoustics may severely affect hearing. In a classroom, where many children are often speaking at the same time, it might be impossible for children with a hearing loss to filter out the background noise. Distance also dramatically reduces intelligibility, as does reverberation or echo.

The best way to overcome such problems is to use a wireless FM communication system. Designed specifically to pick up speech signals directly at the source and transmit them, clearly and without distortion, directly to the child's ear, FM systems create a basis for optimum speech intelligibility, independent of the acoustic surroundings.

Cochlear Implants

A cochlear implant is an implantable device, which bypasses the damaged parts of the inner ear. It is suitable for children who are diagnosed with severe-profound hearing loss in both ears who receive little or no benefit with hearing instruments. Cochlear implants can also be used together with FM systems.