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How Does A Hearing Aid Work?

All hearing aids, regardless of style, are made with the same basic parts. In the behind-the-ear (BTE) hearing aid, shown below, you can see the microphone, tone hook, volume control, on/off switch, and battery compartment.



The microphone picks up sounds from the environment and sends them to a processor that amplifies the signal (makes it louder). The hearing aid will amplify some pitches of the incoming sound more than others depending upon your child's hearing loss. Your audiologist uses the hearing aid's tone controls (located on the reverse side of the instrument) to make the amplified sound appropriate for your child's hearing loss.

After the sound is amplified, it is routed through the hearing aid tone hook to an earmold which is custom made for each child. The tone hook is a small plastic piece that hooks over and behind the child's outer ear (pinna). The earmold holds the hearing aid in the child's ear and directs sound from the hearing aid into the ear canal. Earmolds are made from soft materials after an impression is taken of your child's ear. They are made individually for each child and fit snuggly in the ear canal. As a baby grows, earmolds need to be replaced on a regular basis.



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Hearing Aid Gain

The graph below shows how much the hearing aid increases the level of sound at different pitches (frequencies). This is known as hearing aid gain. For mild hearing losses, small amounts of gain are needed. A severe hearing loss requires more gain. When a hearing loss is different at each frequency, the audiologist also has to adjust the gain of the hearing aid appropriately.

