

## Hearing Aids

### Practitioners, products, prices

"Approximately 17 percent of American adults, or 36 million people, report some degree of hearing loss. Hearing loss is the third most prevalent chronic health condition facing seniors. Fewer than 20 percent of those with hearing loss who require intervention and treatment seek help for their condition. Untreated hearing loss has social and economic ramifications. Before seeking a hearing aid, most hearing aid users [have] lived with hearing loss for more than 10 years, and their impairment [has] progressed to moderate-to-severe levels."<sup>1</sup>

"Hearing health care access can be confusing to the consumer, with ill-defined professional roles and competing financial interests among provider groups. Multiple entry points include family practitioners, audiologists, hearing

aid specialists, otolaryngologists, and direct Web access, as well as magazine, newspaper, and television ads.

In the U.S.,... there are no readily accessible low-cost hearing screening programs, and access to low-cost hearing aids exists only on the Web or through newspaper or magazine ads, all of which can be 'consumer beware' situations."<sup>1</sup>

In this issue of *HealthHints*, we'll look at the barriers to getting hearing aids and provide recommendations for seeking good care and selecting and purchasing hearing aids.

### Why aren't people getting hearing aids?

#### Three reasons

There are three basic reasons people do not get hearing aids:

- pride (e.g., not liking the way it looks, feel undignified, feel aged, etc.),
- don't recognize the problem, and
- lack of information on the benefits and costs.<sup>2</sup>

One of the biggest stumbling blocks is that wearing a hearing aid conjures up negative images. From admitting we're not perfect to feeling old or infirm, people sometimes let appearances keep them from hearing and enjoying their lives.<sup>2</sup>

"Hearing loss is the third most prevalent chronic health condition facing seniors."<sup>1</sup>

Sometimes, however, a person may not recognize his or her hearing loss right away. For many people, hearing loss is so gradual that it is hardly noticed. In fact, hearing loss is often detected first by family, friends, or a hearing test.<sup>3</sup> "You should suspect a hearing loss if you:

- have a family history of hearing loss;
- have been exposed to high noise levels;
- are inclined to believe that "everybody mumbles" or "people don't speak as clearly as they used to";
- find yourself straining to understand conversations; watching people's faces intently when you are listening;
- frequently misunderstand or need to have things repeated;
- increase the television or radio volume;
- have health problems or have reoccurring ear infections, constant ringing in the ears, or dizziness."<sup>3</sup>



Discuss your hearing health with your doctor. New technologies have advanced hearing aids to include those with multiple features for individual adjustment, and some are almost invisible or completely in the ear canal for those who don't want it to be seen. If you haven't discussed the options with an appropriate health professional **recently**, it's time to make an appointment. Of course, affordability is a major issue, but with some [helpful resources](#), you may be able to find hearing aids that will meet your needs at a reduced cost.

## Can hearing loss be corrected?

### Types of hearing loss

"Only a relatively small portion of adult hearing problems, such as ear infection and middle ear diseases, are medically or surgically treatable. If the condition cannot be treated medically or surgically, hearing aids may be beneficial."<sup>4</sup>

Hearing loss is most commonly categorized in one of three ways:

- [conductive hearing loss](#),
- [sensorineural – or "nerve" – hearing loss](#), and
- [mixed hearing loss](#).<sup>5</sup>

"Hearing loss happens for many reasons. Some people lose their hearing slowly as they age. This condition is known as [presbycusis](#). Doctors do not know why presbycusis happens, but it seems to run in families. Another reason for hearing loss may be exposure to too much loud noise. This condition is known as noise-induced hearing loss. Many construction workers, farmers, musicians, airport workers, tree cutters, and people in the armed forces have hearing problems because of too much exposure to loud noise. Sometimes

loud noise can cause a ringing, hissing, or roaring sound in the ears, called [tinnitus](#)."<sup>6</sup>

"Hearing loss can also be caused by a virus or bacteria, heart conditions or stroke, head injuries, tumors, and certain medicines."<sup>6</sup> This is why it is so important to have a thorough medical evaluation before being fitted for hearing aids.

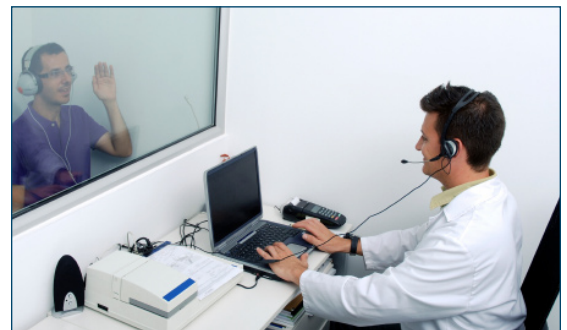
## Who should I see about hearing loss?

### Practitioners

"If you think you are losing your hearing, see your doctor. You may be referred to a health care professional who specializes in ear health and hearing loss."<sup>5</sup> These professionals may include an otolaryngologist, audiologist, or hearing aid dispenser.

- An **otolaryngologist** (sometimes called an ENT – ear, nose, and throat doctor) is a physician who specializes in diagnosing and treating diseases of the head and neck, especially those involving the ears, nose, and throat.<sup>5</sup> Seeing an otolaryngologist is very important in diagnosing and treating underlying conditions that may be causing hearing loss in full or in part.
- An **audiologist** is a trained professional who measures hearing loss and can fit hearing aids. An audiologist has at least a Master's degree and has specialized training in hearing loss; many now have an AuD (Doctorate) degree, too. Some may even have a PhD.<sup>5</sup> Check with the American Speech-Language-Hearing Association (ASHA) for [help finding a certified audiologist](#).

- A **hearing aid dispenser** is someone authorized by the state to measure hearing and to fit and sell hearing aids. The credentials for becoming a hearing aid dispenser vary by state but typically involve working as an apprentice to an already certified dispenser for some period of time and passing a test about hearing aids. A hearing aid dispenser is not an audiologist and does not have to have a college degree related to hearing loss.<sup>5</sup>



"Sometimes, a hearing loss can be a symptom of a medical condition. A medical examination may uncover any underlying illnesses or medical problems associated with your hearing loss. In fact, a medical evaluation is so important that the U.S. Food and Drug Administration (FDA) requires hearing aid sellers to tell you about your need for a medical examination before you buy a hearing aid."<sup>5</sup> **"FDA believes that it is in your best health interest to have a medical examination by a licensed physician – preferably one that specializes in ear disease – before buying hearing aids."**<sup>7</sup> "If you decide to forgo an evaluation, you must sign a waiver... *Don't patronize a business that dismisses the need for a medical examination prior to the purchase of a hearing aid.*"<sup>5</sup> Note: There are approximately 1.4 million [children who have hearing loss](#).<sup>8</sup> Children must be seen by a doctor before they can be fitted for a hearing aid<sup>6</sup> (a waiver is not an option).

“Once you’ve had a medical examination and determined that a hearing aid will help you, look for a hearing health professional who offers products from several manufacturers.”<sup>5</sup> You can check out sellers at:

- local [Better Business Bureau](#),
- state or local [consumer protection agency](#),
- state [Attorney General](#),
- state licensing or certification boards, or
- [American Speech-Language-Hearing Association](#).

“These organizations may have records of complaints against licensed hearing health professionals and can tell you how they responded to the complaints. You also may be able to enter the professional’s name and the manufacturer’s name into a search engine online and find out what other people have to say.”<sup>5</sup>

## What features are important?

### Product

The most important thing to consider when purchasing hearing aids is YOU. Hearing aids today come with multiple features, but if those features don’t fit your impairment and lifestyle, you may be paying for features you don’t need.

“A hearing aid has three basic parts: a microphone, amplifier, and 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.”<sup>9</sup>

Hearing aids can be [analog](#) or [digital](#), but more than 90 percent of the market is now digital hearing

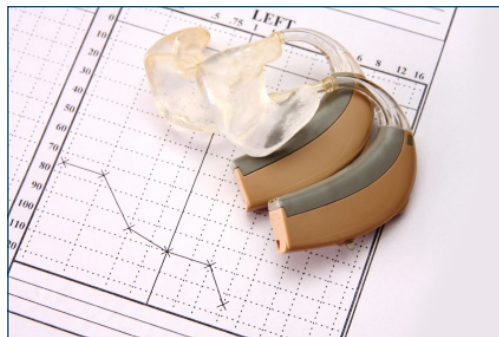
aids.<sup>10</sup> They come in many styles, including:

- [Behind-the-Ear \(BTE\)](#),
- [Open Ear](#),
- [In-the-Ear \(ITE\)](#),
- [In-the-Canal \(ITC\)](#),
- [Completely-in-the-Canal \(CIC\)](#), and
- [CROS/BI-CROS](#).

Choosing a style can depend on many factors, including:

- the severity of your hearing loss,
- the size and shape of your ear,
- your personal preferences,
- how well you can use your finger and hands (manual dexterity), and
- the availability of new hearing aid technologies.<sup>11</sup>

You can find some of the pros and cons of each type of hearing aid in the *Consumer Reports* article, “[Which Type Is Best for You](#).” Note: According to *Consumer Reports*, there is not significant enough difference between brands to identify a “best brand,” so focus more on the features you need than the brand.<sup>12</sup>



Hearing aids also have optional features that can be built in to assist in different communication situations and environments.<sup>13</sup>

In a *Consumer Reports* lab evaluation, some of the most useful features were a [directional](#)

[microphone](#) and [telecoil](#).<sup>10</sup> Other features to consider include [direct audio input](#) and [feedback suppression](#).<sup>13</sup>

“The more complicated features may allow the hearing aids to best meet your particular pattern of hearing loss. They may improve their performance in specific listening situations; however, these sophisticated electronics may significantly add to the cost of the hearing aid as well.”<sup>13</sup> Be careful. Don’t pay for unnecessary features. “The more features you buy, the more you’ll pay, but you might not need every one.”<sup>10</sup>

Be aware that “even with features appropriate for you, you might need to temper your expectations.”<sup>10</sup> A hearing aid cannot restore your hearing to normal like corrective eyewear can restore your vision to 20/20, but it can improve your hearing,<sup>21</sup> which can improve your life quality. “Hearing aids take time and patience to use successfully. Wearing your aids regularly will help you adjust to them.”<sup>9</sup>

One of the most important things to consider when purchasing hearing aids is not to be taken by hearing-aid advertising that will not meet the needs of your personal hearing impairment. Be wary of low-cost hearing aids advertised in any media that do not recommend getting a thorough medical examination by a licensed physician. “Buying a hearing aid online or through the mail is risky. In fact, some states don’t allow hearing aids to be sold through the mail at all. That’s because an aid needs to be custom fitted and tested to be sure it’s working properly.”<sup>5</sup> Also, beware of products known as personal sound amplifiers (you may have seen them advertised on television – small electronic sound amplifiers that allow users to enjoy nighttime

TV without disturbing sleepers or to hear their toddlers from many yards away<sup>14</sup>). These devices are not intended for people with hearing loss and can lead to more damage to your hearing.<sup>14</sup>

Be a wise consumer; follow this checklist adapted from the FDA:<sup>15</sup>

- **Get a check up.** Go to a doctor, preferably an ENT physician (otolaryngologist) to get a medical exam. The medical exam will rule out any medical reason for your hearing loss that would require medical or surgical treatment. You will receive documentation of your medical exam and a statement that says you are a candidate for hearing aids. Your doctor can also give you a referral to an audiologist or a hearing aid dispenser if your health plan requires a doctor's referral for services. Note: You have the option to sign a waiver saying you do not want a medical exam to rule out any medical reason for your hearing loss. However, **FDA believes it is in your best health interest to have the medical exam by a licensed physician before buying hearing aids.**
- **Consider going to an audiologist.** An audiologist will perform an audiological exam to determine the type and amount of your hearing loss, and will counsel you as to your non-medical options to improve your hearing loss.
- **Buy your hearing aid from a licensed hearing health care professional.** This person will typically be an audiologist, a hearing aid dispenser, or an ENT physician. Provide the documentation that you received from your doctor that states you are a hearing aid candidate. Ask your hearing

health care professional to help you determine what features you will need.



- **Be careful when selecting your hearing aid.** Select one that is convenient and easy for you to use. Buy hearing aids with features that meet your needs in daily listening activities. (Note: Take your time; do not be pressured into buying something you don't want or aren't able to use easily. When you are fitted for your hearing aids and go to pick them up, ask the doctor/dispenser to help you. Try out all the features; have him/her show you how to replace the batteries, and practice once or twice while you are there; practice putting the aids in your ear; practice using the volume controls; make a phone call and see how they work over the phone; use any other switches or controls.<sup>16</sup>)
- **Be sure you know how to care for your hearing aid.** Ask your hearing health care professional to show you how to clean it and replace the batteries. Ask if you can have a copy of the written instructions.
- **Ask about a trial/adjustment period.** Most manufacturers provide a trial/adjustment period during which your hearing aids can be returned for a refund. A trial/adjustment period will allow you to test out your hearing aids to see if they work well for you. (Note: Find out what fees are refundable if you return the aid during

the trial period. Make sure that's written in the purchase agreement.<sup>5</sup>)

- **Check out the warranty.** Like any other product you purchase, be aware of what parts or services are covered by the warranty.<sup>15</sup> "Get the details. How long is the warranty? Can it be extended? Does it cover maintenance and repairs? Is it honored by the manufacturer or by the licensed hearing health care professional? In some cases, a manufacturer may not honor its warranty unless the hearing aid is purchased from an authorized seller. You also may be protected by implied warranties created by state law. Ask if you'll get a free loaner hearing aid if your device needs servicing or repair."<sup>5</sup>
- **Be sure to have a "real-ear" test.** "When you return to pick up your aids, usually in a week or two, the provider should do several hearing tests to verify that they are working optimally. Of that battery of tests, one stands out as a must-have: the real-ear test, which measures the match between your hearing loss and the response of your hearing aid. "There is evidence that you get a better fitting with a real-ear test and people are more satisfied."<sup>17</sup>
- **Ask about aural rehabilitation.** For adults, aural/audiologic rehabilitation services focus on adjusting to your hearing loss, making the best use of your hearing aids, exploring assistive devices that might help, managing conversations, and taking charge of your communication. Services can be individual, in small groups, or a combination of both.<sup>18</sup> See if aural rehabilitation can be included when you purchase your hearing aids.

- **Check the total price.** Check whether the price quoted includes testing and other services, as well as the hearing aid.<sup>5</sup>

## What about Insurance? Covered or not, financial assistance

Price is a huge deterrent for many people who might otherwise seek the use of hearing aids. A person can spend thousands of dollars on a pair of hearing aids. Don't give up; there are resources to get hearing aid assistance.



First, if you are a veteran, be sure to contact your nearest [Veterans Affairs](#) facility to see if you are eligible to get

your aids<sup>19</sup> – virtually free if you qualify.<sup>20</sup>

Next, contact your insurance company. “Hearing aids are generally not covered by health insurance companies, although some do [check with yours].”<sup>9</sup>

“For eligible children and young adults ages 21 and under, Medicaid will pay for the diagnosis and treatment of hearing loss, including hearing aids, under the Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) service. Also, children may be covered by their state’s early intervention program or

State Children’s Health Insurance Program (SCHIP).



Medicare does not cover hearing aids for adults; however, diagnostic evaluations are covered if they are ordered by a physician for the purpose of assisting the physician in developing a treatment plan. Since Medicare has declared the [BAHA](#) a prosthetic device and not a hearing aid, Medicare will cover the BAHA if other coverage policies are met.”<sup>9</sup>

Some nonprofit organizations provide financial assistance for hearing aids, while others may help provide used or refurbished aids. Contact the National Institute on Deafness and Other Communication Disorders (NIDCD) Information Clearinghouse (see their contact information in the red box on the right) with questions about organizations that offer financial assistance for hearing aids.<sup>9</sup>

You can also see [Your Guide to Financial Assistance for Hearing Aids](#) from the Better Hearing Institute, which has an extensive list of organizations with their contact information, services, and eligibility requirements.

Planning financially and getting the right hearing aids that meet your need can take time. Finding the right professional

and developing a good long-term relationship with that provider will be important. Don't let these factors stop you from seeking care. Hearing loss can affect all areas of life that require communication – relationships, career, even safety (such as not hearing an alarm or a car's horn). Hearing is too important to just accept its loss.

Once you have your hearing aids, don't be discouraged that your hearing doesn't return to normal. “Allow time to get used to the hearing aid[s]. It may take several weeks or months before you're used to the hearing aid[s]. But the more you use [them], the more quickly you'll adjust to amplified sounds. Though it may be awkward at first, over time you'll adjust to the device and enjoy your enhanced ability to hear and communicate in a variety of situations. By wearing your hearing aid[s] regularly and taking good care of [them], you'll likely notice significant improvements in your quality of life.”<sup>21</sup>

“The sense of hearing is a crucial part of our lives, both physically and emotionally. By using hearing instruments, individuals suffering from hearing loss can continue to lead productive, full, and successful lives.”<sup>22</sup>

**NIDCD Information Clearinghouse**  
1 Communication Avenue  
Bethesda, MD 20892-3456  
Toll-free Voice: (800) 241-1044  
Toll-free TTY: (800) 241-1055  
Fax: (301) 770-8977  
E-mail: [nidcdinfo@nidcd.nih.gov](mailto:nidcdinfo@nidcd.nih.gov)

To view the references used in this newsletter, go to:  
<http://fcs.tamu.edu/health/healthhints/2011/jan/ref.php>

This document is meant for educational purposes only and is not intended to replace the advice of your doctor or other health care provider.

## Three Categories of Hearing Loss

Hearing loss is most commonly categorized in one of three ways:

1. **Conductive hearing loss** involves the outer ear, the middle ear, or both. It usually results from a blockage from earwax, fluid in the middle ear, or a punctured eardrum. Conductive hearing loss can often be corrected surgically.
2. **Sensorineural – or “nerve” – hearing loss** involves damage to the inner ear. It can be caused by disease, illness, age, injury from exposure to noise or certain medicines, or a genetic disorder. Usually, sensorineural hearing loss can't be repaired surgically, but it can be corrected with a hearing aid.

3. **Mixed hearing loss** is a combination of sensorineural and conductive hearing loss. Only a small portion of adult hearing problems, like ear infections and middle ear diseases, are medically or surgically treatable. If the hearing loss can't be treated medically or surgically, a hearing aid may be beneficial.

### Source:

Federal Trade Commission (2010). Sound advice for hearing aids [online]. Retrieved October 15, 2010. From <http://ftc.gov/bcp/edu/pubs/consumer/health/hea10.shtm>.



## Hearing Aids: Analog and Digital

(an excerpt from the U.S. Food and Drug Administration, Medical Devices, 2010)

**Analog hearing aids** make continuous sound waves louder. These hearing aids essentially amplify all sounds (e.g., speech and noise) in the same way. Some analog hearing aids are programmable. They have a microchip that allows the aid to have settings programmed for different listening environments, such as in a quiet place (like at a library), or in a noisy place (like in a restaurant), or in a large area (like a soccer field). The analog programmable hearing aids can store multiple programs for the various environments.

As the listening environment changes, hearing aid settings may be changed by pushing a button on the hearing aid. Analog hearing aids are becoming less and less common.

**Digital hearing aids** have all the features of analog programmable aids, but they convert sound waves into digital signals and produce an exact duplication of sound. Computer chips in digital hearing aids analyze speech and other environmental sounds. The digital hearing aids allow for more complex processing of sound during the amplification process, which may improve their performance in certain

situations (for example, background noise and whistle reduction). They also have greater flexibility in hearing aid programming so that the sound they transmit can be matched to the needs for a specific pattern of hearing loss. Digital hearing aids also provide multiple program memories. Most individuals who seek hearing help are offered a choice of only digital technology these days.



### Source:

U. S. Food and Drug Administration (2010). Types of hearing aids [online]. Retrieved October 15, 2010. From <http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/HomeHealthandConsumer/ConsumerProducts/HearingAids/ucm181470.htm>.

## Hearing Aid Features to Consider

- A **directional microphone** may help you converse in noisy environments. Specifically, it allows sound coming from a specific direction to be amplified to a greater level compared to sound from other directions. When the directional microphone is activated, sound coming from in front of you (as during a face-to-face conversation) is amplified to a greater level than sound from behind you.<sup>1</sup>



- A **T-coil (telephone switch)** allows you to switch from the normal microphone setting to a “T-coil” setting in order to hear better on the telephone. All wired telephones produced today must be hearing aid compatible. In the “T-coil” setting, environmental sounds are eliminated, and sound is picked up from the telephone. This setting also turns off the microphone on your hearing aid so you can talk without your hearing aid “whistling.” The T-coil works well in theaters, auditoriums, houses of worship, and other places that have an

induction loop or FM installation. The voice of the speaker, who can be some distance away, is amplified significantly more than any background noise. Some hearing aids have a combination “M” (microphone)/“T” (telephone) switch so that, while listening with an induction loop, you can still hear nearby conversation.<sup>1</sup>

- The **direct audio input** feature allows you to plug in a remote microphone or an FM assistive listening system, connect directly to a TV, or connect to other devices such as your computer, a CD player, tape player, radio, etc.<sup>1</sup> Blue-tooth technology and remote controls are also available for wireless interface and easier adjustment, respectively.<sup>2</sup>
- The **feedback suppression** feature helps suppress squeals when a hearing aid gets too close to the phone or has a loose-fitting earmold.<sup>1</sup>

### Sources:

1. U.S. Food and Drug Administration (2009). Types of hearing aids [online]. Retrieved October 15, 2010. From <http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/HomeHealthandConsumer/ConsumerProducts/HearingAids/ucm181470.htm#4>.
2. Mayo Clinic (2009). Hearing aids: How to choose the right one [online]. Retrieved October 15, 2010. From <http://mayoclinic.com/health/hearing-aids/HQ00812>.

## Bone-anchored hearing aid (BAHA)

(excerpt from the National Institute on Deafness and Other Communication Disorders, 2007)

“A bone-anchored hearing aid (BAHA) is a small device that attaches to the bone behind the ear. The device transmits sound vibrations directly to the inner ear through the skull, bypassing the middle ear. BAHAs are generally used by individuals with middle ear problems or deafness in one ear. Because surgery is required to implant either of these devices, many hearing specialists feel that the benefits may not outweigh the risks.”

### Source:

National Institute on Deafness and Other Communication Disorders (2007). Hearing aids [online]. Retrieved October 14, 2010. From <http://www.nidcd.nih.gov/health/hearing/hearingaid.asp>.

