

HEARING LOSS RESOURCE GUIDE

HEARING MADE
clear

AARP[®]

Welcome to Hearing Made Clear

At AARP, we know having the right information matters.

That's why we're excited to bring you this hearing loss resource guide. It brings together some of the best and most current thinking on hearing loss prevention and management. From insightful commentary by leading experts to helpful charts and tips, we think you'll find the guide as informative as it is practical. In section 1, for example, you'll read about how important hearing really is as one of our five senses and how changes in demographics and technology are changing the way those with hearing loss can be helped. In section 2, you'll learn about the causes of hearing loss, how hearing is evaluated, and how hearing care providers can help you or a family member. Section 3 shows you how you can protect

your hearing or manage hearing loss so that you can continue to enjoy the sounds of life. The guide closes by offering important information on resources available so that you know where to turn for help and support. Whether you read the guide straight through or focus in on a particular section, we trust you'll find the information valuable and worthwhile.

Regards,



Nicole Duritz

Vice President for Health and Family
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WHY HEARING

Matters



An Expert Opinion

Our sense of hearing is a critical part of how we experience life. It is so important, in fact, that the sense is meant to be fully formed and operational when we are born. Yet despite the critical nature and early development of hearing, it is an extremely delicate sense that requires awareness, care, and attention to protect it.

What makes this critical and delicate sense so important to explore and understand in today's world? To me, it is the blend of an amazing set of circumstances that are colliding in a way that is both daunting and hopeful. We have an aging population, living in a world that is increasingly noisy and reliant upon the ability to hear clearly. At the same time, we have technologies that continue to emerge to help protect and improve the quality of hearing for people of all ages. How we manage these circumstances as individuals and as a society will quite literally change peoples' lives and that is very important.

This has never been truer since we know hearing loss is on the rise in the United States. It is 1 of the top 10 conditions for U.S. adults. And what is especially concerning is that the number of those with hearing loss has doubled in the past 30 years. Modern technology is helping to address this trend for those who already suffer hearing loss, but we need to do more through education, awareness, and prevention to reduce the number in the future.

Despite the troubling statistics about hearing loss, I am optimistic about hearing loss awareness and a trend toward more research. The U.S. Department of Health and Human Services has a program called Healthy People that was created in 1979 to strengthen health policy and practice, identify nationwide health improvement priorities, and increase public health awareness. For the 2020 effort, they have added a new chapter: Hearing and Other Sensory or Communication Disorders. That will have a positive impact on research funding. Hopefully, someday through efforts like these, hearing loss will be less common and possibly reversible. Until then, prevention, identification through hearing testing, and individualized treatment plans are your keys to living a full life, enriched by hearing.

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Making sense of the problem

FIVE SENSES MAKE A VIBRANT LIFE

Our five senses let us experience the world. That world can be our home, family, friends, local community, or places across the globe. In each of these places and with all of these people, our experiences with the world are precious. Making the most of them is what is essential.

So can you imagine experiencing less than 100% of your world? Maybe you've had poor vision that you've corrected with glasses, maybe a trip to the allergist has brought back a better sense of smell. Is the sense and importance of hearing any different? Why would anyone ignore a diminished sense of hearing?

It could be that good hearing is simply underappreciated. Things like hearing that occur automatically in our lives are often taken for granted. But hearing needs to be appreciated too. If it is not, we stand to lose touch with our environment. That loss can limit how we are alerted to danger, appreciate beautiful music, and live our lives.

In addition to hearing being underappreciated, the loss of hearing is a relatively invisible condition. In the early stages, it can simply go unnoticed. When it is noticed, it sometimes gets overlooked and is not taken as seriously as when our other senses become affected.

Despite these challenges, maintaining a vibrant attitude and full participation in life requires keeping all five senses in order, as much and for as long as possible. And some of that is up to you. Yes, we all

age and with that can come hearing loss, but our environment plays a big role too. It's important to recognize the role of both aging and the environment to appreciate the changes in hearing loss, prevention, and management.

THE CHANGING FACE OF HEARING LOSS

According to the National Institute on Deafness and Other Communication Disorders (NIDCD), hearing loss is one of the most common conditions affecting older adults. Their research has shown that one in three people older than 60 and half of those older than 85 have hearing loss. For baby boomers, those who are 45 to 64 mainly, about 15 percent are already affected by hearing loss according to the Better Hearing Institute. With ever-increasing life expectancy, an ever-growing percentage of the population will have to identify, deal with, or live with hearing loss.

Case in point: the U.S. Census Bureau statistics reveal that there are more baby boomers than people over 65 in this country, 25% vs. 12.9% respectively. Still knee-deep in careers, the majority of people 45-64 will notice the problem while they are working. Not being able to hear well while on the job can be a bother; it may also be frightening and could affect earning potential.

The good news is that baby boomers are educated, enthusiastic, and proactive. They also have better options for improving their hearing, and knowledge to use to make sure there isn't unnecessary further deterioration.

WHAT WAS THAT?

The consequences of hearing loss can be serious. Making people aware of them is an important way to help remind people that hearing does matter.

Research sheds light on the consequences

The National Council on Aging is one organization that has studied the consequences of hearing loss. Their studies indicated that when a person can't hear or understand others at work or in family or social settings, they tend to get frustrated and embarrassed—even angry—and lose self-confidence. Poor communication can cause misunderstandings. As the ability to communicate suffers, so can the ability to work well.

People in the teaching profession, the ministry, and others whose jobs depend on personal interaction may have to retire earlier than planned or desired. And with the potential for increased isolation, the emotional well-being of those with hearing loss could be impacted as well.

Research also shows that hearing loss can impact independence. In a 1998 study reported in the *Journal of Rehabilitation Research and Development*, hearing loss did not have to be very bad to cause people to be less independent. For example, they may not be confident meeting with a banker or doctor on their own. Because of safety concerns, independence can be further impacted when the loss is so severe the person can't hear a doorbell, phone, or an alarm. Hearing loss can also cause dizziness and balance problems, which can make people feel less stable and secure.

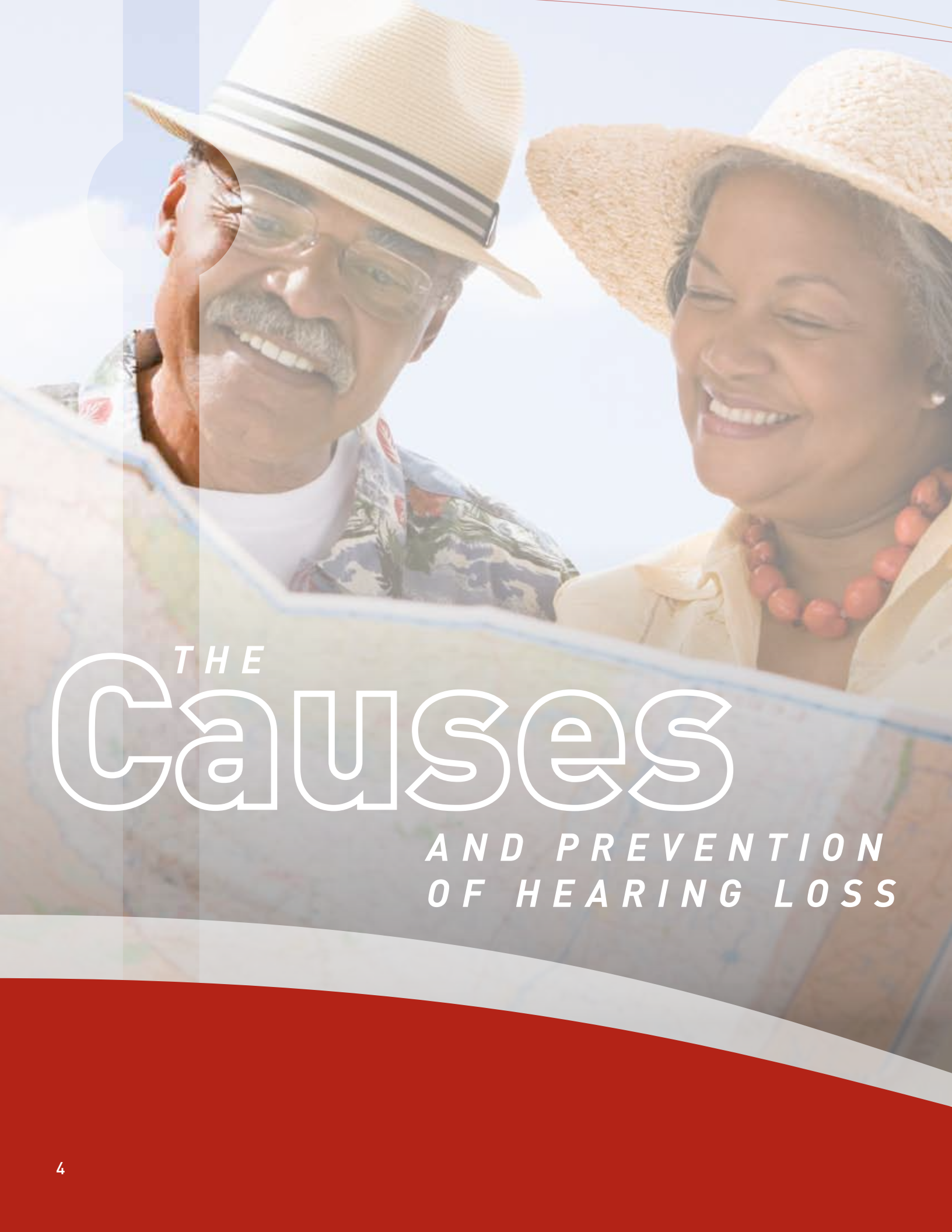
TIMES ARE CHANGING AND SO ARE HEARING TECHNOLOGIES

While hearing loss is increasing, and the consequences can be challenging, hearing technologies are fortunately rapidly improving. Preserving one's sense of sound is getting easier with the current generation of hearing aids and other technologies. Many of the

newest hearing aids contain digital signal processing and come packaged in tiny behind-the-ear styles. The size is reduced because one component, the receiver, has been moved to the ear canal. In fact, the largest component in these miniature devices is the tiny battery!

Other new technologies, referred to as hearing assistance technology (HAT) systems, help improve hearing in different situations like talking on your home phone or listening to TV. While we'll expand on these amazing advances in technology later in this guide, it's important to know about them. Combined with a good understanding of hearing loss and preventive steps to avoid it, these technologies can help people live more complete lives.

While hearing loss is increasing, and the consequences can be challenging, hearing technologies are fortunately rapidly improving.



THE
Causes

AND PREVENTION
OF HEARING LOSS

An Expert Opinion

No one should accept hearing loss as inevitable or untreatable. If your hearing isn't all it can be and you can't participate fully in conversation, that's an enormous loss, no matter what your age.

Prevention comes first and is a lifelong pursuit. No matter what our age or hearing status, we need to do more to reduce exposure to loud sounds. Noise exposure is the #1 cause of hearing loss in the U.S. Loud noise is everywhere, and we sometimes make our exposure worse by playing personal music sources like iPods at high volumes to hear our favorite music above the noise.

For noise that we are not able to control, the solution is cheap and easy: foam earplugs only cost about a dollar. Pop in the ear plugs and you reduce the noise by 20 or 30 decibels.

Age-related hearing loss often begins in middle-age and progresses slowly, so you might not be aware that your hearing is starting to change. Hearing screening programs for adults are critical to determine who is at risk for hearing loss. When someone with a slight loss knows about it, he or she has a chance to make prevention a priority and protect their hearing from further deterioration.

If you notice that you are having trouble hearing, the first step is to obtain a complete hearing exam by a licensed audiologist or a licensed, certified hearing care provider to find out the status of your hearing sensitivity.

If hearing aids are recommended, try them. You may just be surprised at how much benefit they provide. Anyone who has tried a hearing aid and hasn't been happy should persevere like they would with anything else that wasn't working well, from contact lenses to antidepressants to your computer. In fact, current hearing aids are like small computers that can be adjusted in many ways to suit your needs; multiple adjustments are not uncommon.

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Hear today, but it can be gone tomorrow

There is a variety of causes that can be attributed to hearing loss and some occur in combination. The top two causes, by far, are noise and age. Knowing something about these main causes is important, because the insights can often lead to a first step of doing something about it.

NOISE

NIDCD estimates that of the more than 30 million Americans with hearing loss, about a third have loud noise at least partially to blame. So how does loud noise actually damage our hearing? It's pretty simple actually. The inner ear's tiny hair cells are what help deliver sound to the brain. Loud noise damages those tiny hair cells, disrupting communication between the hair cells and the brain. Once damaged, the hair cells do not grow back and the result is noise-induced hearing loss.

Food blenders, lawn mowers, and iPods all have decibel (dB) ratings in the danger zone of 85-90. Movie theaters are routinely measured at 120 decibels, and, ironically, so are health clubs. Below 70 is considered safe. (See chart on following page.)

Like sun worshipping without sunscreen, attending rock concerts without ear protection wasn't, and isn't, a wise idea. Today, many adults wear sunscreen daily and almost everyone slathers it on themselves at the beach. Yet too many are still going to a jazz club or running a power tool without anything protecting their ears.

The sources of loud noise don't just come from recreation activities either. Hearing loss is the most common workplace injury, according to the Centers for Disease Control. High-risk workplaces include factories, construction, and the military.

Noise-induced hearing loss can come from exposure to loud noise for long periods of time or one extremely loud sound such as an explosion. Either way, sudden or

gradual, permanent hearing loss called acoustic trauma can result. While noises like these contribute to hearing loss they are certainly not the only causes of hearing loss.

AGING

Presbycusis is the technical term health professionals use to describe gradual hearing loss due to aging. This type of hearing loss cannot be corrected with medication or surgery but can generally be helped by hearing aids.

The loss is usually gradual and subtle. It becomes apparent when we notice (or admit) that we turn up the volume on the TV more than anyone else, often ask people to repeat themselves, or have trouble communicating with others at large gatherings.

OTHER CAUSES

While noise and age are the most common causes of hearing loss, some people are simply born with an unusually narrow ear canal that diminishes their ability to hear. Hearing loss can also be a result of medical conditions ranging from allergies and ear infections to tumors, diabetes, or a disorder of the inner ear called Meniere's disease, which affects balance and hearing. In some instances it can come about as a result of an antibiotic, chemotherapy, or radiation. Something as traumatic as a head injury or as simple as too much fluid or wax can affect hearing, resulting in hearing loss.

Food blenders, lawn mowers, and iPods have decibel ratings in the danger zone of 85-90.

The sound effects of common noises

DECIBELS

Decibels are like degrees on a thermometer. As temperature increases, so does the number of degrees. As the volume of sound increases, so does the number of decibels.

Degree of Hearing Loss	Hearing Loss Range (dB HL)
Normal	-10 to 15
Slight	16 to 25
Mild	26 to 40
Moderate	41 to 55
Moderately Severe	56 to 70
Severe	71 to 90
Profound	91+

Source: Clark, J.G. (1981). Uses and abuses of hearing loss classification. *Asha*, 23, 493-500. American Speech-Language-Hearing Association. <http://www.asha.org/public/hearing/Degree-of-Hearing-Loss/>

Take a look at how various levels of sound intensity can affect your hearing.

Sound	Noise Level (dB)	
Jet Engines (near)	140	
Shotgun Firing, Jet Takeoff (100-200 ft.)	130	
Rock Concerts (varies)	110-140	Threshold of pain begins around 125 dB
Discotheque/Boom Box, Thunderclap (near)	120	Threshold of sensation begins around 120 dB
Symphony Orchestra, Power Saw (chainsaw), Pneumatic Drill/Jackhammer	110	Regular exposure to sound over 100 dB of more than one minute risks permanent hearing loss.
Snowmobile	105	
Electric Furnace Area, Garbage Truck/Cement Mixer	100	No more than 15 minutes of unprotected exposure recommended for sounds between 90-100 dB.
Farm Tractor, Newspaper Press	97-98	
Subway, Motorcycle (25 ft.)	88	Very annoying
Lawnmower, Food Blender, Recreational Vehicles, TV	85-90 70-90	85 dB is the level at which hearing damage (8 hrs.) begins
Diesel Truck (40 mph, 50 ft.)	84	
Average City Traffic, Garbage Disposal	80	Annoying; interferes with conversation; constant exposure may cause damage
Washing Machine, Dishwasher	75-78	
Vacuum Cleaner, Hair Dryer	70	Intrusive; interferes with telephone conversation
Normal Conversation	50-65	
Quiet Office	50-60	Comfortable hearing levels are under 60 dB.
Refrigerator Humming	40	
Whisper, Broadcasting Studio	30	Very quiet
Rustling Leaves	20	Just audible
Normal Breathing	10	

Data Source: Common Sounds chart, The National Institute on Deafness and Other Communication Disorders, accessed September 6, 2011, http://www.nidcd.nih.gov/health/education/teachers/pages/common_sounds.aspx

Prevention is the best cure

Sometimes you don't know what you've got 'til it's gone. Being aware of the value of our hearing is becoming more important as we age individually and as a country. Today, nearly 40 million Americans have some degree of hearing loss. By 2030, without much growth in population expected,¹ more than 50 million of us will be dealing with hearing loss.²

As one of our most important senses, hearing well can be a significant factor in our relationships and on the job. Being a participating member of our communities, faith organizations, families and friends, can depend in large part on our hearing. And our sense of independence and self-esteem is stronger when we can hear well and communicate easily.

If the time comes that you notice it is becoming difficult to hear conversations at the other end of the picnic table, colleagues at the other end of a conference room table, or a grandchild at the other end of the cell phone, take action. The first step is admitting you might have a hearing problem, but for many that is a very large and challenging first step.

¹Source: U.S. Census Bureau, National Population Projections, accessed September 6, 2011, <http://www.census.gov/population/www/pop-profile/natproj.html>

²Weihai Zhan, Karen J. Cruickshanks, Barbara E. K. Klein, Ronald Klein, Guan-Hua Huang, James S. Pankow, Ronald E. Gangnon and Theodore S. Tweed, Generational Differences in the Prevalence of Hearing Impairment in Older Adults, *American Journal of Epidemiology*, [2010] 171 (2): 260-266. doi: 10.1093/aje/kwp370.

Naturally it is better to prevent than treat, but even folks with hearing loss can benefit from protecting their ears, to preserve the hearing quality they have. Totally preventable hearing loss is the noise-induced kind. Today's adults have an advantage over their parents and grandparents. Past generations did not know what kind of noise was damaging. Of course, the world wasn't quite as noisy.

LIMIT EXPOSURE TO NOISE

One great way to approach prevention is to think about your lifestyle and make adjustments. Do you blow your hair dry every day? That appliance is near your ears for an extended time. Is your blow dryer a very old model? Look into buying a new one that is quieter. Even if you buy a new model, consider wearing earplugs when you dry your hair.

Sometimes our lifestyle can even make loud background noise worse, like with our personal music. If the subway is loud, we tend to plug in and turn up the volume to drown out the noise. We also tend to do the same to block out the loudspeaker music at the gym. The problem is that by doing these things, we are just bringing loud noise even closer to our delicate ears. So remember, if another person can hear your music, or if someone approaches you and you can't understand or hear them without removing the ear buds, turning the volume down can help protect your ears.

USE PROTECTION

The solution is cheap and easy: foam earplugs are available in any drug or hardware store, they only cost about a dollar, and they reduce the decibel level by 20 or 30. Many smartphones now have applications that measure decibels so you know the noise levels at a concert, a bar, or a bar mitzvah with a live band. The same goes for

hobbies like woodworking and housework like carpet cleaning. If the measurement is over 85dB, you are putting yourself in danger of hearing damage.

When you don't have to be alert to sounds around you, like on a plane, use noise-cancelling headphones. They can eliminate the background noise so you don't need to listen to music on such a high volume since you won't be fighting background noise. Isolating earplugs were designed for personal digital entertainment players to shelter the music lover's hearing. They plug up the ear canal, blocking sounds from the environment, and the music plays on at a lower volume.

MAINTAIN GOOD GENERAL HEALTH

Perhaps it seems strange, but it is as important to your ears as to the rest of your body that you don't smoke, and that you eat healthy foods, keep your weight down, and exercise. Take your vitamins, too. A University of Michigan study found A, C, E and magnesium to be positive influences on hearing.

Blame it on the ear's greedy blood circulation and oxygen needs, but all those good habits help prevent diabetes, which is thought to contribute to hearing loss. Compared with the general population, twice as many people with diabetes have hearing loss, according to a National Institutes of Health (NIH)-funded study. Other health conditions—anything that impacts blood vessels and nerve cells—may affect hearing. Controlling high blood pressure, for example, is thought to be a way to prevent much of the hearing loss that is associated with age.

KEEP EAR WAX UNDER CONTROL

Ear wax is not bad. It is, in fact, a natural antibiotic. Too much ear wax, however, can reduce your hearing ability, so this is a good thing to have checked when you see your doctor or if you have some mild trouble hearing. Do not remove it yourself; have your primary

Independence is supported by a robust sense of hearing, and our self-esteem is stronger if we communicate easily.

care physician do it. He or she may refer you to a hearing care provider if it's really bad. They have the most specialized equipment for extraction of ear wax. When the wax is gone, you can gain an extra 15 decibels of hearing.

STEP AWAY FROM THE COTTON SWABS

The ear canal is only about an inch long, so you don't have to go far to cause damage. People scratch the lining of the canal and even puncture their own ear drums with cotton swabs. Let water run into your ears in the shower, and tip your head to drain it out. That should be enough to maintain the ear wax you need and avoid removing too much.

STAVE OFF AND TREAT INFECTIONS

An untreated infection can cause permanent hearing loss. Whether you get swimmer's ear or something more serious, pay attention to pressure, pain, or dizziness and seek medical care. Treatment can be more involved, but you may just have to take antibiotics.

HAVE YOUR HEARING TESTED

Annual hearing assessments provide a baseline and then progress reports. As with cholesterol tests, we can be more careful if our numbers have slipped from one year to the next.

Before you need a hearing aid

There are many things you can do if you have slight or borderline hearing loss. Employing these tips in your daily life and continuing to avoid loud noise can help.

AT HOME

- Even though the noise from most household appliances won't hurt you, reduce noise wherever you can. When buying appliances, choose low-noise models of washers, dryers, and dishwashers.
- If you are renovating, choose quieter materials: wood rather than tile for the floor, for example.
- If you can't hear your doorbell, buy an additional doorbell chime to put in another part of the house.

Denying that you have hearing loss is not an option if you want to live a life that is enriched by all five of your senses.

AT THE OFFICE

- Arrive early for meetings so you can choose the best seat for you, whether that is in the middle of the table rather than at an end, or so your back is to a wall.
- Request minutes after each meeting.
- Schedule one-on-one meetings instead of larger ones.
- Don't hide your mild hearing loss and risk being seen as disinterested.

AT A RESTAURANT

- Ask for a quiet table when you make reservations rather than when you arrive in case the place is crowded.
- Sit against a wall rather than in the center. In a corner is even better.
- Face the person directly for best sound reception.
- Be loyal to restaurants where you hear well; the managers will be more likely to honor your requests for a certain table or section.
- Eat a little early or late to avoid prime time crowds and all their noise.
- Read restaurant reviews that incorporate noise levels.

ON A PLANE

- Take a decongestant about an hour before takeoff.
- Try to sit up front, far from the engines.
- If you wear hearing aids, remove or loosen them.
- Don't drown out jet engine noise with even louder music.
- Use noise-cancelling headphones or earplugs.

If the time comes that you notice it is becoming difficult to hear conversations at the other end of the picnic table, colleagues at the other end of a conference room table, or a grandchild at the other end of the cell phone, take action.





Managing

HEARING LOSS

An Expert Opinion

Hearing is a vital sense that not only connects us with friends and family but also orients us to our environment. Eradicating the stigma associated with hearing loss and hearing aids and making the world hearing-friendly are top priorities, along with preventing discrimination related to hearing loss in the workplace.

Maybe you've sensed some hearing loss, you were screened and told your loss was borderline and it was too early to explore hearing aids. If you are in that situation, there are many things you can do to hear better. If you are finding it harder to hear on the phone, get one with better volume control. If your loud TV volume annoys your family, look into a TV listening system.

Personal assistive listening devices help in all kinds of situations. There are three basic technologies – Infrared, FM, and Hearing Loops – that bring the sound via a microphone directly into your ear or hearing aid, cutting out background noise. In the car, they can help you hear when you are the passenger, or to hear the people in the back seat (grandchildren, perhaps) when you are the driver. At a restaurant or while playing bridge, you put the device's mic in the center of the table to pick up your companions' voices.

The easiest way to connect to an assistive listening device is via a telecoil in your hearing aid. Be sure to ask for one when you purchase your aid. Telecoils connect with hearing aid compatible phones and other assistive listening devices. They increase the benefits of a hearing aid by helping you hear in difficult listening situations where it is noisy, where the acoustics are bad, or where there is a long distance from the speaker.

Get your hearing screened regularly. If you are a candidate for a hearing aid, don't put it off. The longer you go without hearing certain sounds, the harder it is to hear those sounds again, even with hearing aids. From my personal and professional life, I can say with certainty that hearing loss is more visible than any hearing aid.

Brenda Battat

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Listening and learning

Diagnosis doesn't happen automatically in today's healthcare settings, and primary care physicians generally don't screen for hearing loss. There is a tendency to focus on one problem per short appointment, and mild hearing loss is not likely to show up in a face-to-face chat in a quiet exam room. Whether a hearing loss concern is brought up to a primary care physician or a person seeks out a qualified hearing care provider, proper evaluation is an important first step. Taking that first step can be daunting, so here is some insight into the screening and testing process.

SCREENING VS. TESTING

Screening is a preliminary step that is taken to determine if testing is needed. The pure tone test is the most common screening process. This test is administered with a small, portable device and headphones. The person's reactions to sounds determine the faintest tones he or she can hear at selected pitches (frequencies), from low to high. Based on these results, the need for testing can be determined.

SELF-TESTING

Qualified hearing care providers are your best bet if you want to accurately assess your hearing, but there are many lists of questions that you can find online and in books that may help you self-identify a hearing loss. You might want to try our Ten Ways to Recognize Hearing Loss on page 17 to see if you should have a hearing test conducted by a hearing care provider.

TESTING BY A PROFESSIONAL

If your self-examination indicates hearing loss, you should consider getting tested professionally. Hearing testing is an in-depth assessment of the type and extent of a person's hearing loss. Hearing tests may vary, but almost all of them begin with a case history, used to gather important information before the

testing starts. It involves many questions about your health, how you spend your time, and how hearing loss is affecting you. After the case history, the test administrator will inspect the external auditory canal visually for wax, infections, or abnormalities.

The gold standard of hearing testing is a sound-controlled booth. During testing, the patient wears earphones and pushes a button or raises a hand to indicate when he or she hears a tone or a word. Other tests will check the eardrum and middle ear for disorders as well as assess how well you hear different frequencies.



People worth listening to

Regardless of which tests you undergo, you should know the following things when your appointment is over:

- The extent of hearing loss.
- The type of hearing loss.
- If you have hearing loss in both ears.
- Specific recommendations from your provider based on test results.

PROFESSIONALS

Different hearing care providers serve different purposes, with some overlap. One thing is for sure: you need to rely on the services of a qualified provider to assess you and assist you in your quest to be proactive about your hearing health.

The three types of hearing care providers are otolaryngologists (more commonly known as ear, nose, and throat specialists or ENTs), audiologists, and hearing instrument specialists.

OTOLARYNGOLOGISTS

Otolaryngologists (also known as ENTs) are physicians who have specialized residency and training in the medical conditions of the ear. While most do not fit hearing aids, many have audiologists or hearing instrument specialists on staff to test hearing and dispense hearing aids. Otolaryngologists often treat patients with middle ear problems. You should also see an ENT or your primary care physician if you have any of the following symptoms:

- Sudden and dramatic hearing loss.
- Ear pain.
- Ear odor.
- Drainage.
- Dizziness.
- Hearing that is fading in and out.

AUDIOLOGISTS AND HEARING INSTRUMENT SPECIALISTS

The terminology for different hearing care providers can be confusing, and it's often hard to know who does what from their title. Audiologists are trained to determine the type and degree of hearing loss. Based on an assessment provided by an audiologist, he or she may recommend a treatment program or a medical evaluation.

Hearing instrument specialists select, fit, and adjust hearing aids and other instruments that are used to improve upon or compensate for impaired hearing. They administer hearing tests only for the purpose of selecting and fitting a hearing aid.

Both audiologists and hearing instrument specialists also help patients with aural rehabilitation. This is extensive training and coaching that helps people learn to use their hearing aids. As part of the aural rehabilitation, they help patients develop strategies for hearing and communicating well in different settings and situations.

For more information on the specific qualifications, credentials, and training for hearing care providers please visit the following websites:

www.audiology.org

www.ihsinfo.org

Rely on the services of a qualified hearing care provider to assess you and assist you in your quest to be proactive about your hearing.



Hearing loss resolution can be a complicated process, and you may be working together for some time until everything is right.

Both audiologists and hearing instrument specialists should counsel you on how to use your hearing aids and provide follow-up care, attention, and as many adjustments as you need. You should get oral and written instructions on how to insert your hearing aids, how to adjust and care for them, and guidance to help your family adjust to your use of hearing aids.

Beyond skill and service, “good” providers focus on being a hearing care provider rather than a seller of a product. Whichever type of provider you choose, make sure you feel you are compatible. Hearing loss resolution can be a complicated process, and you may be working together for some time until everything is right. There will be future checkups and adjustments so you want to make sure you are comfortable and confident in your provider.

Recognizing the signs of hearing loss

Denying that you have hearing loss is not an option if you want to live a life that is enriched by all five of your senses. Many signs of hearing loss are fairly obvious; it's admitting you have a problem that may be the tough part.

Ten Ways TO RECOGNIZE HEARING LOSS

The following questions will help you determine if you need to have your hearing evaluated by a professional:

1. **Do you have a problem hearing over the telephone?**
 Yes No
2. **Do you have trouble following the conversation when two or more people are talking at the same time?**
 Yes No
3. **Do people complain that you turn the TV volume up too high?**
 Yes No
4. **Do you have to strain to understand conversation?**
 Yes No
5. **Do you have trouble hearing in a noisy background?**
 Yes No
6. **Do you find yourself asking people to repeat themselves?**
 Yes No
7. **Do many people you talk to seem to mumble (or not speak clearly)?**
 Yes No
8. **Do you misunderstand what others are saying and respond inappropriately?**
 Yes No
9. **Do you have trouble understanding the speech of women and children?**
 Yes No
10. **Do people get annoyed because you misunderstand what they say?**
 Yes No

If you answered "yes" to three or more of these questions, you may want to see a qualified hearing care provider for a hearing evaluation.

The material on this page is for general information only and is not intended for diagnostic or treatment purposes. A doctor or other health care professional must be consulted for diagnostic information and advice regarding treatment.

Excerpt from NIH Publication No. 01-4913 <http://www.nidcd.nih.gov/health/hearing/pages/10ways.aspx>



TECHNOLOGY AND OTHER
Resources

An Expert Opinion

By this point in the guide, you know how important addressing hearing loss is to overall health. Once hearing loss is identified, it can be important to be prepared for the purchase process for hearing aids. They are primarily an out-of-pocket expense, averaging around \$1,600 each.

Few insurance plans cover the cost of hearing aids, and Medicare doesn't cover them. Don't let that deter you. It is important that you purchase the aid that addresses your individual hearing loss and lifestyle. Spending the money to purchase the right kind upfront will increase your chances of success with it; a lesser option might just end up in a drawer.

There are some resources to assist with the costs. You might be eligible for a hearing aid through the Veterans Administration. You can use your flexible spending account to cover out-of-pocket expenses with pre-tax dollars.

I caution people against going to the Internet, through a mail-order service, or purchasing a device over-the-counter to save money on this important purchase. The worst-case Internet, kiosk, or big box store scenario is when personal sound amplifiers are passed off as hearing aids. Personal sound amplification devices are not regulated by the FDA. They aren't hearing aids, should not replace hearing aids, nor is it appropriate that they be marketed as such. They can actually hurt someone's hearing since the user can adjust the volume and make it too loud, which can do damage.

The only devices people with hearing loss should use to improve their sense of hearing are those obtained through a licensed professional: a hearing instrument specialist, audiologist, or otolaryngologist. Be sure to shop around to make sure you find someone you trust, as this relationship should be long-lasting.

Providers' practices vary in external appearance and locality. There are franchises within large chain stores, independent shops in strip malls, private offices, and medical centers. There are advantages to each, from products to hours. What is key is finding a hearing care provider licensed by your state with whom you are comfortable.

If you have hearing loss and haven't done anything about it, it's never too late to regain control of your life. As one of our members told me recently, a new hearing aid customer called—crying—from the road, saying, "I am hearing so many things I didn't even know I was missing!"

Kathleen Mennillo

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Hearing aids

About two-thirds of those with hearing loss cite financial constraints as a core reason they do not use hearing aids. For most consumers, improving one's hearing is an entirely or mostly out-of-pocket expense.

Although hearing aids do not "cure" hearing loss or restore hearing 100%, they can be well worth the money and time it takes to adjust to them. Seventy-three percent of hearing aid wearers who responded to a recent *Consumer Reports* survey said they were highly satisfied with their hearing aid.

As we mentioned earlier, a comprehensive hearing test can evaluate your hearing needs and determine if the hearing loss needs medical attention. Hearing care providers will make recommendations for hearing aids if the hearing loss is not medically treatable.

Hearing aids are often the simplest solution, but many people may avoid them due to cost, confusion over which brands are best, or the perception that they may make them look older. According to NIDCD, fewer than 20% of people who could benefit from hearing aids ever get them. Before dismissing hearing aids, it may help to know more about how they work and how they may benefit you.



Hearing aids work by picking up sound waves with a microphone, changing weaker sounds into louder sounds, modifying the sound signals in other ways, and delivering them to the ear through a tiny speaker. A small battery provides the power. The newest designs are like tiny computers that automatically adjust the hearing aid for you in different listening environments.

HOW THEY WORK

Today, almost all hearing aids are fully digital. Digital technology is far superior to its predecessor, analog technology. Digital allows for better programming, and makes it possible for new features such as feedback control. This feature eliminates the squealing that was often heard with analog devices. What you choose depends on your type of hearing loss, lifestyle, and needs such as your budget and dexterity with those tiny batteries. A good hearing aid provider can help explain it all.

TYPES OF HEARING AIDS

Hearing aid types are defined by three initials that indicate where a hearing aid is worn.

BTE, behind-the-ear: These aids hook over the top of the ear. Larger in size, this type is easier to handle than smaller devices and is usually chosen for older persons with problems with fine motor skills for that reason.

Mini BTE, or RIC, receiver-in-canal, has a wire inside a thin plastic tube that connects to an ear bud inside the ear canal, leaving the canal open for more natural sound. The mini-BTEs are less visible than most in-the-ear (ITE) or completely-in-the-canal (CIC) models.

OTE, on-the-ear, is a new style of BTE that is extremely small and sits on top of the outer ear. This open-fit design is best for people who have a high-pitched hearing loss with good hearing in the low pitches. This type of hearing loss is typical when it is noise-induced.

ITE, in-the-ear: Fitted into the ear canal, these are small but visible. Despite their small size, they are easy to insert.

CIC, completely-in-the-canal: The smallest variation of an ITE, these are barely visible. They are so tiny some people have trouble handling them, and battery life is very short. In-the-canal models (ITCs) can accommodate a telecoil. CICs are too small and cannot. One new type of CIC hearing aid—for extended wear—is so small that only a professional can insert and remove it.

AFTER-CARE FOR HEARING AIDS

It takes time to adjust to a new hearing aid. After-care is often included in the price of a hearing aid, and the particulars should be spelled out in the purchase agreement.

After-care is important because you will need to figure out how to handle the aid itself: inserting it, removing it, replacing the battery, and generally getting comfortable with it. Plus, hearing new things might seem somewhat overwhelming. You will wear your aid or aids in different settings: in your own house, at lunch with a friend in a noisy restaurant, on the phone, watching a movie. So it can help to have a professional available for questions and technical support. You can expect to return to your provider for follow-up visits over the course of the first year.

WHAT TO ASK ABOUT A NEW TECHNOLOGY

You can always search around the Internet to check out something new in hearing technology, but read with caution. Here are some questions to ask about new products. Many of the same questions can be applied to a new treatment:

- Who or what kind of hearing loss is this best suited for?
- Can you connect me to someone who is using this new technology?
- Are there more established products or services that provide close to the same end result?
- Can it cause any harm?
- Are there side effects?
- Has this been approved by a regulating federal agency?
- Has the research been published?
- Does insurance cover it?
- Is there a guarantee?
- What is the return policy?
- Is there a restocking fee?

Common misunderstandings ABOUT HEARING AND HEARING AIDS

- 1. Living with hearing loss is just a normal part of aging.**
But hearing loss is more apparent than hearing aids.
- 2. Hearing aids don't do that much to help.**
If you have been missing all the sounds of life for some time, your brain will need time to retrain to hear all these sounds again.
- 3. I tried them once and the sound quality wasn't that great.**
People who are wearing old technology may not be enjoying the high quality sound that newer digital technology offers.
- 4. They are too complicated.**
New devices are extremely automatic.
- 5. I'll look so old in hearing aids.**
Hearing loss is more noticeable than hearing aids if you don't get the joke or answer questions inappropriately.
- 6. My boss will think of me as old if I wear hearing aids.**
If you don't use hearing aids, he or she may think you are unresponsive or worse.
- 7. I'll be considered handicapped.**
Think of hearing aids like you think of eyeglasses.
- 8. It's not me, it's you: everybody mumbles.**
That is why it is often family members who first recognize the hearing loss.
- 9. I can't afford them.**
Yes, they are expensive, but worth it to be fully present in your life.

Hear the costs, don't fear them

While hearing aids can be highly effective, they often carry a high price. According to an online article by Healthy Hearing (August 2010), today's digital hearing aid prices range from approximately \$1,000-\$3,500 per hearing aid, depending upon the level of technology selected. Nearly 80% of individuals with hearing loss would benefit from two devices, which could increase average out-of-pocket expenses even more. According to the May 2011 *AARP Bulletin*, hearing aids can cost between \$1,200 - \$3,700. Don't be scared off though. There are some organizations and resources that can help with the cost, as we discuss shortly. But first, make sure to understand the structure of the cost and what is and what is not included.

BUNDLING V. ITEMIZATION

Knowing that you are getting what you pay for is important. The costs associated with hearing aids may come bundled and itemized. If the cost is bundled, it should include consultation, testing, and evaluation, along with the device, batteries and aural rehabilitation. When you are purchasing hearing aids, the provider should make it clear if the charges are bundled or itemized.

Compare prices and services among hearing care providers. Negotiate. A survey by *Consumer Reports* found that 40 percent of those who bargained got a price break. Keep in mind that you won't know the full cost until you have had your hearing tested. To make a fair cost comparison, you will need to know the full specifications of the recommended hearing aid model.

BATTERIES

All hearing aids run on batteries, and replacing them is an ongoing cost. Your provider will show you what type to use, how to insert them properly, and how to know when to change them. Some hearing aids come with rechargeable batteries and chargers. Batteries may only last a few days, and some last several weeks. Estimated cost is up to \$100 per year per hearing aid.

WARRANTIES

Hearing aids have warranties from manufacturers and while they can differ, they typically fall within these areas:

- Repair Warranty: can be from 1 to 4 years and covers any breakdown or repair needed during the designated period.
- Loss and Damage Warranty: can be from 1 to 4 years and covers one loss/replacement during the warranty period and typically has a deductible of about \$200.
- Extended Warranty: The above warranties can be extended beyond what is offered, for example a 2-year warranty can be extended to 4 years for an added cost, but most manufacturers don't offer warranties beyond 4 years.³

Some hearing aid providers may offer their own warranties; but this is not typical. One other possible way to cover your hearing aids is through your homeowners insurance. Some companies allow clients to put hearing aids on a special rider to their policy like jewelry, furs, and other valuables. This can be an inexpensive way to insure for loss.

³ Source: Gail Linn, Au.D., Potomac Audiology, Rockville, Maryland, interview of July 23, 2011; Hearing Industries Association, Washington DC, e-mail of September 7, 2011; both regarding hearing aid warranties.

Where you can turn for help



SUPPORT GROUPS AND NONPROFITS

Consumer groups such as the Hearing Loss Association of America provide lists of organizations that offer financial assistance with hearing aids and other devices. One good place to look is: www.hearingloss.org/support/financial.asp. Local government, social service agencies, and community service groups have funds to be used for this purpose too. The bottom line: it doesn't hurt to explore many different avenues to get financial help, discounts, or devices.

The Lions Club International Foundation created the Lions Affordable Hearing Aid Project to help hearing aid users who can't afford aids. Contact your local chapter for information.

Sertoma, an organization whose primary focus is assisting the tens of millions of people with hearing health issues and educating the public, gives away mostly refurbished recycled hearing aids. Their Hearing Aid Recycling Program helps people in need with obtaining hearing aids. Clubs collect used hearing aids, have them refurbished and distribute them to people in need (www.sertoma.org/sharp). Some clubs provide free or reduced cost batteries in addition to hearing aids. Currently the states with active clubs are Colorado, Kansas/Missouri, Nebraska, Oklahoma, Pennsylvania, and Wisconsin.

For more information and sources of possible assistance, contact the following organizations and agencies:

- The Better Hearing Institute
- The Hearing Loss Association of America
- The International Hearing Society
- The National Institute on Deafness and Other Communication Disorders
- Your state Medicaid programs
- Your county department of social services

See the back cover of this guide for contact information for some of these organizations.

THE LAW ON YOUR SIDE

Thanks to the Americans with Disabilities Act, many public places like conference centers, concert halls, and subway stations have installed assistive listening systems that enhance hearing through hearing aids and cochlear implants, and through individual receivers provided by the facility.

TIPS FOR COMMUNICATING WITH A PERSON WHO HAS HEARING LOSS

Whether or not your friend or family member with hearing loss has hearing aids, there are things you can do to make it easier for the person to understand you.

- Choose a quiet place to talk. That might mean creating a quiet place by turning off the TV or a dishwasher. Background noise is a problem.
- Face the person head on. It is easier for someone to understand you if they can see your face.
- Don't eat or chew gum while trying to communicate, or lean your chin on your hands. Keep your face in full view. People with hearing loss can pick up visual clues about what you are saying.
- Sit or stand fairly close to each other, but not unnaturally close. Sound travels and loses volume with distance.
- Speak at a reasonable pace. You may need to slow down a little to give the person time to process what you are saying.
- Speak at a normal volume. It's better to be loud than quiet, but there is no need to shout. In fact, if the person is wearing hearing aids, shouting could hurt their ears and can distort lip movement to make speech reading more difficult.

- If the person does say that he or she has not understood something, do not brush it off as unimportant. Repeat or rephrase it.
- Resist "translating" for other people who are speaking to the person with hearing loss, especially if the person with hearing loss is a spouse or family member. You will just undermine their ability to manage on their own.
- If there are children or grandchildren in the person's life, make sure they understand the situation and know how to communicate as well. Even young children can understand that it helps Aunt Jennifer if they stand right in front of her and make eye contact so she can hear them well.

HEARING LOSS TIPS TO SHARE WITH YOUNGER GENERATIONS

Whether you have adult children who are having children of their own or you have a teenager in the house, the most important messages to share with younger generations are testing and prevention.

CHILDREN

- Check out the decibel level at your local movie theater and ask management to turn the sound down if the level is unsafe (see chart in this guide), especially for children's movies.
- Toys can be a source of noise that is too loud: check out anything that makes noise, especially sirens. Manufacturers have this information and should share it if you ask.

ADOLESCENTS TO YOUNG ADULTS

- In a closed space like a car, keep volume reasonable.
- Provide and insist on earmuffs, protective headphones, or earplugs at loud private or public events, and on airplanes.
- Reinforce the message that smoking and secondhand smoke are to be avoided. Adolescents and teens (12-19) who are exposed to secondhand tobacco smoke have nearly double the risk of hearing loss than those who are not exposed.⁴
- Advise the young people in your life to keep the volume down. Noise-induced hearing loss can be prevented. At an age when their hearing should be perfect, about 20% of teens are showing signs of hearing loss, and that's a 31% increase since just the mid-90's. In a small University of Florida study, mild hearing loss was found in 25% of college students tested.

SAFETY AND CARE REMINDERS

Since hearing aid batteries contain toxic substances, it is very important to keep them away from children and pets. Think of them—and handle them—as you would any pill, patch, or medication. Dogs are known to be attracted to hearing aids: when they are out of the ear but left on, dogs can hear them emit a whistling sound, inaudible to humans, that causes them to go after the hearing aid.

When it comes to disposal, some states prohibit hearing aid batteries from being placed in the trash. Check with your local government or waste service provider for disposal or recycling information. Some hearing aid retailers accept them for recycling. Earth911.org has a searchable recycling directory.



VOLUNTEERING

To volunteer for research studies, explore the following three NIH sites:

ClinicalTrials.gov: Deafness

ClinicalTrials.gov: Hearing Disorders

ClinicalTrials.gov: Presbycusis

⁴ Source: Anil K. Lalwani, MD; Ying-Hua Liu, MD, PhD; Michael Weitzman, MD; Secondhand Smoke and Sensorineural Hearing Loss in Adolescents. Archives of Otolaryngology—Head & Neck Surgery, 2011; 137(7):655-662, doi:10.1001/archoto.2011.109.

For more information

For more information and sources of possible assistance, contact the following organizations and agencies:

American Academy of Audiology
www.audiology.org

American Academy of Audiology Foundation
www.audiologyfoundation.org

American Speech-Language-Hearing Association
www.asha.org

Better Hearing Institute
www.bhi.org

Hearing Health Foundation
www.hearinghealthfoundation.org

Healthy People 2020
www.healthypeople.gov

Hearing Education and Awareness for Rockers
www.hearnet.com

Hearing Loss Association of America
www.hearingloss.org

International Hearing Society
www.ihsinfo.org

Mayo Clinic
www.mayoclinic.com

Medicare
www.medicare.gov

The National Institute on Deafness and other
Communication Disorders
www.NIDCD.gov

Veterans Administration
www.va.gov

About AARP: AARP is a nonprofit, nonpartisan organization with a membership that helps people 50+ have independence, choice and control in ways that are beneficial and affordable to them and society as a whole. AARP does not endorse candidates for public office or make contributions to either political campaigns or candidates. We produce AARP The Magazine, the definitive voice for 50+ Americans and the world's largest-circulation magazine with over 35.1 million readers; AARP Bulletin, the go-to news source for AARP's millions of members and Americans 50+; AARP VIVA, the only bilingual U.S. publication dedicated exclusively to the 50+ Hispanic community; and our website, AARP.org. AARP Foundation is an affiliated charity that provides security, protection, and empowerment to older persons in need with support from thousands of volunteers, donors, and sponsors. We have staffed offices in all 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands.

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Department of Hearing & Speech Sciences
University of Maryland
Healthy Hearing
Hearing Industries Association
Hearing Loss Association of America
International Hearing Society
Johns Hopkins University
National Council on Aging
National Institute on Aging
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