When Your Hearing Disappears Suddenly

By Duncan Collet-Fenson

Each year, between five and 30 per 100,000 individuals unexpectedly lose their hearing in the space of a minute or over a few hours because of sudden sensorineural hearing loss (SSNHL). Sadly, immediate medical help is often not sought because the symptoms of SSNHL and other types of hearing loss are very similar and can be mistakenly put down to a temporary blockage caused by wax or fluid. However, SSNHL is a medical emergency, and all types of sudden hearing loss must be checked quickly to rule out anything serious.

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WHAT IS SSNHL?

Also known as sudden deafness, SSNHL is defined as a drop of at least 30 dB in more than three frequencies over a short period of time. It most commonly affects just one ear, although it can affect both ears. It seems to be most common between the ages of 30 and 60, and around 50 percent of people recover within two weeks without any specific treatment. To improve the chances of recovery, early treatment with steroids and antiviral medication may be advised where appropriate, taking into account the possible side effects of such treatments. This medication should be offered provided your individual health needs are assessed and there are no other health contraindications for treatment.

If SSNHL occurs, you might notice a pop in the affected ear, after which either the hearing may immediately disappear, or it could slowly decline over a few hours. It may only be apparent when you try to use the phone on the affected ear and/or may be accompanied by vertigo (dizziness), tinnitus (ringing in the ear), or a feeling of fullness in the ear.

WHAT SHALL I DO IF I LOSE MY HEARING SUDDENLY?

SSNHL is a medical emergency, can result in permanent hearing loss, and requires swift attention. If you have sudden loss of hearing, seek immediate medical advice from an audiologist or go straight to an emergency department or an ear, nose, and throat (ENT) specialist. Prompt action and treatment with steroids may improve the chance of reversing the hearing loss. Patients should request an emergency audiogram because it often provides evidence of SSNHL and can rule out ear wax or other possible causes of hearing loss.

HOW IS SSNHL TREATED?

High-dose oral steroids are the most common treatment, although occasionally the patient may need steroid injections directly into the ear. Patients have the best possible outcome if treated within two to three days after the sudden hearing loss occurs. Waiting even just two weeks for medical attention may miss the opportunity for steroids to potentially improve your chance of recovery. You may need follow-up tests and repeated hearing assessments to monitor your progress or recovery.

Mr. Collet-Fenson is the head audiologist and managing director of Aston Hearing. He was awarded the U.K. and European Audiologist of the Year in 2016, and serves as the treasurer of the Association of Independent Hearing Healthcare Practitioners.

WHY DOES SSNHL HAPPEN?

SSNHL is thought to have various possible causes, including viral infections, blood circulation problems, head trauma, benign tumors on the hearing and balance nerves, or autoimmune diseases. In most cases, the exact cause is never found. SSNHL can happen unexpectedly at any age regardless of any previous hearing issues, and only 10 percent of those diagnosed have an identifiable cause.

CAN YOU PROTECT AGAINST SSNHL?

Prevention is difficult as there are no clear-cut ways to deter the onset of SSNHL, but monitoring your general health and protecting your ears where possible are advisable.

- Protect your hearing at work where necessary and when in loud environments.
- Wear a helmet when playing contact sports or riding a bike.
- Monitor your blood pressure because high blood pressure can cause a vascular episode in the cochlea.
- Be aware of tinnitus (ringing in the ear)—sudden onset or a change in tone.

WHO IS MOST LIKELY TO EXPERIENCE SSNHL?

If you have recently experienced a trauma to the head, ear infection, blood circulation issues, Ménière's disease, or neurological disorders such as multiple sclerosis, you may be at increased risk of SSNHL. However, SSNHL can occur without any warning, so it's important that you take any sudden hearing loss seriously.

Acknowledgment: Thank you to Ian Bottrill, an ENT lead consultant surgeon for Buckinghamshire Hospitals NHS Trust, for his contribution to this article.

Download a printable SSNHL Checklist here: bit.ly/SSNHLChecklist

How to Talk to Your Family About Hearing Loss

By Shari Eberts

When someone in the family has hearing loss, the whole family is impacted. Getting everyone on the same page can help enhance communication and make hearing loss much less frustrating and difficult for all. As the person with hearing loss, it is your responsibility to allow your family to share your unique journey. Here are some tips to do just that.

1. Tell them about your hearing loss. Your immediate family is usually the first to know, but your extended family may not be aware that you have trouble hearing. Be upfront and open about your struggles to allow others to provide the help you need. This may also help explain any mishearings or non-sequiturs that occur.

2. Explain what your hearing loss is like. Hearing loss is difficult to understand for people who have not experienced it, so you may need to explain your hearing loss several times and in a variety of settings to give them a full picture. Suggest that your family members wear earplugs in a safe setting for them to experience what it's like to have hearing difficulties. This won't be fully accurate since earplugs don't mimic the distortion that comes with hearing loss, but it may give them an idea of your condition.

3. Bring them to your audiologist appointment. Learning about your audiogram and the severity of your hearing loss from an expert may help them understand the seriousness of the challenges you face. Your family can also help your audiologist get a better sense of the communication situations that are the most challenging for you, which will aid in your treatment.

4. Share your emotions about your hearing loss. While it is tempting to keep a stiff upper lip, the more you share the frustrations and sadness that surround your hearing loss, the closer your relationships with your family will be. Vulnerability is the path to true partnership.

5. Break down the stigma. If you are comfortable with your hearing issues, others will be too. When I was growing up, my father had hearing loss but would not discuss it. This made hearing loss an unmentionable topic in the family and prevented us from assisting him when he needed it. Make your hearing loss a normal part of the family dynamic.

6. Teach them communication best practices. Small things like getting a person's attention before speaking, keeping your mouth uncovered, and always facing the person with hearing loss when you speak can go a long way toward improving communication. Educate family members about what they need to do to help you hear your best. Be as specific as possible so they can better understand your needs and don't resort to yelling or leaning into your ear to talk.

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7. Invite them to your self-advocacy efforts. When your family collects the caption reader at the movies for you or asks the restaurant manager to lower the music volume, you feel their strong support. These gestures also help you conserve energy for the additional self-advocacy battles that likely lie ahead. Involve your family in activities and volunteer events with your hearing loss community. The more they learn about hearing loss, the better they can understand and support you in your challenges.

8. Create a visual signal for when you didn't hear something. Visual signals can be just as effective as asking "What?" and won't interrupt the flow of the conversation. They can also limit the frustration on both sides when you repeatedly ask someone to speak louder.

9. Experiment with new technologies. Ask your family to help you test new assistive listening devices to see if they make conversation easier when you're dining out or in other settings with background noise. This can be a fun adventure, especially with kids who tend to be more tech-savvy.

10. Bring your sense of humor. Mishearings will occur, so don't take them too seriously. Some can be very funny if you let them be. Keeping a light-hearted attitude can go a long way toward building family support.

Involving your family in your hearing loss journey will help you develop a strong support network where you need it most. Being honest, asking for specific assistance, and enlisting them in your self-advocacy efforts will help strengthen your relationships and enhance communication.

Ms. Eberts is a hearing health advocate, writer, and avid Bikram yogi. She is the founder of Living With Hearing Loss, a blog and online community for people living with hearing loss and tinnitus. She also serves on the Board of Trustees of the Hearing Loss Association of America (HLAA). She has adult-onset genetic hearing loss, and hopes that by sharing her story she will help others live more peacefully with their own hearing issues.

8 Tools to Reduce the Impact of Stigma

By Holly Cohen and Nancy M. Williams

Stigma exists in your external environment, but it can also manifest from inside of you in the messages that you tell yourself. Consider making changes in your life to reduce stigma by committing to at least one of the following tools:

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Tool #1: Take responsibility for your hearing loss. Accept your hearing loss and resist the urge to deny it. In most cases, your hearing loss is not the secret you think it is. Commit to wearing your hearing aids or cochlear implant(s) every day to hear better. Visit your audiologist for adjustments to ensure that your devices are working well.

Tool #2: Create and adopt new messages about your hearing loss. Get a better understanding of how internal and/or external stigma manifests in your life. Determine which voices in your head belong to you—and which ones belong to other people. Focus on what you can control. If you feel "less" because of your hearing loss, alter the message that you tell yourself by changing "I can't" statements to "I can." Accept that the hearing loss is one part of you but it's not all of who you are.

Tool #3: Make a list of difficult listening situations. Reflect on each day of the week and make a list of challenging listening situations organized by home, work, and public places. Be specific and note what you're feeling—uncomfortable, vulnerable, embarrassed, or ashamed. If a situation triggers an unhappy memory from the past, add the memory to your list.

Tool #4: Plan how to talk about your hearing loss. If your hearing aid or cochlear implant is visible, your hearing loss is probably not a secret. If your device is not visible, other people such as your family, friends, and co-workers might not know about your challenges with hearing clearly. In either situation, it takes courage to accept your hearing loss and no small amount of bravery to talk about it. Plan what you want to say. Consider practicing out loud with someone you trust.

Tool #5: Ask for accommodations. Technology is ever-changing. Educate yourself about the range of assistive listening devices so that you can identify and request the appropriate technology and accommodations that you need. People in your life may not know what is available or appropriate for your condition. Become the expert, then ask. Learn about not only technical solutions but also non-technical strategies like note-taking buddies at work.

Tool #6: Communicate effectively and comfortably. How you handle your hearing loss will have a direct impact on the people you closely and regularly interact with. Teach the people in your life how to best communicate with you so that you can hear clearly. For example, remind them to face you when they speak. Your hearing difficulties can be as new and challenging for them as they are for you. Ask speakers to repeat their point in a different way. Remember that humor goes a long way to increase comfort for everyone.

Tool #7: Set realistic and meaningful goals. Living well with hearing loss requires change and adaptability. Change happens slowly and requires commitment. Don't take on more than is reasonable and consider your other responsibilities. However, make a commitment to a meaningful and achievable goal to reduce the effects of stigma on your life.

Tool #8: Connect with other people with hearing loss. The challenges of living with hearing loss and ways to overcome them are known best by those who live with it. Consider participating in online forums and connecting with local hearing loss advocacy groups and events to meet people who "get it" (e.g., AG Bell Association for the Deaf and Hard of Hearing, Association of Late Deafened Adults, Hands & Voices, Hearing Health Foundation, and Hearing Loss Association of America, among others). Engaging in these communities and events can help you be yourself and learn from others who understand the impact of living with hearing loss.

Ms. Cohen, left, is a hearing health advocate and speaker who has been impacted by stigma, professionally and personally, while living with hearing loss for decades. **Ms. Williams** is a strategic management consultant, advocate, and speaker in hearing health care, with expertise in new market development, patient engagement, and consumer insight.

Applying for a Job: Tips for People with Hearing Loss

By Lise Hamlin

Landing a good job, fitting into a new workplace, and successfully advocating for yourself to ensure you are a productive and valued employee, while never easy, are even more complicated when you have hearing loss. Even the first steps of applying for a job and navigating an interview can be a challenge. To meet your career goals, you need the right tools, an understanding of your own hearing loss and the accommodations that work best for you, as well as the skills to successfully advocate for the necessary accommodations at work. Take note of the following tips to help you better manage the job application process.

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APPLYING FOR A JOB

- Only apply for jobs for which you are qualified.
  - The Americans with Disabilities Act of 1990 (and the Rehabilitation Act for federal government jobs and government contractor jobs) prohibit discrimination against qualified employees with disabilities. Learn more at www.ada.gov.
  - Qualified employees are those who can perform the essential functions of the job. If you feel that you need more experience, consider doing some volunteer work.

- What are the "essential functions" of the job?
  - These details should be found on the job vacancy announcement and discussed further at the initial interview. If the essential functions are not obvious, don't hesitate to ask the job poster, recruiter, or Human Resource officer.
  - The Equal Employment Opportunity Commission (EEOC) determines on a case-by-case basis whether a function is essential by evaluating if the employee(s) doing the job can actually perform the function.
  - Does the position exist only to perform a particular function? For example, if an individual is hired to be a court reporter, the ability to transcribe spoken words into a written format would be an essential function, since that is the only reason the position exists.
  - What degree of expertise or skill is required to perform the function? If an employee is hired for his or her expertise or ability to perform a particular function, the performance of that task would be an essential function. A person hired with the credentials of an attorney may be asked to draft contracts as an essential function of the job.
  - The term "essential functions" does not include the marginal functions of the position. For example, if someone hired as an accountant was also asked to answer the phone, depending on the situation, it could be considered a marginal function.

WHEN DO YOU REVEAL YOUR HEARING LOSS?

How and when to inform a prospective employer about your hearing loss is entirely up to you. There is no need to insert your hearing loss into your resume or letter of inquiry. Many employers have little understanding about hearing loss, so it's best to not allow any misguided assumptions get in the way of landing an interview.

Any potential employer is not permitted to ask about your medical condition or require you to take a medical exam before making a job offer. An employer cannot ask whether you have a hearing loss or if you have had a hearing evaluation. However, an employer can ask if you can perform the duties of the job with or without reasonable accommodation. You are

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Dining Out for People with Hearing Loss

By Shari Eberts

Dining out can be a loud and stressful experience. Today's popular restaurant décor includes hard woods, mirrors, and metal surfaces that reflect noise rather than absorb it. A lack of carpeting and other sound-absorbing surfaces creates a cacophony of sound reverberating around the space. Background music combined with the clinking of cutlery on plates and conversations between other patrons add to the overwhelming din. Hearing the waiter recite the specials, let alone enjoying a quiet conversation with your dinner companions, becomes almost impossible. This is true for everyone. Imagine the challenge if you have hearing loss.

Many people with hearing loss avoid restaurants because of the noise. But with these tips, you can make your next dinner out a success.

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1. Research quiet restaurants. Quiet restaurants may be few and far between, but they do exist. Read restaurant reviews online; many now feature loudness ratings. Ask friends for recommendations, or consult free crowdsourcing apps, like Soundprint or iHEARu, to locate quiet restaurants in your area.

2. Provide hearing-related information early. When you make your reservation, mention that you wear hearing aids and request a quiet table. When the restaurant calls to confirm, reiterate your request. When you arrive at the restaurant, remind the hostess once again. If the first table you are given does not suffice, request to be moved.

3. Request a table in a corner. A corner table or a location beside a wall is often quieter because there is a barrier between you and the rest of the restaurant noise. Sitting with your back to the wall will help limit distracting noise from behind you. Experiment to see what works best for you.

4. Ask for a round table. A round table makes group conversation easier. People are more likely to face forward as they speak, projecting their voice towards the center of the table and keeping their faces visible for speech reading.

5. Consider restaurants with sound-absorbing décor. Look for old school restaurant design features like carpet, drapes, cushioned seats, fabric tablecloths, and acoustic tiles. Many restaurants today prefer hard surfaces like wood and glass. Preview the décor online or stop in to see it for yourself before making a reservation.

6. Advocate for your needs. Ask the manager to turn down the music or move you to a quieter table. Request the specials in writing rather than verbally from the waiter. Hearing loss is an invisible condition, so others won't know that you need help unless you ask for it. If a restaurant is not open to meeting your needs, vote with your dollars and do not return.

7. Avoid busy times. Restaurants are quieter at off-hours, and the management may be more amenable to requests to turn down the music. Eat early or late, or try dining outside if the weather permits. Outdoor spaces often have fewer hard surfaces to reflect sound and more organic materials to absorb it.

8. Limit group size. It is fun to eat out in large groups, but this makes conversation more difficult in a noisy environment. Limit groups to four to six people if possible. If a larger group is required, focus on conversing with the people next to you and across from you.

9. Manage the seating arrangement. Position yourself towards the center of a large group, and have the people who are more difficult for you to hear sit directly across from you so that you can read their lips. In a group of four, I like to have the person hardest for me to hear sit diagonally across from me. That way if he or she turns to speak to the person next to him or her, his or her voice is still heading in my general direction. Don't be shy about asking for a different seat if needed.

10. Experiment with technology fixes. Ask your audiologist to create a restaurant program for your hearing aids that will block out background sounds and focus on voices, or try an assistive listening device. Speech-to-text apps can also be used discreetly right on your phone. Remote microphones where your dining companions wear microphones that connect directly to your hearing aids also work well.

Ms. Eberts is a hearing health advocate, writer, and avid Bikram yogi. She is the founder of Living With Hearing Loss, a blog and online community for people living with hearing loss and tinnitus. She also serves on the Board of Trustees of the Hearing Loss Association of America (HLAA). She has adult-onset genetic hearing loss, and hopes that by sharing her story she will help others live more peacefully with their own hearing issues.

How to Enjoy the Movies or Live Theater with Hearing Loss

By Shari Eberts

People with hearing loss are often nervous about going to the movies. They fear they won't be able to understand the dialogue over the booming soundtrack, so they often wait for a film's digital copy that they can watch in the privacy of their own home with the captions on. The same goes for attending live theater. With theater ticket prices on the rise, some people with hearing loss wonder why they should risk spending money on a show they might not understand.

But times are changing. Most movie theaters now provide free captioning devices, and many live entertainment theaters, particularly on Broadway, are improving the hearing access of patrons with hearing difficulties. So, note these tips to enjoy movies and theater shows to the fullest.

- Movie theaters frequently offer free captioning devices.

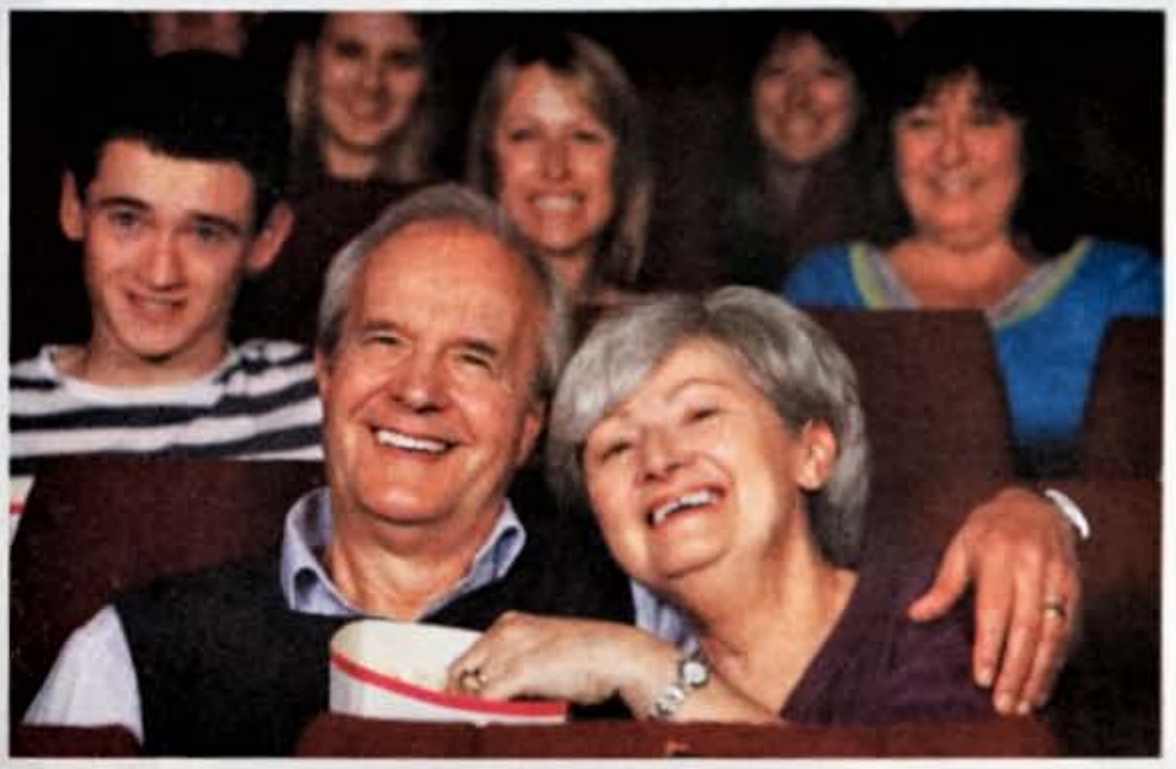
Find theaters with caption readers at CaptionFish.com. Enter your location to search by theater or movie times, or simply ask at your local theater. Most large chains now offer caption devices for all shows. Go to the information booth or concessions stand to borrow one and return it at the end of the movie.

Most caption devices have an OLED display attached to an adjustable support arm that fits into the cup holder of your seat. The screen is small, but the captions are clear. Privacy-visors prevent the captions from bothering others while the bendable arm lets you position the captions in a spot that works for you. Some movie theaters offer captioned glasses that display the captions in the front of you as you watch the movie.

Be sure the device works before the movie begins. Most previews are now captioned, which is a good way to test if the captions are legible and the flexible arm is rigid enough to keep the screen in place. Arrive early so you have time to exchange a broken device for a new one before the movie starts. Inform the manager when there is a problem with a device so it can be fixed for the next user.

- Live theater is expanding its accessibility options.

At live performances, there are many options for hearing enhancement. An infrared headset is the most common assistive device. Some theaters often offer FM systems as well. With these, you connect either by plugging in headphones or linking directly to your hearing aid via the telecoil setting. You may need to line up to get these devices so plan on arriving at the venue early.



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Newer technologies like hearing loops are growing in popularity because of the excellent sound quality. It also allows people with t-coil-enabled hearing aid or cochlear implant to tap into the loop directly. No other device is required.

If you don't have a t-coil enabled aid, explore hearing loop receiver earphones that can be used to tap into a hearing loop. You will probably need to remove your hearing aids to use these earphones.

Captioning options are also becoming more common in live theater. Open captioned shows are spectacular, but limited to specific performances during a production's run. Open captioning provides real-time captioning in sync with the live action. Captions appear on a display board usually located at one side of the stage. To see captioned performance schedules, visit the website of the non-profit group, TDF (www.tdf.org).

Another innovation in captioning is GalaPro, a smartphone app that provides captioning for any performance of a Broadway show after the first four weeks of the run. The captions are displayed on your phone rather than on a screen next to the stage, so be sure to charge your phone's battery in advance. The captions are not real-time as with an open captioned performance, but are preset to display using lighting cues. Reported synchronicity is 95 percent. New delivery methods including glasses and better options for holding the phone for easier viewing are currently being explored.

With so many choices available, people with hearing loss no longer need to avoid the movies or live theater performances. HJ

Ms. Eberts is a hearing health advocate, writer, and avid Bikram yogi. She serves on the board of trustees of the Hearing Loss Association of America. She has an adult-onset genetic hearing loss and shares her story in her blog, LivingWithHearingLoss.com.

Yoga for People with Hearing Loss

By Shari Eberts

Yoga combines physical poses with the philosophy of patience and self-acceptance. Its health benefits include developing stronger muscles, better balance, and increased flexibility. A robust yoga practice can also help people cope with the day-to-day frustrations of living with hearing loss. When combined with meditation, it can also help minimize tinnitus symptoms. People with hearing loss may be skeptical about trying yoga. They wonder if they will be able to hear the instructor well enough to follow along in a class or if their devices will fall off when performing different yoga poses. These are all real concerns, but the following tips should help you enjoy your yoga practice even when you have hearing loss.

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BEFORE YOU START

1. Find the right studio. Visit a few yoga studios in your area to get a sense of the classes being offered. Speak to each manager about your hearing loss. There may be other students in the same boat. Ask the manager about classes with students of different age ranges and abilities, which might make for a less intimidating setting. Try a studio that seems the most accommodating.

2. Learn about the poses in advance. Most studios offer new student workshops. This is a great way to learn the basic poses in a smaller setting where hearing will be easier and one-on-one attention is the norm. Familiarity with the poses will give you confidence before heading into a group class. You can also watch videos for yoga beginners at home.

DURING CLASS

1. Go with a friend. If you have a friend who does yoga, ask if you can go with him or her to a class. Your friend might also be able to give you a tutorial ahead of time to let you know what to expect. During a class, you can follow along by watching your friend without feeling awkward about observing someone too closely.

2. Before a class starts, inform your yoga teacher about your hearing loss. This knowledge will allow the teacher to give you extra assistance if you seem to be missing something. Don't feel awkward about talking to the teacher about your hearing loss. It is typical for students to discuss physical limitations such as an injury or illness with the yoga teacher before class.

3. Find a central spot in the room. This way, you can watch the people in front of you if you don't hear the teacher's instructions, and you can see other yogis behind or beside you. It is best if you can also see the teacher in case he or she demonstrates any of the poses. You can also ask the teacher to recommend a spot that would work best considering your hearing issue.

4. Use a headband or sweatband to protect your devices. If you find your cochlear implant or hearing aids fall off or move around too much during class, try holding them in place with a bandana or sweatband. This will also keep the sweat out of your ears and protect your devices from excess moisture.

5. Have fun. Hey, it's only yoga! Who cares if your downward dog could use some work or if you are slightly behind the flow of the class as it moves to the next pose? Look around the room—others probably are too. Yoga is about improving your health and mental well-being, not a competitive sport. It also gets easier the more you do it.

6. Don't give up if the first class is a dud. The first class you try might not be the right one for you. Try another class, instructor, or yoga style, or explore another studio. It's like trying out hearing aids or princes—the first one you kiss might not be a good match.

Ms. Eberts is a hearing health advocate, writer, and avid Bikram yogi. She serves on the board of trustees of the Hearing Loss Association of America. She has an adult-onset genetic hearing loss and shares her story in her blog, LivingWithHearingLoss.com.

Managing Hearing Loss in Winter

By Mark Patterson

The winter months can be long and cold. But don't let your hearing health suffer. Moisture buildup and middle ear infections are usually more prevalent in cold weather, and the hardware and performance of hearing aids can often be impaired when exposed to water and wind. So, what can you do?

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1. **Come up with a plan.** These preventative measures can save you from problems down the road:
   - Clean or suction debris from any exposed areas on your aid, and double check the receiver, battery contacts, and microphone ports.
   - Properly remove any earwax from your ear canal.
   - Purchase an auditory training program from your audiologist to keep up with your hearing-cognition regimen.

2. **Keep your hearing aids dry.** Consider getting a dehumidifier, which is a specialized drying canister for hearing aids. Store your hearing device in this canister overnight with the batteries taken out and the battery doors left open. If you don't have a dehumidifier, remember to regularly remove your hearing aid batteries and clean everything with a dry cloth.

   If your hearing aids get wet, note these emergency tips:
   - Immediately wipe them dry, remove the ear mold if your aid has one, and take out the batteries.
   - Dry the battery compartment using a Q-tip or a safe cleaning tool.
   - Place your hearing aids in a dehumidifier or Ziploc bag with silica gel packets.
   - Let your devices sit for 24 hours.

3. **Keep your ears dry.** Water is the number one culprit for ear infections, which, if left untreated, can cause inflammation and temporary hearing loss. Cases of extreme cold can also aggravate certain preexisting conditions like exostosis (www.hear-it.org, 2011).

   If water gets trapped in your ear:
   - Do not use Q-tips.
   - Use swimmer's ear drops to help clear any trapped water.
   - See your physician if you experience any ongoing pain, pressure, or popping.

4. **Socialize.** Try not to isolate yourself for more than one or two consecutive days. Even if you don't feel like leaving the warm comfort of your home, consider going to dinner or movies with friends or visiting your local library. If you're snowed in, do not sit in the quiet for too long. Listen to the radio or TV, or try an auditory training program. The more you practice hearing speech in noise and the more conversations you have in different environments, the easier it is to maintain your cognitive and hearing health benchmarks.

5. **Prepare for travel.** If you're planning for a winter getaway, prepare a hearing aid travel checklist. Include items like extra batteries (more than you think you'll need), cleaning tools, and backup devices (if you have them). Check out this handout (http://bit.ly/2I8Unuh) for tips on traveling with hearing loss. For accessibility information when traveling within the United States, visit www.transportation.gov.

6. **Wear outdoor gear to protect your ears and prevent water damage of your device.** When exercising outdoors or playing winter sports, wear wrist and forehead sweatbands to help intercept moisture. Use gears that fit over your hearing device and earmuffs to help safeguard your ears and hearing devices against snow and freezing temperatures.

   When you're in a noisy area, particularly with loud snow blowers or snowmobiles, wear over-the-ear protection instead of in-the-ear varieties that have a tendency to trap liquid in the ear.

7. **Give extra attention to children with hearing loss.** In winter months, children are more prone to ear infections, which can exacerbate any existing hearing impairment (pennstatehershey.adam.com, 2016). Be mindful of any middle ear infection symptoms such as irritability, pain, loss of balance, trouble paying attention, or increased hearing difficulty. To help prevent infections and buildup of moisture-related bacteria, clean your child's ear mold with an audiologist-approved cleaning agent.

8. **Manage your stress.** It's easy for holiday anxiety to be replaced by winter stress, and if you're already struggling with your hearing, that stress can multiply. Though it is important to socialize, also take some time for yourself. Winter won't last forever, so enjoy the world around you.

Mr. Patterson is a writer and videographer based in Chicago, IL. He frequently writes for REM Audiology and other speech and hearing practices in South Jersey and Philadelphia. He is a graduate of Temple University.

Tips for Traveling With Hearing Loss

By Shari Eberts

Traveling when you have hearing loss can be challenging, but that's no reason to miss out on discovering new locales. Follow these tips to have a safe and rewarding adventure.

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Prepare in Advance

Before booking a hotel, ask about available accommodations for people with hearing loss. Many hotels, especially in developed countries, have rooms with specific amenities for people with hearing loss (e.g., flashing lights for the phone and doorbell) if you request them in advance. If you are traveling with a tour company, alert them to your accommodation needs. They may be able to help.

Many museums in large cities provide hearing loops or other assistive technology if you request it. The same goes for theaters and other performance spaces. Send an email to the venues for up-to-date information.

Learn about your destination before you go. Familiarize yourself with the names of places, important historical figures and the like. That way when you hear these names, they will sound more familiar and be easier for you to understand.

Use Technology for Logistics

Whether you are traveling by plane, train, or automobile, download all relevant apps onto your smartphone before you go. Most airlines and train company apps include timetables and provide alerts for gate changes or delays. Practice using the apps before you go so you are prepared if you have trouble on your trip.

Advocate for Yourself

Inform your tour guides and fellow travelers about your hearing loss and provide specific suggestions on how they can help you hear your best. Tell your guides that you will stay close to them so you can better hear and see their face for lipreading. Kindly request them ahead of time to speak clearly and only while facing the group whenever possible.

Have an assistive listening device (e.g., pocket talkers or FM systems) handy in case you'll need to transmit the guide's voice directly to your hearing aids, blocking out background noise.

When dining out, request for quiet corner tables at restaurants or sit outside when the weather is nice. Ask your hotel concierge to suggest quieter restaurants so you can reserve a table.

Ms. Eberts is a hearing health advocate, writer, and avid Bikram yogi. She serves on the Board of Trustees of Hearing Loss Association of America. She has adult-onset genetic hearing loss and shares her stories at LivingWithHearingLoss.com.

Remind People What You Need

People often forget about hearing loss because it is invisible, so don't be shy about reminding others of your needs. A gentle prompt like holding your hand behind your ear often works well and does not disrupt the flow of dialogue. Save non-critical clarification questions for a quiet moment or break, but be sure to ask them. When logistical information is provided, request it in written form. Carry a notebook and pen in your bag to make that an easy process.

Bring Ear Protection

Traveling can be loud! In cities, traffic and construction noise are everywhere. Attending a musical performance is a great way to experience a new place, but the volume can be unsafe. Don't be afraid to turn down or remove your hearing aids and wear ear protection when needed. Bring extra earplugs to share with your traveling companions.

Pack Extra Batteries and Chargers

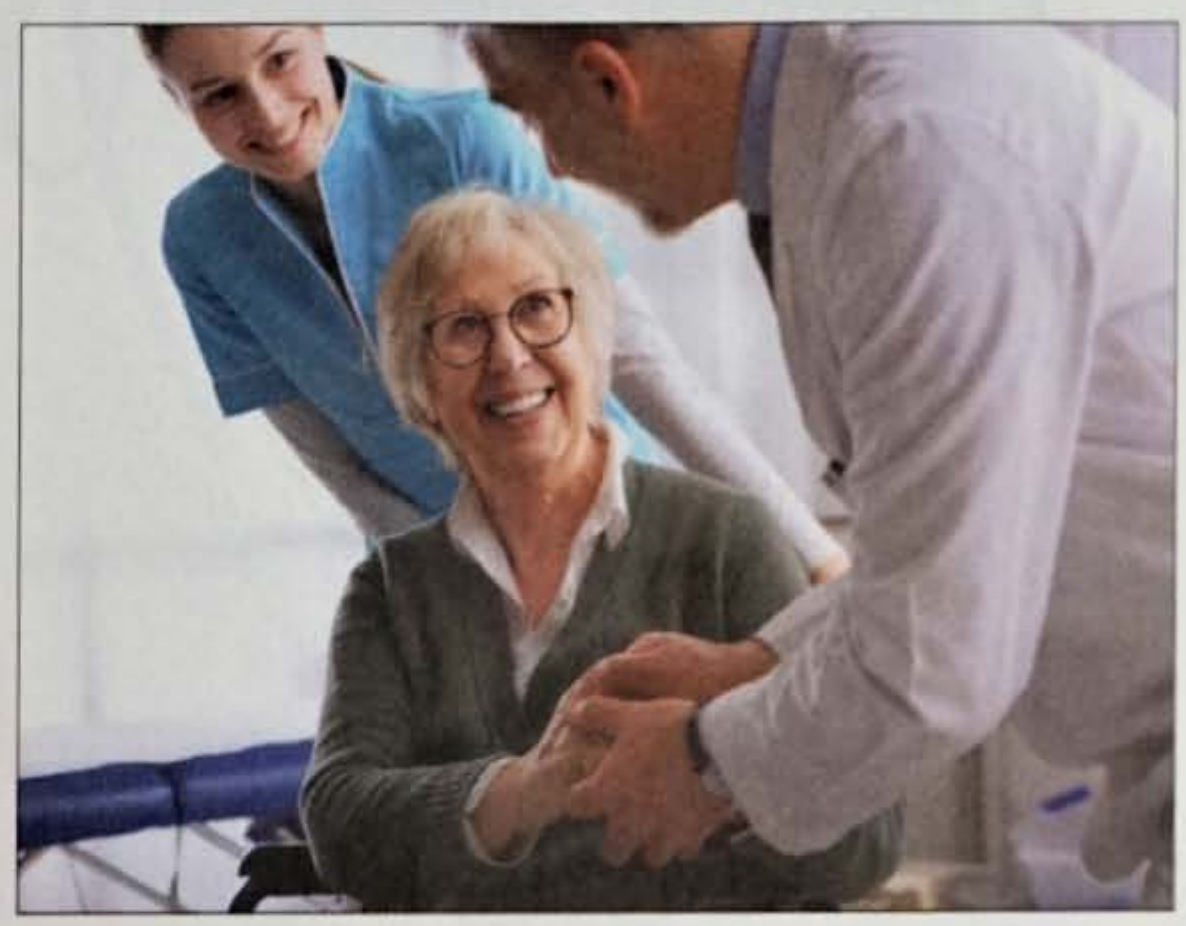
Your devices won't work without power. Be sure to bring a sufficient supply of batteries and extras. Replacement batteries may be harder to find in unfamiliar locations. Pack a supply of batteries in different travel bags in case one gets misplaced. Check that all your chargers are working well and bring an extra if available.

Have a Back-Up Plan

Having your hearing aids on the fritz can be troubling at anytime, but when you are far away from home and your audiologist—in another country, for example—it can feel like a disaster. Set a back-up plan before you go and test it out so you can easily implement it if needed. Examples include using a pocket-talker, an FM system, or connecting a high-quality headset to an app like EarMachine on your smartphone. If you have spare hearing aids, bring those too.

How to Find Hearing Loss-Friendly Physicians

By Shari Eberts



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For people with hearing loss, going to the doctor can pose a stressful communication challenge. A mumbling receptionist can make it difficult to check in for an appointment and hear one's name being called when the doctor is ready. In the examination room, doctors are often multitasking, taking notes with their backs turned while they ask questions or discuss a patient's medical condition. This doesn't work for someone who has hearing impairment and uses lipreading to augment his or her hearing. Surprisingly, these scenarios can even happen during visits to an audiologist or a physician for a hearing-related issue. When you have hearing loss, advocate for yourself to get the most out of every doctor's appointment. Follow these tips to get the health care you deserve.

1. Discuss your needs upfront. When setting a doctor's appointment, make sure to say that you have hearing loss and request any available accommodations. You will learn a lot simply by observing the reaction to your request. Unfortunately, some doctor's offices—even those related to hearing—do not offer any hearing assistance either at the reception or during the appointment, where a portable loop or simple pocket-talker device, for example, could make all the difference.

2. Bring your own devices. Wear your hearing aids and bring whatever assistive listening devices you have such as a Roger pen, simple FM system, or free speech-to-text smartphone application like Google's new Live Transcribe.

3. Start your appointment with a reminder of your hearing loss. When you arrive at the doctor's office, remind the receptionist about your hearing loss and request that he or she speak slowly while facing you. If an accommodation is available that you think would be helpful, request to use it. Ask the office staff to alert you with a tap on your shoulder when it is your time to see the physician. In the exam room, tell the doctor about your hearing loss and your communication preferences.

4. Provide real-time feedback, both positive and negative. Thank the receptionist, staff, and physician for utilizing any accommodation and/or speaking in a way that you can hear. Positive feedback often leads to continued constructive behavior. If they drift away from communication best practices during the appointment, provide a gentle nudge back to the right direction. Several reminders may be necessary, so rather than getting frustrated, stay focused on doing what it takes to get the important health information that you need.

5. Make a Communication Action Plan (CAP). Complete a CAP (bit.ly/CommAccessPlan), which details the ways that physicians and clinic staff should best communicate with you, and share it with your health care providers. A CAP lists the hearing devices you use and services you need to communicate better. Your CAP should be kept in your medical record for easy access at each doctor's appointment, but bring a copy with you in case the clinic's copy gets misplaced. Read this Guide For Effective Communication in Healthcare (http://bit.ly/2GYj4ue) by the Hearing Loss Association of America to learn more about a CAP.

6. Ask for important details in writing. Medical information can be confusing and full of jargon. Request the physician to write down key information, including any required medication and dosage. Bring along a pad and pen for this purpose. Clarify the details for your next appointment in writing or request a confirmation email. Review all insurance/billing information in writing and ask for clarification when needed.

When you have hearing loss, self-advocacy in a medical setting is critical. It can be frustrating when physicians and their staff do not use best practices in communication or do so for a brief period, then revert back to ways that are challenging to you. However, don't stay silent. Advocate for yourself—always politely—to ensure that you get optimal health care. If your current physician and/or clinic staff is unresponsive to your communication needs, start looking for a new one.

Ms. Eberts is a hearing health advocate, writer, and avid Bikram yogi. She blogs at LivingWithHearingLoss.com, and serves on the board of trustees of Hearing Loss Association of America (HLAA). She has an adult-onset genetic hearing loss and hopes that her story will help others to live more peacefully with their own hearing issues. Connect with her on Facebook and Twitter.

Assistive Listening Systems & Your Right to Hear

By Stephen Frazier

The Americans with Disabilities Act (ADA) stresses that people with hearing loss have the same right to hear well in places of assembly as people with normal hearing. If a venue has a public address system, a hearing aid-compatible assistive listening system (ALS) must also be available. If you have hearing loss, stay up-to-date on technological advancements and regulations to ensure your access to sound in public settings.

WHAT ARE THE TYPES OF ALSs?

HEARING LOOPS. In its simplest form, a hearing loop is a discreetly hidden wire surrounding a seating area. When plugged into an amplifier that is connected to a PA system, the loop transmits the PA system sound as a silent electromagnetic signal that is received by wire coils called telecoils, which are found in most hearing aid models today. The hearing aids with an activated telecoil can turn that signal back into sound.

RF SYSTEMS. These systems transmit sound via radio waves to a receiver and earphones, which you can borrow in various public venues. Like a miniature radio, the receiver captures the radio signal and sends it to the user's ears via the earphones. To meet the ADA hearing aid compatibility mandate, all RF systems installed, or significantly upgraded since 2012, pair 25 percent of receivers with neckloops instead of earphones. When plugged into the receiver, the neckloop becomes a miniature hearing loop, transmitting sound electromagnetically to hearing aid telecoils.

IR SYSTEMS. These transmit sound via invisible light beams that are converted into sound in the same manner as in RF systems.

WiFi SYSTEMS. Audio streaming delivers sound through an existing WiFi network to smartphones or tablets via an appropriate app. While these are getting more popular, they do not meet the ADA standards for an ALS because venues that offer them require users to use their own smartphones as receivers.

Mr. Frazier is a trained hearing loss support specialist and a freelance writer. He co-chairs the Committee for Communication Access in New Mexico and heads the Loop New Mexico clearinghouse. He is a former New Mexico chapter coordinator of the Hearing Loss Association of America and served on the board of the New Mexico Speech-Language Pathology, Audiology, and Hearing Aid Dispensing Practices for many years. Learn more about his work at www.LoopNM.com, www.CCAnm.com, www.SOFNABQ.com, and connect with him at InTheLoop@juno.com

WHAT ARE BENEFITS OF ALSs?

A recent survey found that hearing aid users are six times more likely to use a hearing loop system than other ALS options in a public venue because it eliminates the need to borrow and return devices and remove their hearing aids to access the system. It also eliminates any hygienic concern over using borrowed devices. Furthermore, user's hearing aids customize the sound to match the pattern of their audiogram–something earphones cannot do.

Beyond the benefits unique to hearing loop systems, any ALS separates sounds that users want to hear, such as speech from background noise. By using earphones or turning off their hearing aid mics, users eliminate much of the reverberation, ventilation hum, and other sounds that may interfere with their ability to discern words, improving the speech-to-noise ratio.

HOW DO I FIND AND ACCESS AN ALS?

The ADA requires the placement of ALS signage (blue international symbol; see above) in venues with an available system. Look for the symbol at performing arts halls, transportation hubs, legislative chambers, and any place where people assemble that uses a PA system. If you see this sign, inquire at the box office or information desk about the type of system available. If a hearing loop is available and you have telecoils, simply turn them on. You can also borrow a small telecoil-equipped receiver and earphones to access the loop. If an RF or IR is available, borrow a receiver and earphones or a neckloop. Places of worship are the No. 1 location with ALSs but, because the ADA does not usually apply to these venues, you may not see any signage. Ask an official if a hearing loop is available. Venues with RF or IR systems must offer users the choice of earphones or a neckloop.

You can become an advocate for hearing loops. Talk to leaders at your place of worship, city council, and local performing arts center about installing a hearing loop. Encourage leaders and other hearing health advocates to learn more about the technology and how to go about looping a venue. For more information, visit these resources: www.Hearingloss.org, www.hearingloop.org, www.aldlocator.com/, and www.time2loopamerica.com/loop-locator/.

What You Need to Know Before Getting a Hearing Dog

By Judy McDonald

You've probably seen service dogs for people returning from war or in wheelchairs, and even dogs that can alert their humans to impending seizures. But did you know there are service dogs specially trained for the deaf? Learn more about hearing dogs and how they can help those who are hard of hearing.

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WHAT ARE HEARING DOGS?

Hearing dogs enable deaf or hard-of-hearing people to be more aware of their surroundings. They give cues to help their handler better navigate public settings. For example, when the dog looks to the left, this tells the handler that an auditory signal is coming from that direction. This prompts the handler to look to the left to see if it is something he/she should respond to.

Hearing dogs are also trained to alert their handler to certain sounds at home. For example, they are trained to paw at their handler's leg when the smoke alarm goes off, the doorbell rings, the microwave dings, or the kettle whistles. Hearing dogs can be trained on a case-by-case basis to react to sounds that are specific to a handler's situation. An average service dog undergoes over 600 hours of training.

Hearing dogs can be of a small or large breed, but size is not a factor. Labradors, golden retrievers, and doodles are generally trained as hearing dogs, but any dog breed that has the right temperament and energy as a service dog would be a great hearing dog.

IS A HEARING DOG RIGHT FOR ME?

Weigh the pros and cons of getting a hearing dog. Will it give you new freedoms, or will it draw extra attention to you that you're not comfortable with? Although service dogs can bring many benefits, getting one requires at least a 10-year commitment. This decision should not be taken lightly. Make sure your friends and family are on board because getting a hearing dog can be a long and difficult process.

Different service dog organizations may have different application requirements and procedures. In general, service dog applicants must:

- be deaf or hard of hearing, with medical documentation,
- have good communication skills,
- have love for dogs and patience to undergo dog trainings and address possible challenges,
- be able to provide veterinary care and maintenance for the next 10 to 12 years,
- be able to participate in handler training.

HOW CAN I APPLY FOR A HEARING DOG?

If you meet these prerequisites, find a service dog organization and apply for a hearing dog with your medical and personal referral documents. If your initial application is accepted, the organization will contact you to schedule a phone or in-person consultation to see how a service dog can assist you and make sure you are a good fit for a hearing dog. Check the financial requirements or if the organizations can help you raise the funds to get a hearing dog. Once the funds are met, you will be in line for dog placement to select a dog that has the natural propensities to assist you; additional training may also be given to the service dog when deemed necessary.

WHAT IS HANDLER TRAINING?

Handlers must learn how to work with the dog as a team. Handler training generally takes 14 days to reinforce the dog's previous training. This is when the dog learns to respond to the handler's commands in practical, real-life settings to help the handler gain confidence in taking the dog under his or her care. Training is also conducted in public, such as shopping malls, restaurants, and parks, so the handler feels comfortable taking the dog outside of the house.

After completing the training, the handler gets a certification card and the dog is provided with a service vest and identification tag. Service dog organizations may also conduct monthly and bi-yearly consultations to ensure that the hearing dog is healthy, happy, and effectively improving the handler's quality of life.

Ms. McDonald is a certified service dog trainer at Little Angels Service Dogs and a professional comedian. She was a recipient of a service dog, which inspired her to help Little Angels' program reach more people who could benefit from a service dog.

Plan for Effective Communication in Health Care Settings

By Jody Prysock and Toni Iacolucci

For people with hearing loss, communicating clearly with doctors and medical staff is important for safety and well-being. Consider these tips:

- Tell staff you are hard of hearing or deaf.
- Fill out a Communication Access Plan (CAP), and ask that it be added to your Electronic Medical Record (http://bit.ly/2uHL5Df).
- Ask questions, and make sure they are all answered.
- Repeat information to make sure you understand.
- Find out which staff member is responsible for the aids and services you need.

Your needs may depend on the type of visit, so note these reminders:

Visiting the Emergency Department

- Remind the staff you will not hear your name being called.
- Ask for a copy of registration questions.
- Ask that a sticker with a symbol showing that you are hard of hearing or deaf be placed on your wristband.
- Ask to have a sign posted with your hearing status.
- If you cannot wear hearing aid(s) or cochlear implant(s), ask that they be put in a labeled container or given to a family member or friend.
- Be sure to get all instructions in writing.

Inpatient Visits

Pre-Admission

- Contact a patient representative or advocate to ask who is responsible for arranging the services you need.
- Follow up before your appointment to ask about aids and services they have for you and what you need to bring.

Admission

- Bring your paperwork and your CAP.
- Bring hearing aids, cochlear implants, assistive listening devices (ALDs), batteries, and a container with your name on it.
- Bring a pen and paper or a tablet.

During Your Stay

- Inform the staff that you expect to be included in all discussions and decisions.
- Tell the staff that you won't be able to hear the intercom.
- Make sure to have a sign of your hearing status over your bed, a wristband with a universal hearing loss sticker, visual alerts, captioned phone, and instructions to set up TV captions.
- Discuss with the staff how they will get your attention, e.g., turning lights on and off, tapping you on the shoulder.
- Make sure hearing aids, cochlear implants, ALDs, etc., are kept safe.
- If you are unable to get the help you need, ask to speak with a Patient Advocate.

Discharge

- Request to have all discharge instructions in writing.

Outpatient Visits

Scheduling Appointments

- Use an online patient portal or email scheduling.
- Discuss what aids and services are available.
- If using a phone for scheduling, repeat the date, time, and address of your appointment to confirm.

When You Arrive

- Remind the staff you are hard of hearing or deaf.
- Give them your CAP.
- Ask the staff how they will let you know when you will be seen.

Your Visit

- Review your CAP, and discuss your hearing status and your needed aids/services.
- When prescribed a new medication, ask if it may affect your hearing, balance, or tinnitus.
- Request to have all information about your treatment plan and medications in writing.
- Ask for the name, phone or text number, or email address of someone to contact if you have questions.

TESTS & PROCEDURES

- Remind staff that you are hard of hearing or deaf.
- Give staff a copy of your CAP.
- Ask to wear your hearing device(s) until tests or procedures begin. If this is not possible, ask staff to put the device(s) in a container with your name on it.
- Ask for a written explanation of what will be done.
- Make sure all your questions are answered before staff put on surgical masks.
- If you have a cochlear implant(s), ask your doctor if you can have an MRI.
- Ask for earplugs/a headset before getting an MRI.
- If anesthesia is involved, ask your doctor if this will affect your hearing, balance, or tinnitus.
- Ask your doctor if someone will be in the room to give instructions and how he or she will communicate with you.
- Ask the staff how and when you will get the results.

For more, see the Guide for Effective Communication in Health Care.

Ms. Prysock, left, is a certified sign language interpreter, a consultant, and an advocate for all hard of hearing, deaf/Deaf, and DeafBlind people. **Ms. Iacolucci** is a hearing health advocate and a member of the NYC Board of Directors of the Hearing Loss Association of America. They are the authors of the Guide for Effective Communication in Health Care.

Advocate for Your Hearing Health

By Beverly Zwahlen

Self-advocacy to improve one's hearing and comprehension is not always easy for people with hearing loss. But, with practice, you can effectively communicate your hearing and listening needs to those around you.

1. **Self-advocacy begins with self-knowledge.**
First, understand your listening strengths, needs, and interests. Even with hearing aids (HA) or cochlear implants (CI), you may find yourself in situations where you'll need additional assistance to better hear and understand speech (e.g., face-to-face meetings in noisy settings, use of landlines/mobile phones, using safety devices like smoke and fire alarms, watching TV). If you require help to understand your needs, ask your hearing care provider to conduct a needs assessment.

2. **Use Hearing Assistive Technology (HAT).**
If you need additional hearing assistance beyond your HA or CI, there are other options. Bluetooth accessories and hearing loops provide direct audio streaming to your HA or CI from TVs, phones, theaters, airports, etc. Closed-caption phones, apps, and alerting devices are also available–many at no cost to qualified individuals. Learn about HAT by asking your hearing care provider and joining a hearing support group in person or online. People with hearing loss are eager to share their knowledge and experience.

3. **Don't try to hide your hearing loss.**
Acknowledge your hearing loss so people will be more likely to look at you directly and speak clearly when addressing you. If your conversation partner knows that you have hearing difficulties, there may be fewer misunderstandings.

4. **Effectively and assertively communicate your needs and preferences.**
Using effective strategies, you can modify behaviors and work toward improving your lines of communication. Consider these examples:
   - Avoid saying "Huh?" or "What did you say?" when you heard at least part of what someone was saying. Instead, say something like, "I know you are talking about a new movie, but I did not catch the title." This will help the person know what you did not hear clearly. Practice analyzing why you experience difficulties with a particular speaker, then make specific polite requests.
   - Did the person turn away from you while talking? Use a specific request such as "Please face toward me when you speak. I lip-read" instead of saying "I didn't hear you."
   - Is the person talking with their hand over their mouth? Say "Could you please put your hand down? I lip-read," instead of "I can't make out what you're saying."
   - Does the person speak too fast? Ask the person to "Please slow down a bit so my ears can keep up with what you are saying."
   - Verify what you think you heard. Be willing to ask questions when something is unclear or you need clarification.
   - Use positive words when you need help understanding. Say "Could you please speak a bit louder?" instead of "You're going to have to speak louder if you want me to understand you."
   - Politely let people know what you need to make the conversation flow more easily. At a group meeting, suggest that only one person talk at a time. When in a conference call, suggest that each participant identify himself or herself when he or she speaks.

5. **Be prepared! Anticipate difficult listening situations and plan ahead.**
Example: Dining out with friends?
   - Suggest going at a time when the restaurant is not likely to be too busy.
   - Suggest a place that you know is relatively quiet.
   - Familiarize yourself with the restaurant's menu that can often be found online.
   - Arrive early and pick a seat furthest from the noisy kitchen and position yourself to best understand conversation.
   - Bring any hearing assistive devices that you may need

Example: Attending a meeting with a large group?
   - Arrive early and sit where you have the best line of sight of most attendees and with least glare.
   - Remove chairs that are not needed.
   - Bring hearing assistive devices and test first.
   - Ask for a facilitator and scribe.

6. **Listen with your eyes, not just your ears!**
Look at the speaker's face, particularly their lips. The speaker's facial expressions and body language may also help you understand what is being said.

7. **It's ok to break the rules.**
Picture this: You are waiting at an airport boarding gate, and after a loudspeaker announcement that you couldn't understand, half the people waiting with you start running to another gate. Go to the head of the line and say: "Excuse me, I don't mean to break into the line, but I could not hear the announcement and wonder if you could repeat it for me so I don't miss my flight."

8. **Be patient with yourself and with others.**
Don't blame yourself or others for your difficulties. Keep trying these tips and stay positive, even when the going gets tough.

Ms. Zwahlen is a hearing wellness advocate, hearing technology trainer, and public speaker. She has severe-to-profound hearing loss that has progressed since childhood.

Emergency Preparation for People With Hearing Loss

By Shari Eberts

After the disheartening events of Sept. 11, 2001, my family decided to have an emergency plan in place. But after attending an emergency preparedness session, I realized that our emergency plan did not consider my hearing loss. *How would I make sure I had my hearing device during an emergency? What's my backup communication strategy should I lose my device?* Here are tips in making an effective emergency plan for people with hearing loss.

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STAY INFORMED

While you can prepare for some emergencies like blizzards or hurricanes, you can never be sure about unexpected crises like fire, waterline damage, or terrorist attacks. In either case, the more information you have, the safer you will be. Sign up for email or text alerts for upcoming weather events, transportation disruptions, etc. Find local emergency alert systems and programs that send out timely and written alerts, which work well for people with hearing loss.

CREATE AN EMERGENCY NETWORK

Designate at least two people (friends, family, caregivers, neighbors, coworkers) to be part of your emergency network. You may want different networks for home and work depending on how far apart they are. Consider including somebody from out of town to act as a communication relay in case the local phone lines are jammed.

The people in your network will stay in touch during an emergency, have spare keys to each other's homes, and know where to find emergency supplies. Your network must be familiar with your hearing loss as well as your hearing devices (e.g., hearing aids, CIs, Roger pens, FM systems, etc.) and the batteries or chargers required to operate them.

PLAN YOUR COMMUNICATION OPTIONS

For people with hearing loss, this may be the most critical step. How will you communicate with your emergency network or medical personnel? In an emergency, your usual modes of communication may not be available so preparation is critical.

- Prepare index cards with important phrases like, "I wear hearing aids," or "Please face me and speak as clearly as possible." Have a notepad and pen available as well.
- Use social media to stay in touch. Facebook Safety Check, for example, lets you indicate your status during an emergency, and updates you on the status of others.
- Install personal safety applications (apps) on your smartphone. Explore iTunes or Google Play for popular apps that show your emergency contacts, blood type, and details about your hearing loss/devices on your phone's lock screen, making it visible without a password.

PREPARE EMERGENCY SUPPLY KITS

You will need two—one kit for your home and one portable kit should you need to evacuate. Both kits will contain similar items, but some (like water and snacks) will differ in quantity. Include:

- Copies of important documents like insurance cards, photo IDs, contact details of your family/emergency network, and a medication list with dosages. Keep these items in a waterproof container.
- Flashlights with extra batteries to help you navigate and lipread. Bring a whistle or bell to get someone's attention.
- First aid supplies, including an antiseptic cream, painkillers, bandages, and cleansing wipes.
- Hearing devices with spare batteries in waterproof containers. Include available backup devices and portable battery chargers, but make sure they are charged!

Preparation is the best defense in any emergency. Start making your emergency plan using helpful templates and add contingencies for your hearing loss (NYC gov, 2017). Hopefully, you will never need to use it.

Ms. Eberts is a hearing health advocate, writer, and avid Bikram yogi. She serves on the Board of Trustees of Hearing Loss Association of America. She has adult-onset genetic hearing loss and shares her stories at LivingWithHearingLoss.com.

Tips for Fall and Balance Safety

By Jennifer Grace, AuD

Falls among older people (aged 65+) are widespread and growing. According to the Centers for Disease Control and Prevention (CDC), one in four older adults falls each year, and one in every five of those falls results in serious injury, such as a broken bone or head injury. Alarmingly, fall death rates in the United States have increased by 30 percent from 2007 to 2016.[1]

Problems with walking and balance are an obvious fall risk factor. So it's not surprising that research reports 80 percent of people aged 65 and older in the United States have experienced balance disorders such as dizziness and vertigo.[2] Of these balance disorders, vestibular (inner ear) dysfunction is a leading cause. In fact, 35 percent of adults 40 years or older in the United States have experienced vestibular dysfunctions.[3]

Less obvious is the audiometric portion of the ear and how it may contribute to fall risk. A study at the Johns Hopkins University School of Medicine and the University's Bloomberg School of Public Health found that people with at least 25 dB hearing loss are three times more likely to report a fall. Each 10 dB increase in hearing loss raises the chance of falling by 1.4 times.[4]

At the onset of balance disorder or hearing loss symptoms, a primary care physician or internal medicine doctor typically determines and refers the patient to the most appropriate specialist, such as an otolaryngologist (ENT), a cardiologist, a neurologist, or an audiologist. Common intervention strategies include medication, surgery, therapy (the most common and least invasive), or assistive hearing device.

Health care technology provides the most promising approach to address these issues. Expanding at an amazing rate, health and medical technology now spans artificial intelligence, virtual health care, nanomedicine, virtual reality (VR), 3D printing, and big data.

TECHNOLOGY FOR BALANCE DISORDERS

Twenty years ago, the standard diagnostic test battery for identifying vestibular dysfunction was video nystagmography (VNG) and caloric testing. Recent research shows that 68 percent of patients with vestibular dysfunction are missed when only VNG is performed.[5] In an age of technology enlightenment, if a full diagnostic test battery isn't completed, answers like "your tests are normal" or "just live with it" are outdated. Seek out a specialist who provides a comprehensive diagnostic test battery of all five end organs in each inner ear.

In this hyper-connected world, computers, mobile phones, cars, homes, and even your household pets, can be remotely monitored. So goes the trend in health care. Virtual health care seeks to extend the reach of medical care out of the office and into patients' homes, allowing doctors and specialists to virtually monitor and treat patients in between office visits. VR devices are the new buzz for intervention of phobias, addictions, and lazy eye, to name a few. Several in-office VR programs and devices are in development for therapy and treatment of various balance disorders. However, a home-based VR treatment system for patients with dizziness, vertigo, and imbalance would provide the most patient convenience and clinical flexibility. These advances also promise to make health care more accessible, continuous, and effective.

Look for a balance center that provides both in-office and home-based treatment to receive the most enhanced, individualized, and effective treatment.

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HEARING TECHNOLOGY OPTIONS

Research shows that hearing loss can lead to cognitive decline, such as incoordination and difficulty completing normal daily activities, increasing the risk for falls and other injuries.[6]

Many technologically advanced hearing devices are available to correct individual hearing loss, providing customized speech recognition and improved overall hearing. These devices can be adjusted remotely and connect to mobile phones, televisions, and even doorbells, providing additional lifestyle enhancements. However, the U.S. FDA reported that only one-fifth of people who could benefit from these hearing devices actually seek them out.[7]

Ask a specialist about advanced hearing devices, including extended wear options. It can benefit more than just your hearing.

Advances in general medicine and audiology are often linked to technological innovation. Follow the technological advances and you'll find a more balanced future.

Dr. Grace is the clinical director at Newport-Mesa Audiology Balance & Ear Institute located in Newport Beach, CA. She is a vestibular audiology specialist who conducts research, presents, writes, and contributes in the areas of dizziness, vertigo, balance disorders, tinnitus, and hearing loss.

References for this article can be found at http://bit.ly/HJcurrent.

Choosing the Right Hearing Protector

By Christi Themann, MA, CCC-A

Noise can be bothersome and sometimes fun, but in all cases, a sound that is too loud for too long can damage one's hearing. Repeated exposure to hazardous sound can cause permanent hearing loss, tinnitus (ringing in the ears), and trouble understanding speech in background noise. The best way to prevent noise-induced hearing damage is to reduce exposure by turning down the volume, moving away from the sound, or limiting exposure time. If you cannot take any of those steps, then you should use hearing protection. Follow these guidelines to choose the right hearing protector.

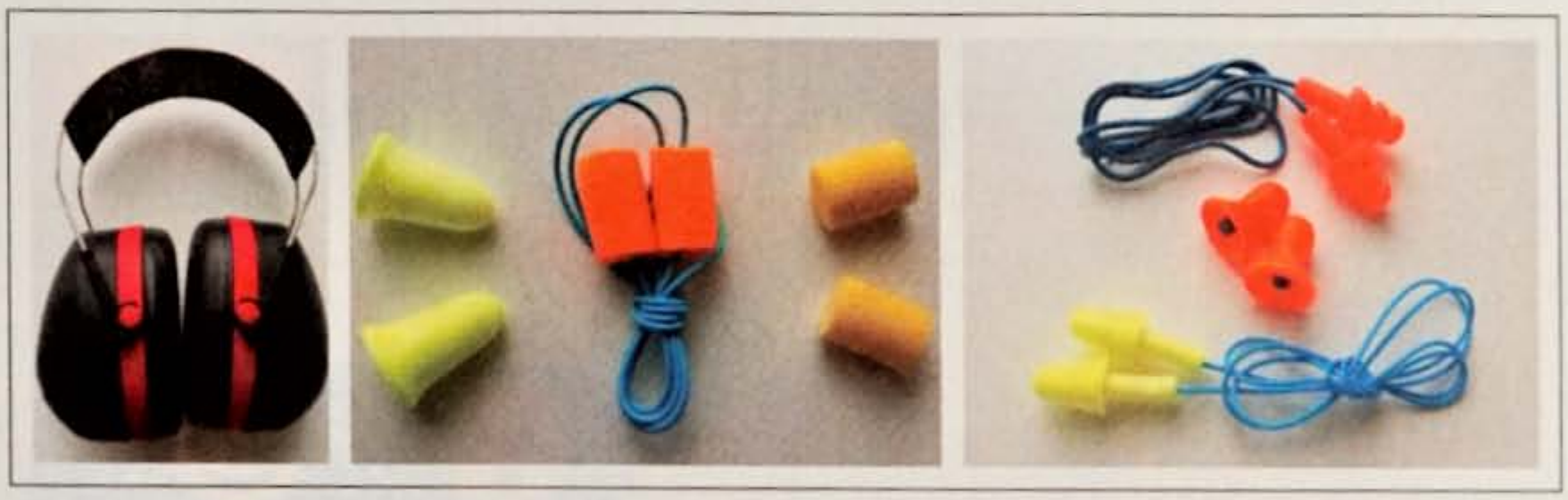

Photo Credit: NIOSH.

Figure 1. Examples of earmuffs, foam ear plugs, and pre-formed ear plugs.

1. Know how much noise reduction you need. The National Institute for Occupational Safety and Health (NIOSH) recommends wearing hearing protection whenever sound levels are 85 dBA or higher. Check how loud a sound is by using a sound measuring app such as the NIOSH Sound Level Meter (bit.ly/NIOSHsoundapp). If you do not have an app, a good rule of thumb is that noise is too loud if you need to shout to be heard by someone an arm's length away.

Hearing protectors are labeled with a Noise Reduction Rating (NRR). However, the NRR is measured in a laboratory and most people get far less noise reduction than the NRR suggests. Fortunately, most hazardous sounds require just 5 or 10 dB of noise reduction to be safe, and almost any hearing protector, when fit correctly, can provide 10 dB of protection. An easy way to know whether your hearing protection is fit correctly is to listen for a change in how you hear your own voice; if your voice sounds deeper, fuller, or more hollow, you likely have a good fit.

If the noise is 100 dBA or greater (such as chainsaws or jackhammers) or if it is impulsive (such as nail guns or firearm noise), you should wear double hearing protection (earmuffs over earplugs).

2. Think about the listening situation. Factors beyond noise levels need to be considered. For example, will you be wearing eyeglasses, sunglasses, or eye protection? What about hats, helmets, or head protection? Eyeglass frames and headgear can interfere with the seal of an earmuff, making earplugs a better choice. Will your hands be getting dirty? If so, avoid using foam earplugs, which must be rolled down with your fingers before insertion. Will it be very hot or very cold? Earmuffs can be uncomfortable in hot environments; earmuff cushions may not seal tightly in very cold environments.

Consider the kinds of sounds involved. Will the noise be continuous or intermittent? Earmuffs and pre-formed earplugs are easier to remove and replace frequently than foam plugs. Corded protectors keep earplugs handy if you don't have pockets or a purse. Will you be listening to music or need to talk to people while wearing hearing protection? Flat attenuation earplugs or earmuffs (also called musician's earplugs) preserve sound fidelity and would be the best choice. Will the environment generally be quiet except for sudden bursts of sound such as firecrackers or target shooting? Level-dependent or sound restoration hearing protectors allow sound to pass through when it is quiet and become protective when it is loud.

3. Consider comfort and convenience. Once you have narrowed your selection down to hearing protectors that are appropriate for your noise exposure and compatible with what you will be doing when you wear them, the choice is completely up to you! Remember, though, that hearing protection only works if you wear it consistently and correctly every time you are exposed to hazardous noise, so choose a protector that is comfortable and convenient.

Ms. Themann is a research audiologist on the Noise and Bioacoustics Team at the National Institute for Occupational Safety and Health (NIOSH). She manages audiometric testing for several large epidemiologic studies, including the National Health and Nutrition Examination Survey and the Early Childhood Longitudinal Study. She is also interested in using new media to promote healthy hearing and developing effective hearing loss prevention strategies for workers with impaired hearing.

DISCLAIMER: The findings and conclusions in this report are those of the author and do not necessarily represent the official position of the National Institute for Occupational Safety and Health or the Centers for Disease Control and Prevention.

FAST READ:
Studies point to a host of poor health outcomes for patients with untreated hearing loss, including higher comorbidity, hospitalization rates and health care costs. Needed remedies for these patients include improved access to amplification devices, increased referrals for hearing screenings, and more attention to their communication needs from providers.

UNTREATED, UNINFORMED AND POWERLESS

Joe struggled to follow what his primary care provider and wife said during a consultation about Joe's high blood pressure, heart disease and asthma. "What? What was that?" he asked multiple times. Finally, Joe's wife spoke up, saying Joe had not been able to hear well for years. Joe quickly defended himself. He had already met with an audiologist who confirmed his hearing loss. However, he ignored the audiologist's recommendation to get fitted with hearing aids since he couldn't afford to pay several thousand dollars for the devices.*

Joe had retired early from his job as a teacher due to his worsening hearing loss. Ever since, he'd faced financial and health woes. To make matters worse, Joe felt isolated from his friends and family because of his hearing loss. Joe's wife was concerned that Joe had been declining physically, emotionally and socially since retiring early. She was frustrated with the lack of options to help Joe.

Unfortunately, Joe's situation is far from unusual. Hearing loss is common, affecting more than 15 percent of Americans ages 18 and older, according to 2012 National Health Interview Survey data. And a data analysis we published last year in the Disability and Health Journal with Amanda Reichard reveals that adults with hearing loss commonly have chronic diseases such as cardiovascular disease and diabetes, as well as poorer self-reported health, than peers without hearing loss (**bit.ly/diseases-hearing**). This leads us to speculate that hearing loss may factor into a heavier disease burden.

Our findings square with past research that also links hearing loss to poor health care access and outcomes. Patients with hearing loss are more likely to be hospitalized and readmitted within 30 days for the same condition, and also to report poorer communication and satisfaction during medical care encounters, as found by researchers such as Ji Eun Chang (**bit.ly/hearing-hospital**).

Not surprisingly, these outcomes result in higher health care costs for patients with hearing loss. Per-person spending is as much as $22,000 higher over 10 years when compared to those with normal hearing, even after adjusting for a variety of sociodemographic and health factors, as per findings in a 2018 JAMA Otolaryngology–Head

and Neck Surgery article (**bit.ly/JAMA-HLcosts**).

What can be done to improve access and outcomes for this vulnerable population? One remedy is to reduce the high cost of hearing aids, which makes hearing treatment prohibitive for patients like Joe. Congress has passed legislation to make this happen by allowing hearing devices to be sold over the counter (see the Leader article, "OTC Hearing Legislation Becomes Law: What's Next?" **on.asha.org/OTC-future**).

The U.S. Food and Drug Administration (FDA) is expected to issue regulations for OTC hearing aids in 2020. Meanwhile, those who can afford them can opt to purchase personal sound amplification products (PSAPs)—over-the-counter devices not FDA-approved and intended only for use with mild-to-moderate hearing loss for people older than 18 (see the Leader article, "Add PSAPs To Your Practice?" **on.asha.org/PSAP-practice**).

Beyond promoting use of amplification devices, audiologists, speech-language pathologists and other providers can help bolster patients' access to hearing health in other ways: advocating for and conducting hearing screenings, educating others about behavioral techniques to improve communication with people with hearing loss, and noting patients' hearing loss and communication needs in patient documentation.

Let's delve further into what drives hearing health disparities, and what can be done to equalize care.

UNEQUAL ACCESS

In our Disability Health Journal study, we analyzed data on 53,111 National Health Interview Survey participants, ages 65 and older. We found that respondents with hearing loss were more likely to experience arthritis, cancer, cardiovascular disease, diabetes, emphysema, high blood pressure and stroke than respondents without hearing loss. Older patients with hearing loss also rated their health more poorly than did age-matched peers without hearing loss.

In addition to the higher association with physical disease that we found, other studies tie hearing loss to problems with mental health, cognitive functioning and activities of daily living (see sources). Achieving good health is further complicated because people with hearing loss are less likely to be employed and are more often lower-income than people without hearing loss (see sources). As a result, they often rely on public insurance, which makes finding health care providers more difficult—not all providers participate in public plans, because reimbursement rates are lower than private insurance.

There is, however, reason to hope that people with hearing loss can have good health and medical care outcomes. Those who gain access to hearing aids fare better medically

Poor outcomes result in higher health care costs for patients with hearing loss. Per-person spending is as much as $22,000 higher over 10 years when compared to those with normal hearing.

UNTREATED, UNINFORMED AND POWERLESS

Adults with hearing loss commonly have chronic diseases such as cardiovascular disease and diabetes, as well as poorer self-reported health, than peers without hearing loss.

than their peers without hearing aids, including an 8-percent lower relative risk of having an emergency visit and 9-percent lower relative risk of having a hospitalization—as found in research led by Elham Mahmoudi (**bit.ly/HA-healthcare**).

Spurred by such findings, in 2016 a committee of the National Academies of Science, Engineering, and Medicine recommended changes to improve health care access for people with hearing loss (**bit.ly/HHC-adults**). The Committee on Accessible and Affordable Hearing Medical Care for Adults' principal recommendation was to make hearing aids and hearing devices easier to access. To put the committee's recommendation into practice, Congress passed the Over-the-Counter Hearing Aid Act of 2017. The FDA is developing regulations to implement that law. In the meantime, the FDA has approved Bose "self-fitting hearing aids" for over-the-counter sales for people with mild to moderate hearing loss (**on.asha.org/ldr-bose-otc**).

The OTC Hearing Aid Act will likely benefit a large portion of people with milder hearing loss who've been priced out of the market. However, it may not help people with more severe forms of hearing loss—whose access to hearing aids will not change under the new regulations—and those already with low income and reduced access to health care.

Costs for a pair of hearing aids vary widely, from $1,200 to $7,000, with costs for fitting, programming and rehabilitation sometimes included or added separately. Compounding the cost is the fact that health insurance plans, including Medicare, rarely include any hearing aid coverage, resulting in significant out-of-pocket costs. It's no surprise that only 14 percent of U.S. adults 50 years and older with hearing loss use hearing aids (see sources).

RESEARCH CHALLENGES

Although there is a growing literature on the health and health care outcomes associated with hearing loss, there is still much work to do. For example, one important source of research information is medical claims data, but hearing loss is poorly captured in these data. Even if hearing loss diagnosis codes (such as International Statistical Classification of Diseases and Related Health Problems [ICD]-9 and 10 codes) are used, medical care providers frequently select "hearing loss, unspecified." This classification limits researchers' ability to determine how worsening hearing loss may affect health and health care.

Also, medical providers frequently do not record hearing-loss diagnosis

UNTREATED, UNINFORMED AND POWERLESS

Medical providers frequently do not record hearing-loss diagnosis codes because the visit was not specifically for hearing loss or because the hearing loss was unrecognized.

codes because the visit was not specifically for hearing loss or because the hearing loss was unrecognized.

When primary care providers *do* select hearing-loss codes, they choose codes that likely reflect more severe forms of hearing loss, not milder ones, that affect ability to deliver care. This practice likely biases the reported findings associated with hearing loss and leads to policy and practice recommendations that don't align with patients' needs and providers' experiences.

But there's been an important and helpful development on the data-collection front: Thanks to a stipulation in the Patient Protection and Affordable Care Act of 2010, all federally funded surveys must now include a core set of disability questions, including one identifying people with hearing loss (see "Communication: It's Critical to Care" on page 46). With this addition, researchers can more consistently identify and track hearing loss across the U.S., furthering the development of policies and programs to support people with hearing loss.

PRACTICAL STEPS TO BOOST ACCESS

As the FDA works up its proposed OTC rules, there is much that audiologists, SLPs and other providers can do to support patients with hearing loss and their health care colleagues who serve them. Training to work with patients who have hearing loss should begin in medical school and in graduate school for other health care professions, and continue throughout providers' training and career. Indeed, federal regulations require that health care facilities ensure effective communication through auxiliary aids and services.

Here are some specific actions providers can take to improve health care access and services for patients with hearing loss:

Push for hearing screening whenever applicable. Screening rates for hearing loss are poor (see sources), prompting the U.S. Preventive Services Task Force to recommend that all patients older than 49 and at risk for hearing loss be screened, and subsequently diagnosed and given services. Audiologists can guide patients on hearing amplification options, including hearing aids and PSAPs, as needed, and SLPs can refer patients to audiologists for this follow-up care.

Educate colleagues on the importance of capturing hearing loss in medical records. Better documentation will help researchers develop a more accurate understanding of the health and health care needs of these patients

and tip off medical providers and support personnel about the need to use supportive communication strategies and/or provide an interpreter during visits (see "Are Your Patients *Really* Hearing You," **on.asha.org/ldr-pts-hear**).

Work with medical administrators to hold workshops and trainings on effective communication strategies with people with hearing loss (such as facing and making eye contact with patients when speaking and using clear speech). This step will not be easy, as budgets and personnel are strained throughout health care organizations. But it is important work, especially to comply with the law.

Advocate for use of PSAPs at health care facilities. Some clinics provide in-office PSAPS to patients with untreated hearing loss, to aid their communication with health care team members (see "Amplifying Patient Care," **on.asha.org/Pitt-PSAP**). Providing such accommodations helps facilities comply with the Americans With Disabilities Act. Audiologists and SLPs can also guide patients on other hearing assistive tools, such as smartphone applications, to help them manage everyday tasks and navigate life.

Hearing loss is a recognized risk factor for dementia and, as we found, is also common among older people with chronic conditions. Managing chronic conditions and maintaining good health and social participation are complex for these patients. All health care providers play a role in ensuring that their patients with hearing loss can understand and act on health care recommendations.

As Joe's story reveals, patients may be unable to access hearing devices for financial reasons, but that alone should not be a barrier to good health care outcomes. With increased attention to communication and amplification options—including more devices offered to patients for use during appointments—patients like Joe will receive additional tools to help address their hearing loss and improve their care and overall quality of life.

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**Name has been changed to protect patient privacy.*

Find sources for this article at leader.pubs.asha.org.

In addition to the higher association with physical disease that we found, other studies tie hearing loss to problems with mental health, cognitive functioning and activities of daily living.

Hearing Aid Use is Associated with Improved Cognitive Function in Hearing-Impaired Elderly

Study suggests hearing loss contributes to sensory-specific cognitive decline

NEW YORK, NY (April 25, 2016) — A study conducted by researchers at Columbia University Medical Center (CUMC) found that older adults who used a hearing aid performed significantly better on cognitive tests than those who did not use a hearing aid, despite having poorer hearing.

The study was published online in the American Journal of Geriatric Psychiatry. The researchers also found that cognitive function was directly related to hearing ability in participants who did not use a hearing aid.

More than half of adults over age 75 have hearing loss, yet less than 15 percent of the hearing impaired use a hearing aid device. Previous studies have shown that the hearing-impaired elderly have a higher incidence of fall- and accident-related death, social isolation, and dementia than those without hearing loss. Studies have also demonstrated that hearing aid use can improve the social, functional, and emotional consequences of hearing loss.

"We know that hearing aids can keep older adults with hearing loss more socially engaged by providing an important bridge to the outside world," said Anil K. Lalwani, MD, professor of otolaryngology/head and neck surgery at Columbia and otolaryngologist at NewYork-Presbyterian/CUMC and NewYork-Presbyterian/Morgan Stanley Children's Hospital. "In this study, we wanted to determine if they could also slow the effects of aging on cognitive function."

> "We know that hearing aids can keep older adults with hearing loss more socially engaged by providing an important bridge to the outside world."
>
> *—Anil K. Lalwani, MD*

The study included 100 adults with hearing loss between the ages of 80 and 99. Of the participants, 34 regularly used a hearing aid. Audiometry tests were performed to measure the degree of hearing loss. Cognitive function was evaluated by the Mini-Mental State Examination (MMSE), in which participants give vocal responses to verbal commands. Executive function was also assessed with the Trail Making Test, Part B (TMT-B), which does not have a verbal or auditory component.

Hearing aid users, who had worse hearing than non-users, performed significantly (1.9 points) better on the MMSE. Among non-users, participants with more hearing loss also had lower MMSE scores than those with better hearing. Although hearing aid users performed better than non-users on the TMT-B, the difference was not statistically significant. In addition, TMT-B scores were not correlated with hearing level.

"Our study suggests that using a hearing aid may offer a simple, yet important, way to prevent or slow the development of dementia by keeping adults with hearing loss engaged in conversation and communication," said Dr. Lalwani.

The study is titled, "Hearing Aid Use Is Associated with Better Mini-Mental State Exam Performance." The other contributors: Z. Jason Qian, MS; Kapil Wattamwar, BS; Francesco F. Caruana; Jenna Otter, MD; Matthew J. Leskowitz, MD; Barbara Siedlecki, MS, RN; and Jaclyn B. Spitzer, PhD.

The researchers declare no financial or other conflicts of interest. ■

Connections Between Hearing Loss and Cognitive Function from the Better Hearing Institute (BHI)

A number of studies have come to light over the last few years showing a link between hearing loss and dementia. Specifically, a pair of studies out of Johns Hopkins found that hearing loss is associated with accelerated cognitive decline in older adults and that seniors with hearing loss are significantly more likely to develop dementia over time than those who retain their hearing. A third Johns Hopkins study revealed a link between hearing loss and accelerated brain tissue loss. The researchers found that for older adults with hearing loss, brain tissue loss happens faster than it does for those with normal hearing. Some experts believe that interventions, like hearing aids, could potentially delay or prevent dementia. Research is ongoing.

How hearing loss affects cognitive function

We "hear" with our brain, not with our ears. When we have a hearing loss, the connections in the brain that respond to sound become reorganized. Fortunately, for many people, hearing aids can provide the sound stimulation needed for the brain to restore the normal organization of connections to its "sound center" so it can more readily react to the sounds that it had been missing and cognitively process them.

Brandeis University Professor of Neuroscience, Dr. Arthur Wingfield, has been studying cognitive aging and the relationship between memory and hearing acuity. He says unaddressed hearing loss not only affects the listener's ability to "hear" the sound accurately, but it also affects higher-level cognitive function. Specifically, it interferes with the listener's ability to accurately process the auditory information and make sense of it.

In one study, Wingfield and his co-investigators found that older adults with mild-to-moderate hearing loss performed poorer on cognitive tests than those of the same age who had good hearing. Wingfield and colleagues at the University of Pennsylvania and Washington University in St. Louis also used MRI to look at the effect that hearing loss has on both brain activity and structure. The study found that people with poorer hearing had less gray matter in the auditory cortex, a region of the brain that is necessary to support speech comprehension.

Wingfield has suggested the possibility that the participants' hearing loss had a causal role. He and his co-investigators hypothesize that when the sensory stimulation is reduced due to hearing loss, corresponding areas of the brain reorganize their activity as a result.

"The sharpness of an individual's hearing has cascading consequences for various aspects of cognitive function," said Wingfield. "We're only just beginning to understand how far-reaching these consequences are."

"Even if you have just a mild hearing loss that is not being treated, cognitive load increases significantly," Wingfield continued. "You have to put in so much effort just to perceive and understand what is being said that you divert resources away from storing what you have heard into your memory."

As people move through middle age and their later years, Wingfield suggested, it is reasonable for them to get their hearing tested annually. If there is a hearing loss, it is best to take it seriously and treat it. ■

Tips to Include Children with Hearing Loss in Team Sports

By Erin Stauder, PhD, MS, CCC/SLP

A few years back, the Seattle Seahawks signed Derrick Coleman, the National Football League's first deaf offensive player. Wrestler and mixed martial arts fighter Matt Hamill, deaf since birth, is a three-time NCAA Division III national champion, and has competed in the Ultimate Fighting Championship. Despite these inspiring success stories, young athletes who are hard of hearing have historically been left out of team sports. Several factors contribute to this, including social and group sensitivities, challenges in understanding team norms, and a lack of resources limiting the size of the support staff. Overlooking these kids can hurt their growth as individuals and athletes, as well as set them up for exclusion in the workplace and other social settings further down the line.

As parents, how do we work with schools and communities to close this gap? How do we establish new allies to help our children develop valuable interpersonal and team skills and encourage a deeper understanding of what defines communication?

BUILD AWARENESS & UNDERSTANDING

An inclusive team environment starts by recognizing that communication isn't one-size-fits-all. When we assume that everyone communicates the same way we do, that's when exclusion happens. Encourage the leaders in your community to educate themselves and develop empathy by remembering these key truths:

- With sensory challenges, each situation or individual is different, and what works for one person might not work for another.
- Consider that someone on the team might be hard of hearing or have attention deficit disorder, autism spectrum disorder, or other sensory challenges.
- Don't write them off. Instead, seek to understand and put yourself in their shoes. It might be different from what you're used to and take a little extra work, but that's what inclusion is all about.

IT'S OKAY TO ASK QUESTIONS

Proactively observe and do your own research. However, the only way for a coach or teammate to know how they can fully support someone is to ask. Out of respect, they may feel they need permission to ask some of those uncomfortable questions. Share these conversation tips with sports coaches:

- Reach out to parents about how to best serve their child.
- Admit that this is unfamiliar territory, affirm that you value their child's contribution to the team, acknowledge them as the expert, and express a willingness to learn.
- Encourage players to ask questions too. Obviously, it's important to be respectful and mindful of context when approaching the conversation, but most people will appreciate the opportunity to have an open dialogue.

ADVOCATE FOR YOUR CHILD'S NEEDS

Resources often dictate the number of support staff available to a coach to accommodate specific player needs. That means you need to let someone know exactly what your child needs. Offer solutions such as:

- identifying a few specific teams to have trained support staff for players with sensory challenges. Resources may be limited to provide consistent support for each team in a league, but there may be enough to provide support for one or two teams.
- showing the coaches/staff how a hearing or assistive listening device works.

ENCOURAGE COMMUNICATION VIA MULTIPLE CHANNELS

Emphasize the need for multichannel communication and offer support to make that happen, whether that's creating visual aids, transcribing, or interpreting. Share these recommendations with coaches:

- After reviewing a game, send a note around to the team recapping what you discussed.
- If you show a video with an audio quality that isn't great, try to provide a transcript so the team members can follow along.
- When you put up plays on the drawing board, attach clear text labels to the different scenarios.
- Face the players when you talk to them.
- Find creative ways to complement visual communication with audio or text-based communication, and vice versa.

Connecting with coaches at school and the community is a critical first step to facilitating an inclusive sports environment. At your child's school, this could look like attending an athletic department meeting for ongoing education with the coaches. In your community, this might mean becoming a coach on your child's team, conducting a training session with coaches, and establishing regular check-ins with the recreation department to create an open line of communication.

These changes require time and energy (on top of what is probably already a busy schedule), so be sure to connect with other parents in your area to take on this cause together. And then, perhaps, we'll start to see more stories like Derrick Coleman and Mike Hamill.

Dr. Stauder is the executive director and CEO of Hearing and Speech Agency (HASA), a nonprofit organization based in Baltimore, MD, that provides education, hearing health, language access, inclusion, and speech and language programs to people of all ages. In 2018, Stauder was named one of Maryland's Top 100 Women by *The Daily Record* and was featured in *Baltimore's Child* as a Mom on the Move. In 2019, she was named one of the Top 10 Leaders in Diversity by the *Baltimore Business Journal*.

Noise and Toys: Dos and Don'ts

By Laurie Hanin, PhD, CCC-A

Noise poses a serious threat to all, but it's particularly important to pay attention to the noise surrounding children today. Studies have shown that about 14 percent of children between 12 to 19 years old have hearing loss in one or both ears (*JAMA*. 2010 Aug 18;304(7):772). From infant toys to video arcades to headphones for electronics, children are bombarded with sounds. Protecting children's hearing is critical, so consider these facts when choosing toys and activities that promote safe listening.

Noise affects more than children's hearing abilities. Children exposed to ongoing loud levels of noise do not learn as well. A landmark study in 1975 found that the reading scores of students whose classrooms were located close to elevated train tracks were one year lower than those of students with classes held at a quiet area of the campus (*Environ Behav*. 1975;7(4):517).

Risks to children's hearing from dangerous noise levels are everywhere. Most people today are aware that listening to headphones at loud levels can be harmful, but dangerous noise levels are everywhere. Video arcade sound levels can exceed 110 dB. Some home computer games and stereo systems can produce levels as high as 135 dB, and children often use headphones with these systems. Certain toys, even those for babies, have been found to produce sounds over 110 dB, which is comparable to the levels found in power drills. Just a few minutes a day with toys at these sound levels is enough to permanently damage a child's hearing over time.

Toy safety standards are not adequate to protect children's hearing. The American Society of Testing and Materials (ASTM) mandates that sound-pressure levels produced by toys shall not exceed 85 dB at 50 cm (19 inches) from the surface of the toy. But when a child holds a toy close to his or her ear, the noise level will be much louder, presenting a danger to hearing. As most children play with toys close to their face and have shorter arms than adults, consider how your child will be playing with a toy in the actual setting before purchasing the item.

Children can be exposed to hazardous noise levels from birth. It's not all about pre-teens and their headphones. Certain rattles, squeaky toys, toy telephones, and musical toys have been found to produce sounds over 110 dB, the same level as power tools. When a power tool at this sound level is used at work, the Occupational Safety and Health Administration (OHSA) requires the use of ear protection. Infants and young children, however, are just given these toys, commencing their early exposure to potentially unsafe sound levels.

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Noisy toys can cause permanent hearing loss over time. Noise from toys, in addition to the other recreational and environmental sounds that children are exposed to today, can cause noise-induced hearing loss. This risk to hearing loss accumulate over time. Noise-induced hearing loss is permanent but preventable. Parents must listen to the sound of a toy before purchasing it and encourage children to turn down the volume on headphones. Parents can use sound meter phone applications to measure the sound produced by toys. However, a simple rule of thumb is: "If it sounds too loud, it probably is."

Help children make better recreation choices that consider their hearing. Today's entertainment scenes and toy options seem to encourage children (and adults) to listen to louder and louder sounds. Fortunately, there are many quiet ways for children to have fun and for parents and caregivers to enjoy time with them. For example, reading to young children helps develop their reading skills and fosters a close relationship between parent and child. Toys with sounds do not have to be completely avoided. Look for low-volume, educational computer games, puzzles, construction sets, and board games that allow children to learn while playing in less noisy settings. Visit libraries and museums, and take walks in the park. Finally, promote the use of ear plugs and ear protection when attending concerts, festivals, firework shows, and other events that will have loud sounds.

Dr. Hanin is a pediatric audiologist and the director of the Center for Hearing and Communication in New York City. The center has long been a proponent of hearing conservation, and was one of the first organizations to shed light on the dangers of noisy toys.

Key Facts About Tinnitus

By Tennille Crooks and Beverley Eintracht

Tinnitus is the perception of sound when there is no external sound present, often described as a ringing, buzzing, humming, clicking, or cicada-like sound. Less commonly, tinnitus can be heard as a musical tune or a pulsing sound in time with a person's heartbeat. It may be one or multiple sounds, and it may be constant or intermittent. It can be heard as coming from one or both ears or from within the head. Research shows that most people hear tinnitus when they are asked to listen in a very quiet environment (i.e., when sitting in a sound-proof booth). Tinnitus is common and reported in all age groups.

CAUSE AND HABITUATION

The exact cause of tinnitus is hard to pinpoint, but it is generally understood that it results from some type of change, either mental or physical, but not necessarily related to the ear. Tinnitus can be associated with noise exposure, hearing loss, middle ear pathology or dysfunction, impacted wax, head or neck injuries, some medications, or a period of high stress. In many instances, the cause or the trigger is unknown.

Tinnitus may dissipate over time or a person may habituate to it such that even though it may be audible, it is of little consequence. In some people, the tinnitus can be intrusively bothersome and significantly affect their general well-being.

Seek assistance if the tinnitus:

- is associated with hearing difficulties.
- presents or changes suddenly.
- becomes intrusive and bothersome.
- interferes with sleep and/or your ability to concentrate.
- impacts general well-being.
- is in one ear only.

Individuals with tinnitus are often told that "there is nothing that can be done" or that "you will have to learn to live with it," but this is not the case. While there is no cure, treatment options are available, and patients can successfully manage the tinnitus to the point where it is no longer a concern.

Consult a general practitioner to address any underlying medical factor that may be contributing to the tinnitus.

Some people require a more involved intervention, and those with distressing tinnitus often benefit from a multidisciplinary approach. In addition to a general practitioner, an ENT specialist, and an audiologist/a tinnitus specialist, others who may be involved in the rehabilitation process include physiotherapists, counsellors, sleep specialists, and/or temporomandibular joint dental specialists.

Factors influencing your ability to get used to the tinnitus include current stress levels and coping abilities, emotional and physical support systems, and insight into the mechanisms of the tinnitus.

Plus, understanding how all of the above interact.

FINDING SUPPORT

Your experience of tinnitus and its impact on your life are unique, so it's important to seek the assistance of a tinnitus specialist who can offer a holistic, evidence-based tinnitus program designed specifically for your personal situation.

A tinnitus management program should provide you with a deeper understanding of tinnitus and strategies you can use to manage and reduce the symptoms.

These strategies may include a combination of:

- sound enrichment
- hearing devices
- neuromonics treatment
- behavioral techniques such as cognitive behavioral therapy and acceptance commitment therapy
- stress reduction and relaxation strategies
- sleep solutions

TINNITUS AND HEARING

If the tinnitus is accompanied by any hearing loss, the use of hearing aids can be helpful on a number of levels. Well-fitted hearing aids assist with communication, help reduce the stress and fatigue associated with intensive listening, and amplify low-level background sound. This can result in a reduction in tinnitus awareness. There are also devices that combine a hearing aid and a noise generator in a single unit, and these can provide the benefits of both.

The timing and sequence of different types of intervention can play an important role in how individuals respond to treatment. A person with chronic tinnitus may be grieving for the perceived loss of silence and how this is affecting his or her life. This person may not be ready for certain types of intervention (e.g., hearing aids, maskers), and may even reject any early intervention. Before the rehabilitation process begins, it is helpful for the individual to be in a place of acceptance and to start coping emotionally.

For additional resources, check out the following: American Tinnitus Association (www.ata.org), British Tinnitus Association (www.tinnitus.org.uk), https://www.nidcd.nih.gov/health/tinnitus, and https://hearinghealthfoundation.org/what-is-tinnitus.

Tennille Crooks and **Beverley Eintracht** are clinical audiologists and tinnitus specialists who are members of Audiology Australia and Independent Audiologists Australia. They are co-owners of Perth Hearing and Tinnitus Clinic, which is committed to providing evidence-based, ethical, and comprehensive services within a comfortable and relaxed atmosphere.

Apply Now for a Mentored Teaching and Research Award

Students and faculty in communication sciences and disorders (CSD) have until April 15 to apply for either of ASHA's two mentored teaching and research awards—one for junior-level faculty seeking to advance their careers, and one for undergraduate and graduate students considering a PhD program and faculty-researcher career.

Awards from the Advancing Academic-Research Careers (AARC) and Students Preparing for Academic and Research Careers (SPARC) programs support self-identified mentored teaching and research activities designed to enhance academic career development.

Since the programs were launched 15 years ago, AARC has supported 114 faculty and SPARC has supported 175 students.

AARC

This $5,000 award supports 18-month mentored teaching and research activities, such as incorporating new learning techniques to enhance teaching or collecting pilot data to strengthen a grant proposal.

AARC applications that focus on clinical practice research, implementation science, or interprofessional education or practice (IPE/IPP) are particularly encouraged.

The AARC award (**on.asha.org/award-aarc**) is part of ASHA's ongoing efforts to enhance faculty retention and address the PhD shortage. Program data for the 73 participants who received their awards more than three years ago show that 96 percent remain in academic positions and more than 80 percent have been promoted to the level of associate professor or above.

SPARC

The $1,000 SPARC stipends (**on.asha.org/sparc-award**) support undergraduate and graduate students in 15-month mentored teaching and research activities. A faculty mentor guides the student awardee in achieving predetermined research and teaching tasks that expose the student to the work associated with a faculty-researcher career.

SPARC students can explore the work of a doctoral-level faculty-researcher, including teaching in CSD and delving into clinical research topics. Students in research-focused and teaching-focused programs can apply.

ASHA encourages faculty members to promote this award to eligible students, who must fall into one of these categories:

- Junior or senior undergraduate enrolled in a CSD program.
- First-year master's degree student enrolled in a speech-language pathology program accredited by the Council on Academic Accreditation (CAA).
- First- or second-year AuD student enrolled in a CAA-accredited audiology program.
- Students accepted into a CAA-accredited graduate program for the 2018–2019 academic year.

For more information, email academicaffairs@asha.org.