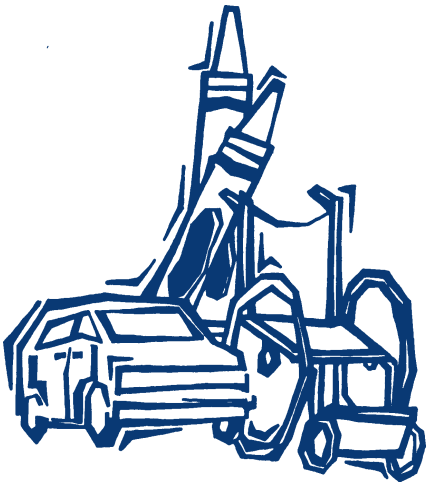

FAMILY

Age-Related Changes in Hearing no. 10.244

by C.E. Barber [1]

Hearing loss is potentially the most serious of all sensory impairments.

- Unlike vision loss, it is not easily recognized by others. It rarely prompts empathy and understanding.
- It can lead to social withdrawal, isolation, depression, paranoia and suspiciousness. Even a slight loss can be emotionally upsetting if it jeopardizes communication and relationships with family and friends.
- Older adults who respond without actually hearing may risk being labeled "cognitively impaired" instead of hearing impaired.
- Use of public transportation may be difficult.
- Sounds that require response (doorbells, telephones and alarm clocks) are lost. Disorientation may result.
- A person with a significant hearing loss may be at risk from not hearing warning bells, alarms and horns.

Hearing loss may significantly impair the ability to successfully cope with or adapt to other age-related losses.

Quick Facts...

Impaired hearing affects more older adults than any other chronic condition.

Thirty to 50 percent of all older adults suffer a hearing loss serious enough to affect the quality of communication and interpersonal relationships.

It is possible to have a slight hearing loss but not experience any interference with daily living.

There are two types of hearing loss: conductive and sensorineural.

Definitions

The term "hearing impairment" refers to any degree of loss in the ability to discern loudness or pitch outside the range for normal. "Deaf" refers to a condition where hearing is impaired to a profound degree. Hearing loss that occurs with increasing age is known as "presbycusis" ("presby" = "elder" and "akousis" = "hearing"). With presbycusis, hearing loss:

- is permanent,
- affects both ears equally,
- is greater for high-pitched sounds,
- is more common and severe for men, and
- gradually worsens with age.

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It is possible for a person to have a slight hearing loss but not experience any interference with daily living. Likewise, a person without any loss may have difficulty hearing in some instances (e.g., a party where many people are shouting or talking at the same time), but not in others (e.g., one-on-one conversations in a quiet room).

Incidence of Hearing Impairment

Impaired hearing affects more older adults than any other chronic condition. Although only 2 percent of people 55 and over are classified as legally deaf, 30 to 50 percent of older adults suffer a hearing loss serious enough to negatively affect the quality of communication and interpersonal relationships.

People often compensate for a minimal level of hearing loss and do so fairly successfully. However, hearing loss may become a problem that needs to be addressed if a person exhibits one or more of the following conditions or behaviors:

- Turns up the television (radio, stereo) beyond the comfort level of others.
- Complains that others do not speak clearly.
- Frequently asks others to repeat what was said.
- Has difficulty hearing high-pitched sounds (e.g., women's/children's voices, telephone dial tones).
- Habitually turns her or his head to one side while listening.
- Frequently misunderstands what is said (or gives inappropriate answers), especially in group situations and settings.
- Has difficulty discerning the source of sounds.
- Experiences ringing in the ears or other "head noises."

Signs of Hearing Impairment

- *The speech of others sounds slurred or mumbled; words are difficult to understand.*
- *Speech is especially difficult to hear when there is background noise.*
- *Certain sounds are overly loud or annoying.*
- *A hissing or ringing background noise may be heard.*

Causes

Hearing impairment may be a product of many factors, including normal aging. Often, it is difficult to know how much hearing loss there is due to aging and how much is attributed to other factors. Prolonged noise exposure (e.g., farm machinery), injury, medications, disease and heredity are all factors that affect hearing.

Some of these factors can be reversed. Do not be misled by the belief that all hearing loss is a product of normal aging. Hearing loss may become more common with age but a certain degree of hearing loss may not be normal. Visit with a health care professional when hearing loss is detected.

Helping the Hearing Impaired

- *Avoid over articulating.*
- *Don't shout.*
- *Don't chew, eat, smoke or cover your mouth while speaking.*
- *Never speak directly into an individual's ear.*
- *Reword messages.*
- *Avoid mixed messages.*
- *Arrange furniture in rooms so people are no more than 6 feet apart and visible.*
- *Enhance speech through facial expressions, gestures and visual aids.*
- *Give a hearing-impaired person time to respond to your message, and allow longer pauses between your sentences.*
- *Always treat a hearing-impaired person with respect.*

Types

Conductive hearing loss occurs when there is a blocking of sound waves that are carried from the ear drums to the inner ear. This may be caused by ear wax in the ear canal, fluid in the middle ear, or abnormal bone growth or infection in the inner ear. Sounds seem muffled or faint. At the same time, however, a person may perceive his or her own voice to be louder than usual and may speak more softly as a result. Many conductive hearing losses can be corrected medically or surgically. Hearing aids may also help.

Sensorineural hearing loss involves damage to parts of the inner ear or auditory nerve. Sound waves reach the inner ear but are not properly transmitted to the brain because of damage to the delicate nerve mechanisms of the inner ear, prolonged exposure to noise (or to a sudden loud noise), or a tumor on the auditory nerve. With this type of hearing loss, there is particular difficulty in hearing high-pitched sounds. Low-pitched sounds often can still be heard.

Self-Help for the Hearing-Impaired

People who suffer from a hearing impairment can play an active role to enhance the communication process.

- **Don't monopolize conversations.** Some people seek control of conversations to ensure they know what is talked about, and/or in an effort to mask the fact they have a hearing loss.
- **Pay attention to non-verbal cues.** Watching a person's face can provide important cues regarding the content of a verbal message.
- **Be open and candid about the hearing loss.** Let people know the kinds of things that make conversation easier (or more difficult) for you to hear.
- **Be assertive. Ask others not to shout or to mumble.** Inform others that you hear best when they face you and speak in a normal, yet clearly articulated, voice.
- **Recognize that some people mumble.** Ask the person to speak up, slow down, pronounce words carefully, and face you.
- **Eliminate or decrease background noise.** Background noise caused by appliances (e.g., radio, television, kitchen appliances, fans, air conditioners) and traffic make speech difficult to hear.

- **Encourage others to get your attention before speaking to you.** Explain to others that you can understand them better if they alert you to the fact that they want to communicate.
- **Use adaptive and assistive listening devices.** Many devices have been developed to transmit sound from a television directly to the ear. Other devices include flashing lights on appliances, doorbells and telephones; vibrating alarm clocks; and pocket-size amplifiers and speakers.
- **Request a listening device in theaters, churches, and other public places.**

Professional Help

In some cases, the diagnosis and treatment of a hearing problem can be made by an individual's personal physician. More complicated cases may require the help of specialists (otologists, otolaryngologists, and otohrinolaryngologists), all of whom are trained to perform surgery on the head and neck.

An audiologist is another health professional who is trained and often licensed by a state board to identify and help with rehabilitation. However, audiologists do not prescribe drugs or perform surgery. To measure extent of hearing loss and hearing impairment, audiologists use a device that produces sound of differing pitches and loudness (an audiometer), as well as other electronic devices. These hearing measurements test a person's ability to understand speech. The tests are painless and often can locate a hearing problem within a short period of time. A physician can use the results of these tests to recommend a course of treatment.

Hearing Aids

Examination and test results from a qualified professional will provide the basis for determining the best treatment for a hearing impairment. In some cases, surgery, or cleansing the ear canal to remove wax, will restore some or all hearing ability.

At other times, a hearing aid is recommended. To purchase a hearing aid, a person must either have a written statement from a physician (evaluation of condition and benefit to be derived from a hearing aid), the person must sign a waiver saying that no medical evaluation of hearing is desired.

It is imperative that individuals seek professional advice for the most appropriate design, model and brand. This advice

Most hearing aids are categorized as one of five basic designs:

1. Body-type hearing aids *are worn on the body, with a cord connecting the aid to a receiver that snaps into the earmold.*
2. Behind-the-ear hearing aids *are smaller, with no connecting cord. They sit behind the ear, connected by clear tubing to the earmold.*
3. Eye-glass hearing aids *are variations of the behind-the-ear hearing aid they are mounted in eyeglass frames.*
4. All-in-the-ear hearing aids *are earmolds that contain all of the hearing mechanism.*
5. Canal hearing aids *are the smallest type available. There is no ear mold because all of the hearing aid mechanisms are mounted in a case that fits into the ear canal.*

(part of the hearing evaluation) is given by an audiologist who takes into account hearing level, the ability of each ear to understand speech, and the individual's ability to operate the aid. Appearance and comfort also are taken into account.

When purchasing a hearing aid, the price should include services such as: adjustments, counseling in the use of the aid, maintenance, and repairs covered by warranty. Consider quality of service along with the quality of a particular hearing aid. Always be wary of sales persons who minimize or ignore to first obtain a hearing assessment by a licensed audiologist.

Buy only what you need. The most costly hearing aid may not offer the desired benefit and satisfaction. Also, the cost of a hearing aid may not be covered by insurance.

Special Training

Individuals with certain types of hearing impairments may need special treatment. Some individuals may benefit from speech-reading ("lip reading"), which allows a person to receive visual cues from lip movements as well as facial expressions, body posture, hand gestures and the environment. Auditory training may include hearing aid orientation, but also be designed to help a hearing-impaired person identify and handle specific communication problems. Speech-reading and auditory training can significantly reduce the handicapping effects of hearing loss or impairment in later life. If needed, counseling may help individuals understand their abilities and limitations in a way that maintains a positive self-image.

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Free Information

Alexander Graham Bell Association for the Deaf, free publication list, (202) 337-5220 (Voice/TTY), 3417 Volta Place, N.W. Washington, DC 20007.

Better Hearing Institute, toll-free Hearing HelpLine, offers names of hearing health-care professional in the caller's area. 1-800 EAR WELL (Voice only toll-free), (703) 647-0580 Voice-TTY, P. O. Box 1840, Washington, DC 20013.

Food and Drug Administration, information about hearing impairment and hearing aids. (301) 443-3170. FDA Office of Consumer Affairs, HFE-88, 5600 Fishers Lane, Rockville, MD 20857.

Hearing Industries Assoc., publications on hearing aids and their proper use. (202) 833-1411, 1255 23rd Street, N.W., Suite 850, Washington, DC 20037.

National Assoc.of the Deaf, information/referral lists of service providers, (301) 587-1789 TDD, 814 Thayer Avenue, Silver Spring, MD 20910.

National Assoc. for Hearing and Speech Action, information on speech and hearing disorders. (800) 338-8255 (Voice/TTY, toll-free), (301) 897-8682 (call collect in Maryland), 10801 Rockville Pike, Rockville, MD 20852.

National Hearing Assoc., promotes hearing-awareness, (312) 323-7200. Address: 1010 Jorie Boulevard, Suite 308, Oak Brook, IL 60521.

National Info.Center on Deafness, clearinghouse for hearing impairment and deafness, (202) 651-5051 (Voice/TTY), Gallaudet College, Kendall Green, 800 Florida Ave., N.E., Washington, DC 20002.

Self Help for Hard of Hearing People, Inc., bimonthly publication, Shh Journal. (301) 657-2248 (Voice), (301) 657-2249 (TTY), 7800 Wisconsin Ave., Bethesda, MD 20850.

The National Information Center on Deafness /Other Communication Disorders, provides information on hearing, balance, smell, taste, voice, speech, and language, NIDCD, Building 31, Room IB62, Bethesda, MD 20892.

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