Hearing Loss & Aging

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Hearing Loss

- About one-third of Americans older than age 60 have hearing problems.
- About half the people who are 85 and older have hearing loss.
- Hearing loss can have a major impact on an older person's physical, social, and emotional well-being.
- It can cause embarrassment, interfere with a person's ability to interact with others, and contribute to feelings of depression and isolation.

Audiologic Evaluation

Includes tests for

- Pure Tone Audiometry
- Speech Audiometry
- Immittance Audiometry

Pure Tone Audiometry

Normal hearing sensitivity

Speech Audiometry

There are two basic measures using speech:

- SRT Speech Reception Threshold
- SD Speech Discrimination

Speech Threshold (SRT)

Sometimes older persons wait until the tone is quite loud before responding, instead of responding at their minimum threshold.
This test can help detect that situation.

Speech Understanding (SD)

This test measures a person's understanding of speech.

- Given in quiet, at average conversational level, it provides information about how a person hears average conversation.
- Given at the maximum loudness needed for clarity, it evaluates how well the person understands speech when it is loud enough to compensate for their hearing loss.

Immittance Audiometry

- Tympanogram
    - This test has types A, C, and B.
        - Type A detects normal middle ear function.
        - Type C detects negative middle ear pressure.
        - Type B detects fluid behind the eardrum in the middle ear.

- Acoustic Reflexes
    - This test measures acoustic reflex arc.
        - It can help estimate the degree of hearing loss.

Types of Hearing Loss

<u>Conductive hearing loss</u>:

Caused by conditions in the Outer or Middle Ear.

Causes include:
Cerumen (wax) blockage
Middle ear fluid (earache)

<u>Sensorineural hearing loss</u>:

Caused by conditions in the Inner Ear.

Causes include:
Age, Noise, Viruses, Drugs

Conductive hearing loss

- It affects hearing like covering your ears.
- It affects loudness, NOT clarity, of hearing.

Sensorineural hearing loss

- It affects both clarity and loudness.
- It distorts frequencies:
    - Usually the high frequency sounds are affected more.
    - A person would be able to hear vowels but not consonants.
- A person with sensorineural hearing loss might say they can't hear because the speaker "is mumbling," or they will ask the speaker to "talk up" or "speak up."

Coping with Hearing Loss

- Hearing aids are best when
    - they are worn in both ears.
    - they are worn all the time.

- Period of adjustment
  - It is very important to know how your perception of sounds will change.
  - It is very important to have realistic expectations of your hearing abilities.
- Use clear speech
  - Use slightly slower speech.
  - Articulate clearly.

Hearing high frequencies is necessary to understand consonant sounds.

- These sounds are very directional.
  - The listener needs to look at the speaker.
  - The speaker needs to look at the listener.
- These sounds will be lost if speaking over a distance.
- These sounds will be masked out by background sounds, like other speakers, a television, or street noise.

If the hearing-impaired person does not understand the speaker:

- Rephrase the question or statement.
  - Don't just repeat the same thing.
  - Rephrase and simplify if possible.

If you are the hearing-impaired person:

- Don't just say "WHAT?" or "HUH?"
- If you understand part of what is spoken, but not another part, let the speaker know what you do understand: "You said Julie went <u>where</u> on vacation?"

Assistive Listening Devices are available.

- T- Coil for telephone, TV, Lectures
- Infra-Red or FM wireless
- Alerting devices are available to help people hear other sounds more clearly, such as:
  - Fire Alarm
  - Doorbell
  - Telephone
  - Baby Nursery
- Cell Phone Compatibility
  - M3 or M4 classification devices have recently become available.

Cochlear Implants

If hearing aids cannot help due to the severity of hearing loss, Cochlear Implants may be an option.

- These implants have a very high success rate today.
  - The devices can restore hearing to almost normal.
  - They are evaluated and programmed at implantation.
  - Many visits are needed to fine-tune the processor.

If you would like more information about this topic or would like to provide suggestions for future topics, please contact the Iowa Consortium for Applied Gerontology. Established in 2003 at the University of Northern Iowa, the Iowa Consortium for Applied Gerontology focuses on developing timely and accessible educational programs for Iowa communities. IaCAG provides services and opportunities for Iowa's senior population, service providers, education professionals, businesses, students, and family caregivers. Visit www.iacag.org or call (319) 273-7961 for more information.

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