



# Hearing Loss in Aging

Presenter:  
Kathleen Lee, Au.D., CCC-A



# SEMINAR INSTRUCTOR



## Kathleen Lee, Au.D., CCC-A

- *Doctor of Audiology*
- *Owner of Concierge Audiology Las Vegas*





# Hearing Loss in Aging:

Impact on Overall Health and Wellbeing



# GOALS AND OBJECTIVES

## I. Signs and Causes of Hearing Loss

"Why does my wife mumble all the time?" "I can hear in quiet but have a hard time in noisy situations." "Why is the tv volume so loud?"

## II. Understanding the Effects of Hearing Loss

"Getting together with friends used to be fun but it's more of a hassle these days." "I feel so lonely lately." "I have diabetes and high cholesterol- are these conditions are related to my hearing?"

## III. Treatment Options

"What are my options for treatment?" "Can I just get surgery to fix my hearing problems?"  
"What's the difference between an ENT and audiologist?"

# Common Scenarios

It never used to be this way. What changed?



# Hearing Loss Statistics

**In the United States,**

- **Third most common chronic physical condition**

(National Center for Environmental Health, 2018)



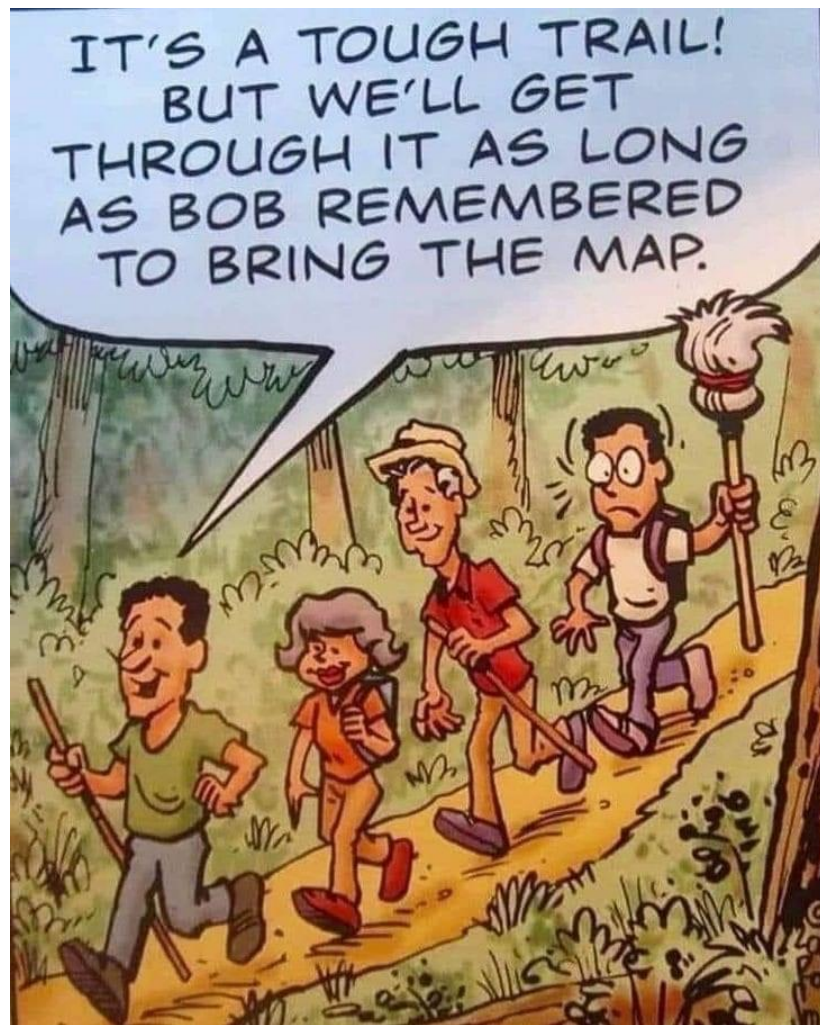
**Increases with age:**

- 30-35% of adults 65-75
- 40-50% of adults 75+  
(NIH Hearing Loss: A Common Problem for Older Adults)
- As many as 81.4% of adults 80+  
(Sharma et al., 2020)

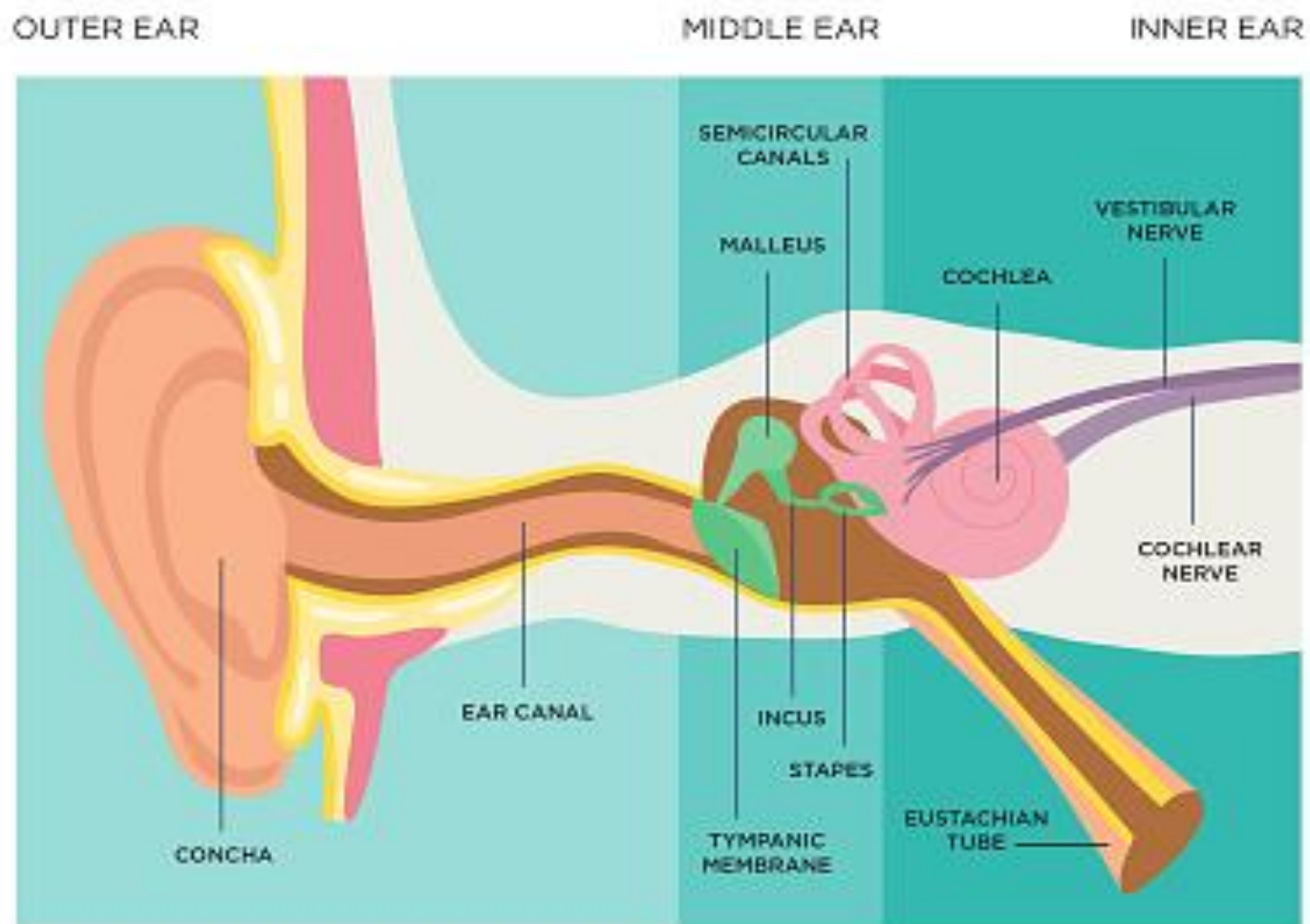


# Signs of Hearing Loss

- Asking to repeat more
- Turning up the volume on TV/ radio
- Hard time understanding people in noisy places
- Complains that voices sound mumbled/ slurred
- Difficulty with certain voices
- Avoidance of the telephone
- Listener Fatigue
- Pretending to hear
- Ringing in ear/ tinnitus



# EAR ANATOMY





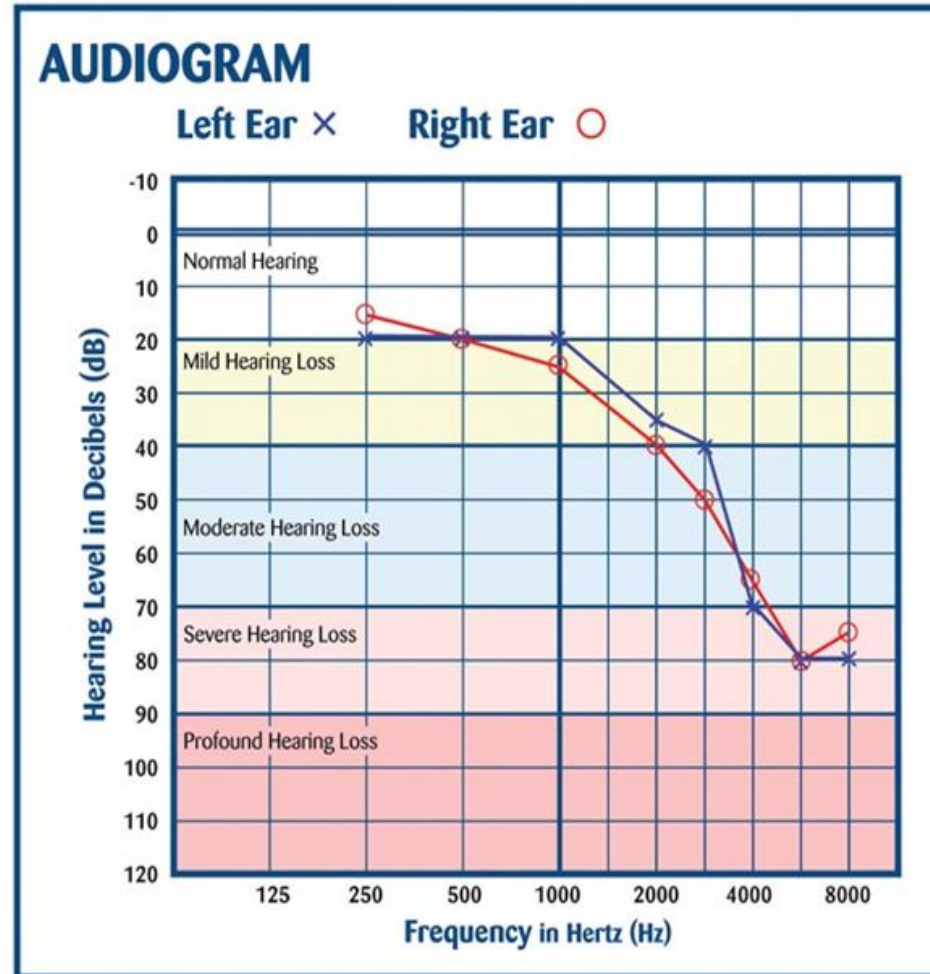
# Ear Wax: Friend or Foe?

- Consists of sebum, dead skin, and hair
- Provides lubricating and anti-microbial features that are beneficial
- Natural migration outward
- Safe removal: **NO Q-TIPS!**



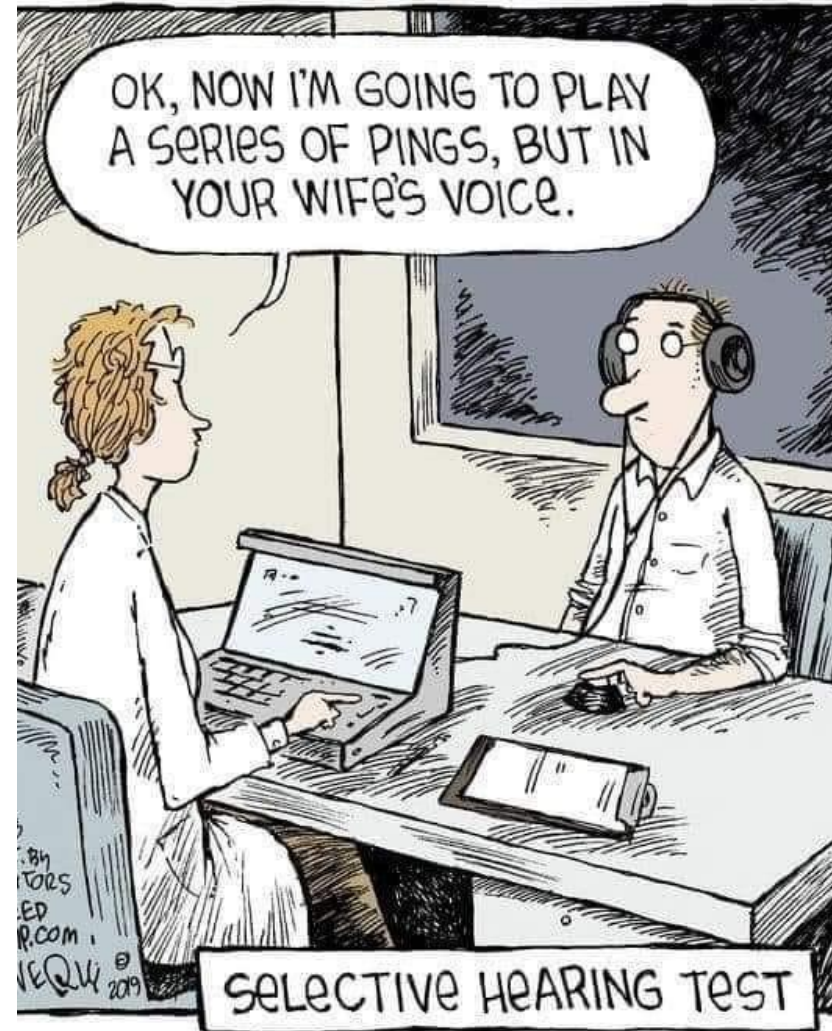
# The Audiogram

- Provides information about type and degree of hearing loss
- Used in conjunction with case history, otoscopy, and other tests
- Used to program prescription-based hearing aids for more accuracy



# Types of Hearing Loss:

- **Conductive**
  - excessive wax
  - ear infection
  - otosclerosis
- **Sensorineural**
  - presbycusis
  - noise exposure
  - Meniere's
- **Mixed (combination)**
  - excessive wax + noise exposure





# Presbycusis (Age Related Hearing Loss)

## Combination of Changes:

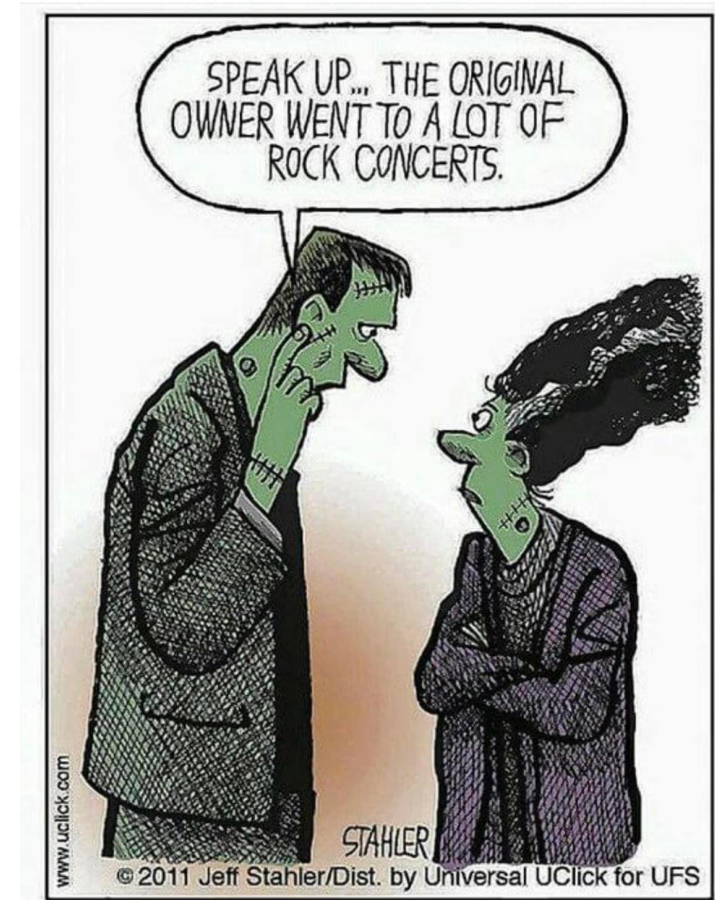
- Reduced blood flow and structures of the inner ear
- Changes to the nerve of hearing
- How the brain processes speech and sound

## Characterized By:

- Gradual progression
- Difficulty with softer voices, children's voices, speech in background noise, and clarity
- Additional Factors: diabetes, poor circulation, noise exposure, certain medications

# Noise Induced Hearing Loss

- Intensity of Sound & Time of Exposure
- <60% maximum volume
- Use earplugs



# Comorbidities:

- Sleep Apnea
- Diabetes
- High Blood Pressure
- High Cholesterol
- Cardiovascular Disease





# Consequences of Hearing Loss

- Social Isolation
- Depression
- Anxiety
- Risk of Falls
- Cognitive Decline & Dementia



# Tinnitus

- Ringing, buzzing, roaring, clicking, humming, hissing, crickets etc.
- 15-25% of population, very common with older adults
- Mild to Severe
- No Cure. How to Manage? hearing aids, sound generators, behavior therapy
- About 80% of people with hearing loss also have tinnitus

# Vertigo

- Specific sensation of motion or spinning
- Related inner/vestibular system
- Often underdiagnosed
- Dizziness effects 15-20% (~a quarter have inner ear related/vestibular vertigo)
- Comprehensive hearing and balance assessment





# Auditory Deprivation: Use It Or Lose It

- What Is It?
- How to Avoid this?



# TREATMENT OPTIONS

- Medication
- Surgery
- Hearing Aids
- Cochlear Implants
- Bone Anchored Hearing Aids (BAHA)



# Hearing Aids

- Different Styles
- Technology
- Rechargeability
- Smartphone Integration:
  - Bluetooth & Apps
- Telehealth



# Hearing Aids continued:

- Commodity vs. Commodity+Service Package





# Prescription-Based vs. OTC

## Prescription- Based

- Requires a HHP
- Uses audiogram/comprehensive tests
- Extended fitting range from mild to profound
- Different styles/Coupling
- Accuracy & Customization

## OTC

- Mild-to moderate HL/ Adults
- Lack of customization
- Self fit/ Lack of professional Assistance
- Sold online/retail
- Usually cost less

## Treatment Options continued:

### Candidacy Specific:

- Cochlear Implants
- Bone Anchored Hearing Aids (BAHA)



# Hearing Healthcare Professionals

- Otolaryngologists (Ear Nose Throat Specialists/ENTs):
  - Physicians (M.D.)
  - Surgery/ Prescribe medication/ Order tests and scans
- Audiologists:
  - Doctorate (Au.D.) or Masters (M.A.)
  - Diagnostic Testing
  - Hearing Aid services/ CI programming
- Hearing Aid Dispenser
  - Associates/HS diploma/additional coursework
  - Hearing aid dispensing



# Helpful Suggestions

- Establish healthy foundations
- Use earplugs in loud situations
- Routine testing starting 60+
- Aural rehabilitation strategies
- Address hearing loss to minimize long term effects





# Closing Remarks

- Reflections
- Motivation is key!



# Useful Links

The House Institute: <https://houseinstitute.com/>

American Academy of Audiology:  
<https://www.audiology.org/consumers-and-patients/>

American Speech Language and Hearing Association: <https://www.asha.org/public/>

American Tinnitus Association: <https://www.ata.org/>

To donate or receive hearing aids if you are in need:

<https://hearingaiddonations.org/>

<https://www.starkeyhearingfoundation.org/>

<https://helpamericahear.org/>

<https://www.lionsclubs.org/en/explore-our-clubs/eyeglasses-and-hearing-aids-recycling>

VA Audiology services: <https://www.prosthetics.va.gov/audiology/index.asp>

Mobile Audiology: <https://conciiergeaudiologylv.com>



# Creating an Age-Friendly Health System & Dementia-Friendly Community in Nevada

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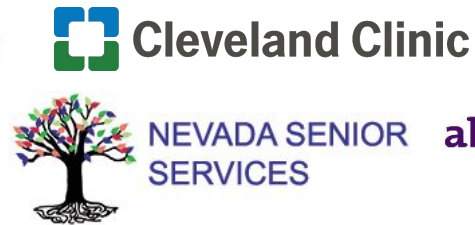
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**CONTACT NIHAN**  
[nihan@unlv.edu](mailto:nihan@unlv.edu) | (702) 272-0826 | <http://www.nihan.care>

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