

Aging and Hearing Loss

"It is not the voice that
commands the story: it is the
ear." ~ Italo Calvino

Mary Jane Sullivan Au.D.CC-A
Associate Professor
University of New Hampshire
mjs28@unh.edu





Hearing Loss is invisible but not insignificant

- one-third of adults between 65 and 70 have some degree of hearing loss
- approximately half of all people 75 and older have hearing loss

(National Institute on Deafness and Other Communication Disorders)

How is hearing loss defined:

- Type
- Degree
- Configuration
- Speech Discrimination

*Diagnostic audiological testing
needed to get a complete
picture of hearing needs*



Presbycusis

Common cause of
acquired hearing loss

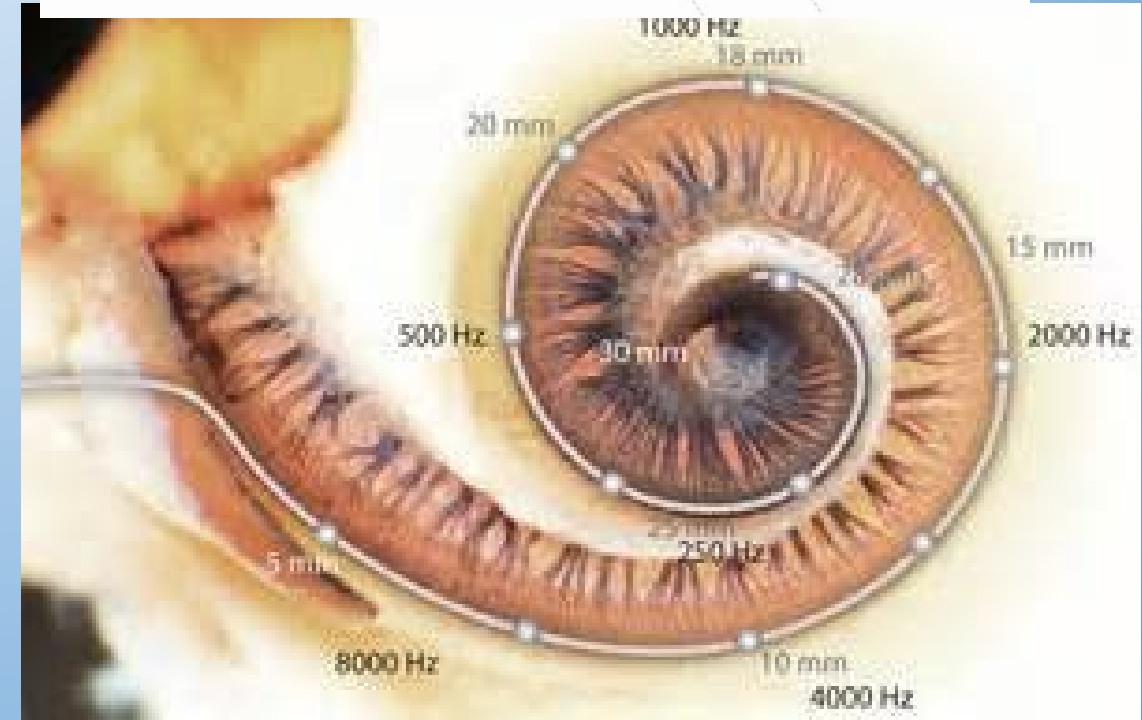
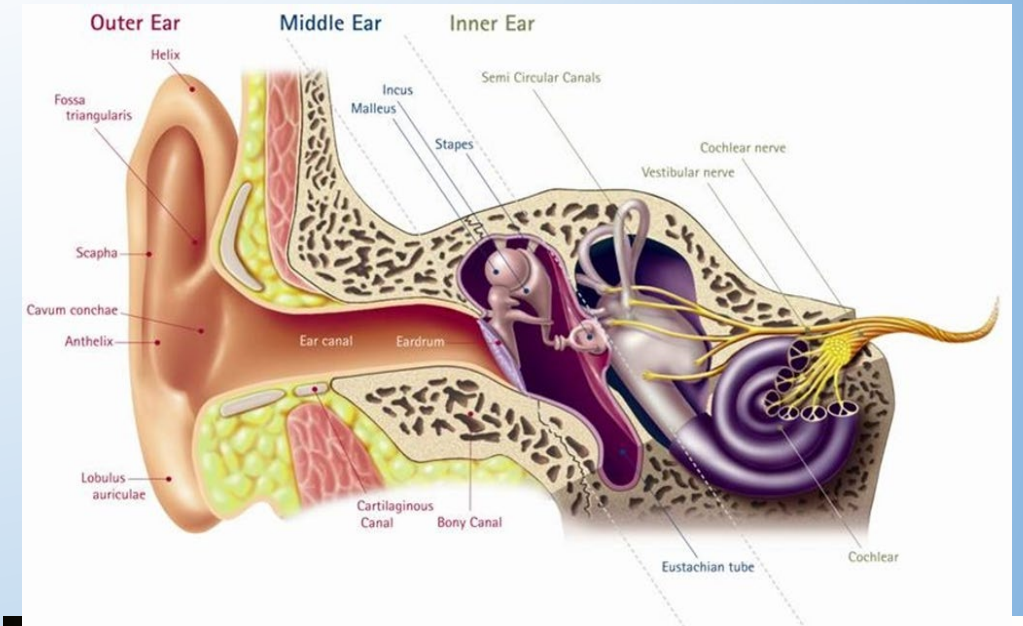
Predispositions:
genetics and
environment

Typical presentation of presbycusis

Clarity of speech most impacted

Communication challenges will vary depending upon environment and speaker

Person impacted not always aware of what they are missing depending upon degree of loss



Untreated hearing loss is bad for your brain

Use it or lose it

If hearing loss is left untreated, auditory pathways in your brain can atrophy because they're not being used.



Lin et al

- Followed 2,000 adults 70 and older for 6 years
- Greater degree of loss resulted in greater cognitive decline
- Those with mild to moderate hearing loss 2x increase in dementia
- ARHL associated with atrophy in specific areas of brain with most change in right temporal lobe
- Increased fall risk: subtle auditory cues important for gait
- Question: If ARHL is treated can cognitive impact be delayed or eliminated(amplification)

Lin et al findings

Research is supporting hearing loss as a global health concern

Prevalence of hearing loss doubles with every decade

What are the consequences of age related hearing loss=cognitive load, effortful listening

Age related hearing loss (ARHL) impacts how brain encodes auditory information

ARHL decreases sensitivity and increases distortion of encoding

Hearing is only sensory system which is continually “on”



Can anything help?

- Hearing Aids
- Communication strategies
- Assistive Devices
- Cochlear Implants
- Combination



Over the Counter (OTC) Hearing Aids

FDA Reauthorization Act

A law established on August 18, 2017, as part of [the FDA Reauthorization Act of 2017](#), directed the FDA to create a category of OTC hearing aids for adults who might have mild-to-moderate hearing loss.



Successful intervention
depends upon individualized
and professional services
focused on patient needs and
goals

**One size does not fit
all**

Why do anything?

Effective communication relies on hearing

Hearing loss impacts:

Cognitive decline

Social/Emotional Health

Physical well being



Resources

Veteran benefit

CapTel services

<http://www.captel.com>

Insurance Coverage




Communication Strategies

Louder is not better

Visual supports help understanding

Hear with our brains not our ears



Not all hearing
losses are part of
aging process



Future

Over-the-Counter hearing aids

- More attention to impact of hearing loss, considered in public health context
- Technology advances
- Hair cell regeneration



Thank-you for
listening!!
