



Audiology Lunch & Learn

DR. BRANDI R. SHEPARD

Professionally

- ▶ Practicing for 17 years
- ▶ Masters degree in 2003
- ▶ I managed 5 hearing aid clinics 2005
- ▶ Started my own Audiology Clinic 2007
- ▶ Earned my doctorate in 2009
- ▶ Came home for a position to develop Cody Regional Health's first Audiology program 2014

What is an Audiologist?

Primary healthcare professional who evaluates, diagnoses, treats and manages hearing loss and balance disorders in children and adults.

Know Your Provider...What do they know? Where have they been? What they can do for you?

- ▶ Bachelor degree
- ▶ Masters Degree
- ▶ Pass National Exam
- ▶ 1 Clinic Internships (Pediatric clinic)
- ▶ 2 Clinic Externships (VA, Balance clinic)
- ▶ Clinic Fellowship Year (ENT practice)
- ▶ Doctoral degree

Why Audiology?

- ▶ Hearing loss is the 3rd most common health problem in the United States.
- ▶ 48 million Americans have hearing loss.
- ▶ New research shows hearing loss and dementia are linked.

Facts according to the Hearing Loss Association of America

- ▶ 2-3 children out of every 1,000 born have a detectable hearing loss in one or both ears
- ▶ Almost 15% of school aged children (6-19) have some degree of hearing loss
- ▶ 1 in 3 people over the age of 65 have hearing loss
- ▶ 1 in 2 people over the age of 75 have hearing loss

Hearing Loss and Brain Function

- ▶ Your brain must work harder to process sound if you don't hear well.
- ▶ Hearing loss causes fewer signals to be sent to your brain. As a result, the brain declines.

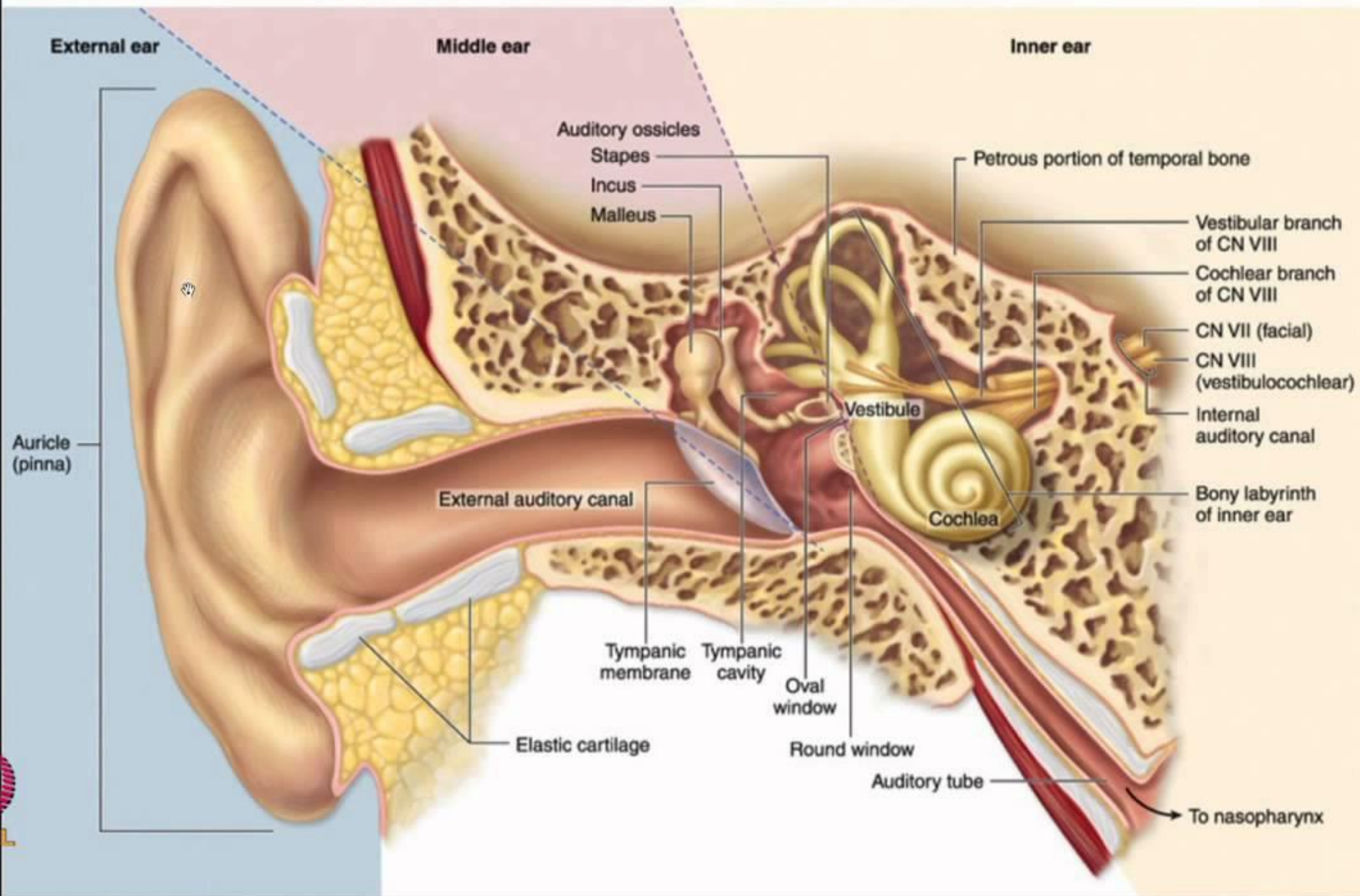


To know more...

WebMD

Hearing Loss and Dementia: The Silent Connection

By David Steen Martin



3 Types of Hearing Loss

- ▶ Sensorinueral
- ▶ Conductive
- ▶ Mixed

Sensorineural hearing loss

What is it?

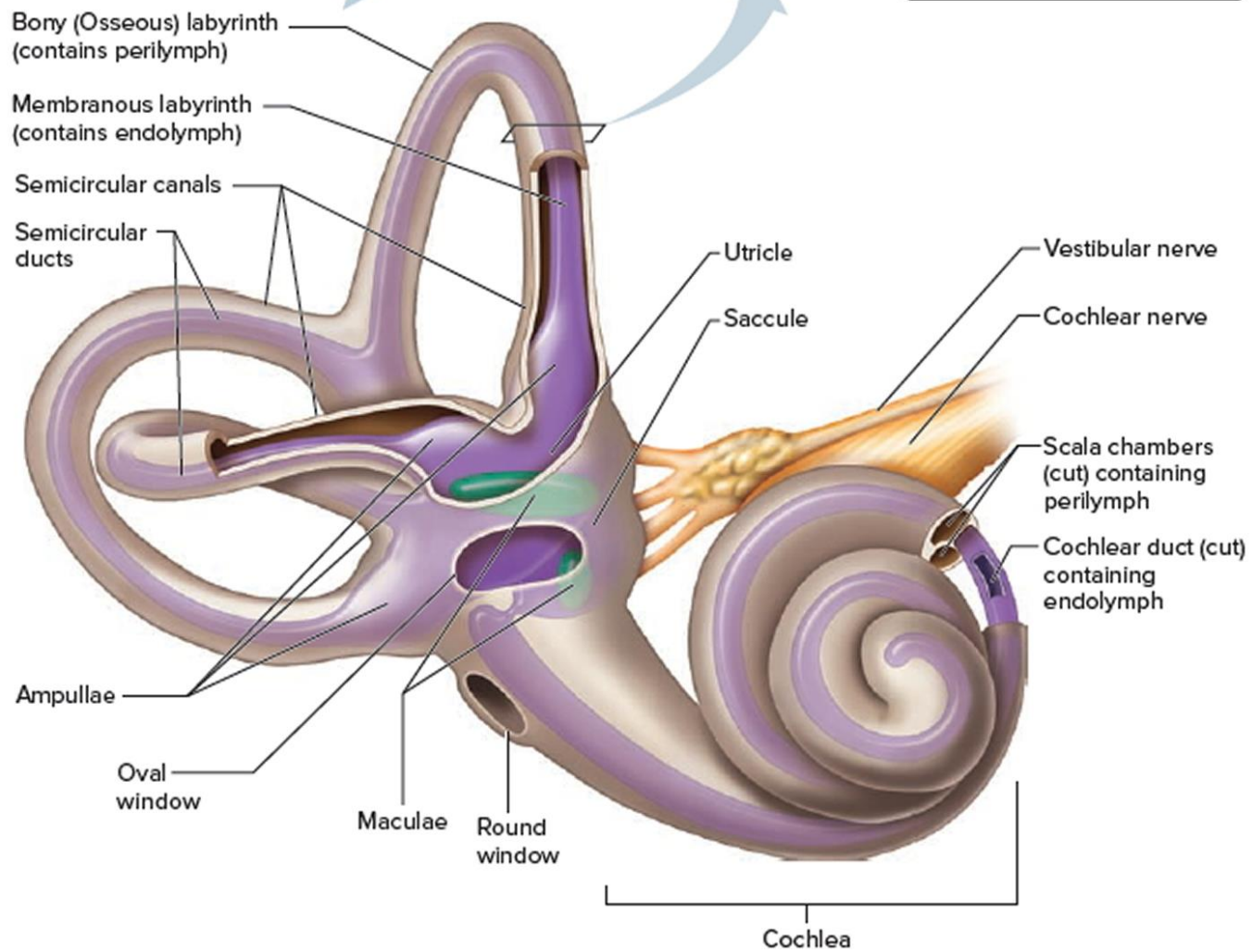
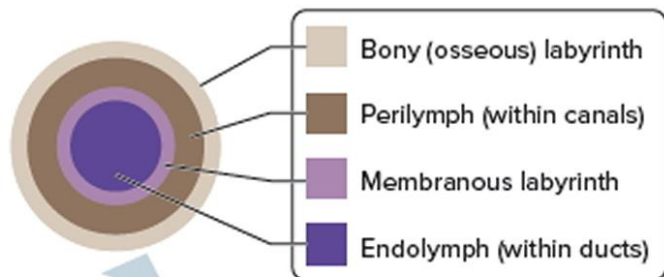
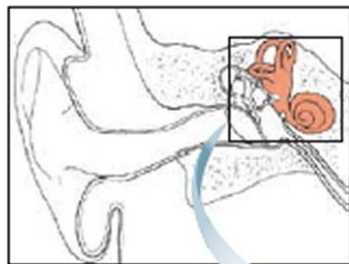
- Permanent loss due to problems of the inner ear (nerve damage)

Causes

- Noise exposure
- Aging
- Hereditary

Solutions

- Hearing Aids
- Cochlear Implant



Conductive hearing loss

What is it?

Problems with

- Ear canal
- Ear drum
- Middle ear
- Ossicles (bones)

Causes

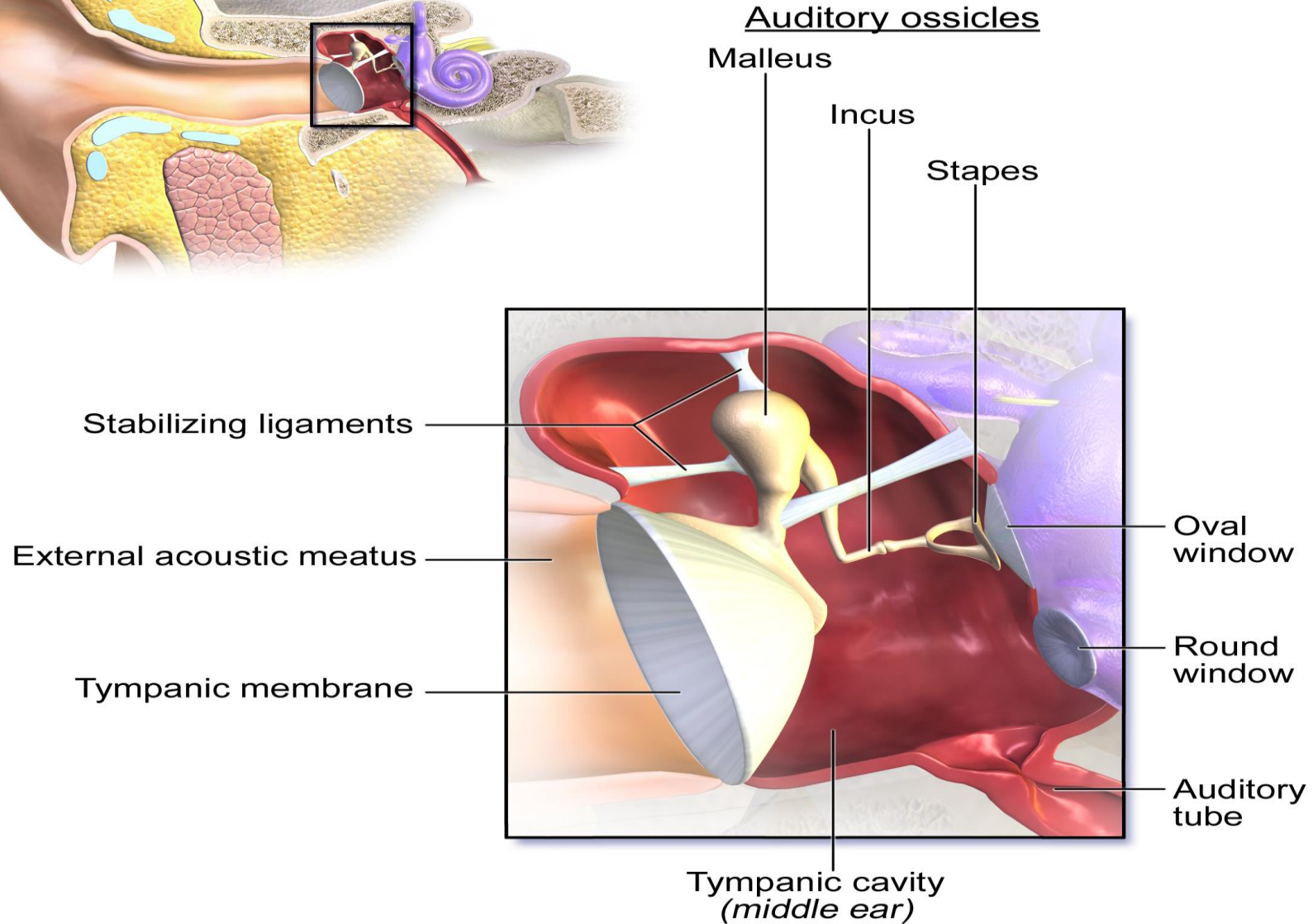
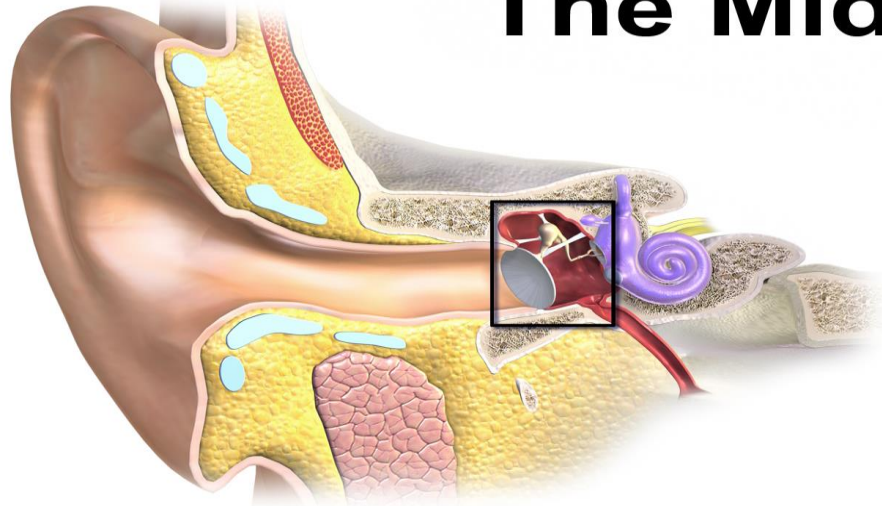
- Illness
- Accidents
- Hereditary
- Wax/Foreign Body

Treatment

Medical intervention

- Medication
- Surgery

The Middle Ear



Mixed Hearing Loss

What is It?

Combination of conductive & sensorineural hearing loss.

- Damage in the outer or middle ear & in the inner ear

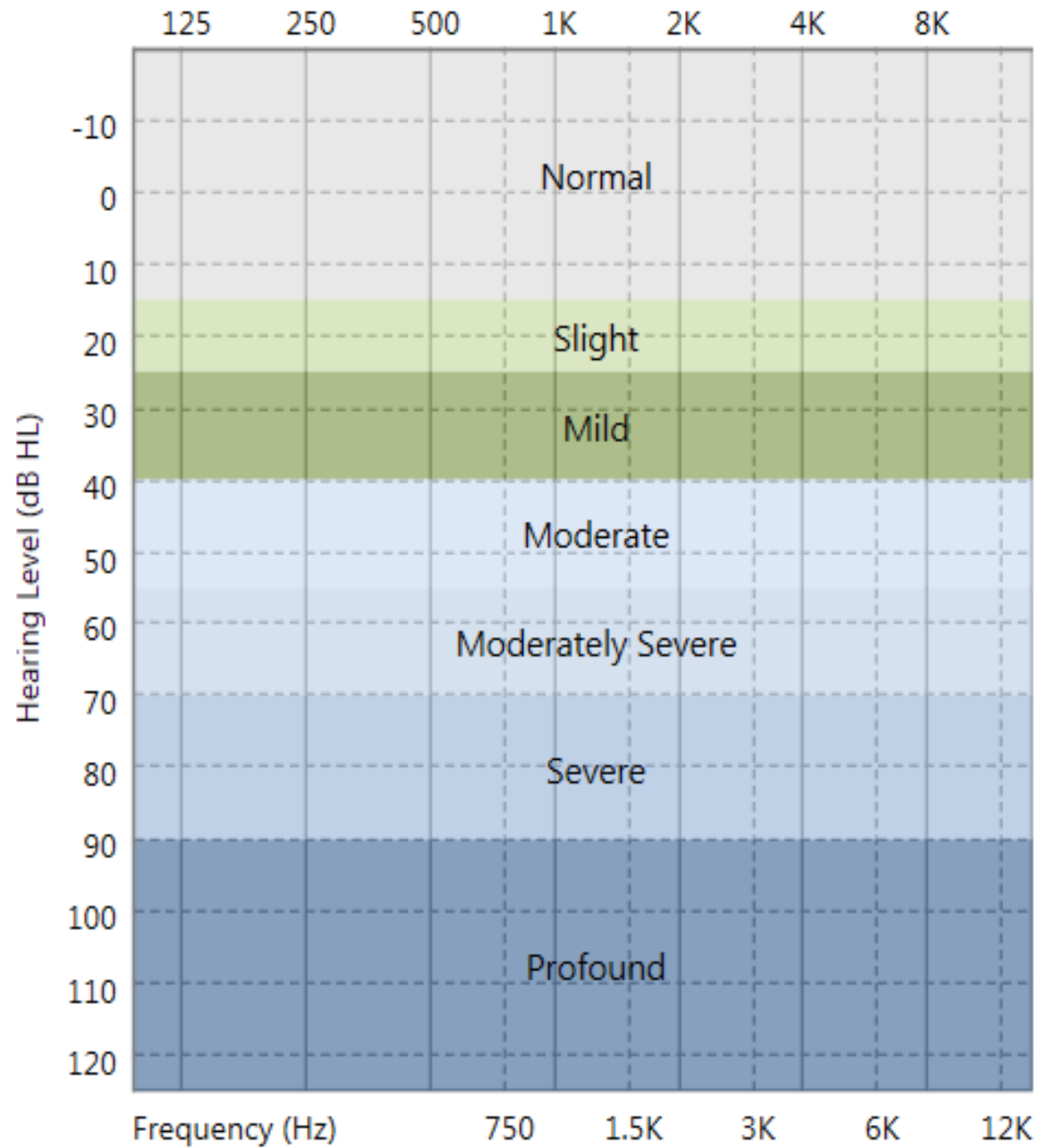
Example

- Someone has a nerve damage loss and then gets an ear infection

Treatment

- #1 priority is always treatment of the medical complication
- Amplify

Degree of hearing loss quantifies how much hearing loss is detected



What happens during a Audiological evaluation?

Part 1

- ▶ Why are you here?
 - ▶ History/Experiences

What is Tinnitus?

- ▶ Described as ringing, rushing, buzzing, roaring, clicking, hissing
- ▶ Can be intermittent, constant, one ear or both
- ▶ Can be quiet or so loud that it can interfere with your ability to concentrate or hear outside sounds
- ▶ Affects 1 in 5 people
- ▶ Not a condition itself, but a symptom of underlying condition
 - ▶ Age-related hearing loss
 - ▶ Noise-related hearing loss
 - ▶ Ear injury
 - ▶ Circulatory system disorder

Technically

- ▶ Tinnitus happens when there is damage to the inner ear cell. If the hairs inside your inner ear are bent or broken, they can "leak" random electrical impulses to your brain, causing tinnitus.
- ▶ Phantom sounds

Causes and Complications

Medical problem

Medications

Alcohol/Nicotine

Stress

Sleeping problems

Fatigue

Anxiety & Irritability

Depression

Memory Problems

Trouble concentrating

Do I need to be concerned?

- ▶ Tinnitus that is associated with hearing loss, dizziness, or vertigo
- ▶ Appears suddenly with no apparent cause
- ▶ One sided tinnitus
- ▶ If you are unsure come and see me

Audiological Evaluation

Part 2

- ▶ Immitance Testing
 - ▶ Tympanometry & Reflexes
- ▶ Audiogram
 - ▶ Pure Tone (air & bone), Speech Testing, Speech in Noise Testing

Audiological Evaluation

Part 3

- ▶ Inform/Educate
- ▶ Counsel
- ▶ Recommendations
- ▶ Solutions

Recommendations

- ▶ Treatment of Conductive/Mixed hearing loss
 - ▶ Referrals (ENT, Neurologist, Physical Therapy, Pediatric Audiology)
- ▶ Annual hearing test
- ▶ Hearing protection in noise
- ▶ If you notice a change in your hearing schedule a hearing test
- ▶ Amplification

Hearing Aids

oticon
PEOPLE FIRST



Invisible In the Canal (IIC)



Completely In The Canal (CIC)



In The Canal (ITC)



Half Shell



mini RITE



mini RITE

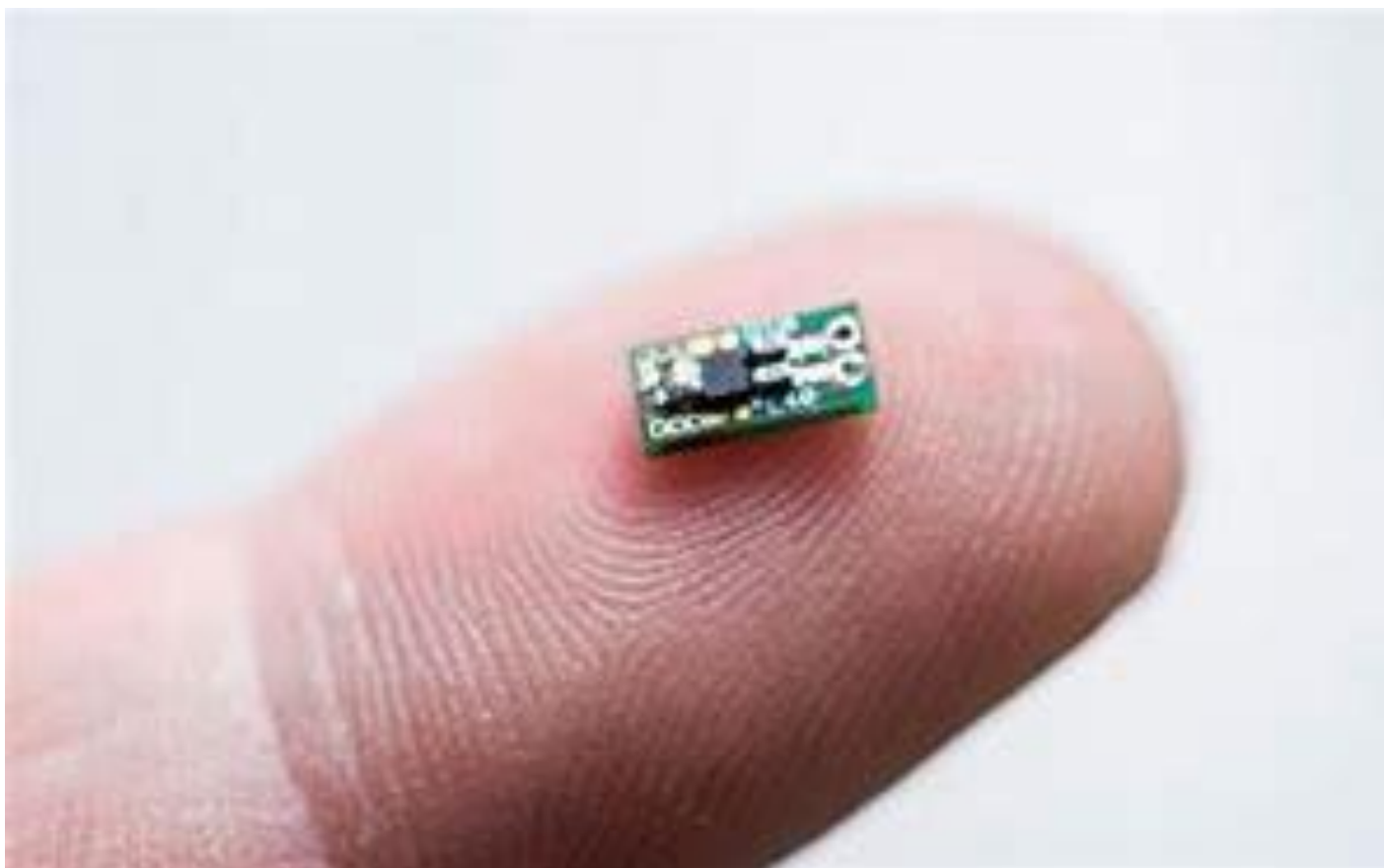


Receiver In The Ear (RITE)



Behind The Ear (BTE)

Technology



Colors of Hearing Aids



Connectivity



Connect Clip



Rechargeable Batteries



Audiology Clinic Contact

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Questions?

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AUDIOLOGY