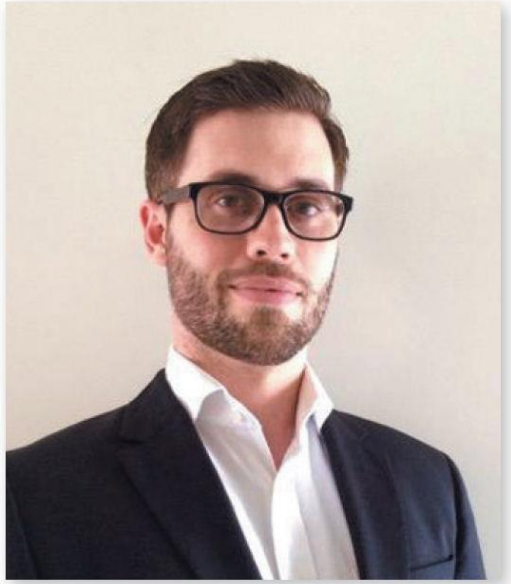

Mr Ryan Johnson-Hunt

MNZAS Senior Audiologist

Bay Audiology

Saturday, June 10, 2017

(Room 6)

11:00 - 11:55 WS #123: Hearing Loss: Rehabilitation Options and Funding Entitlements

12:05 - 13:00 WS #135: Hearing Loss: Rehabilitation Options and Funding Entitlements (Repeated)

Hearing Loss: Rehabilitation Options and Funding Entitlements

Ryan Johnson-Hunt – Audiologist MNZAS

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Outline for Today

- Hearing system refresher
  - Hearing anatomy and types of hearing loss
- Treatment and Rehabilitation Options
  - Hearing Aids and funding options
  - Cochlear Implants
- Hearing loss in General Practice
  - How to detect hearing loss in your patients
  - When to refer to an Audiologist
  - How to interpret audiograms
- Question Time

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Disclosure Statement

I am employed by Bay Audiology, which is part of the Amplifon Group. We are independent of any Hearing Aid Manufacturer.

CME sessions will not promote products, brands or incentives, and will give a balanced view of all therapeutic options available for good quality patient management.

Information presented is unbiased and based on scientific evidence.

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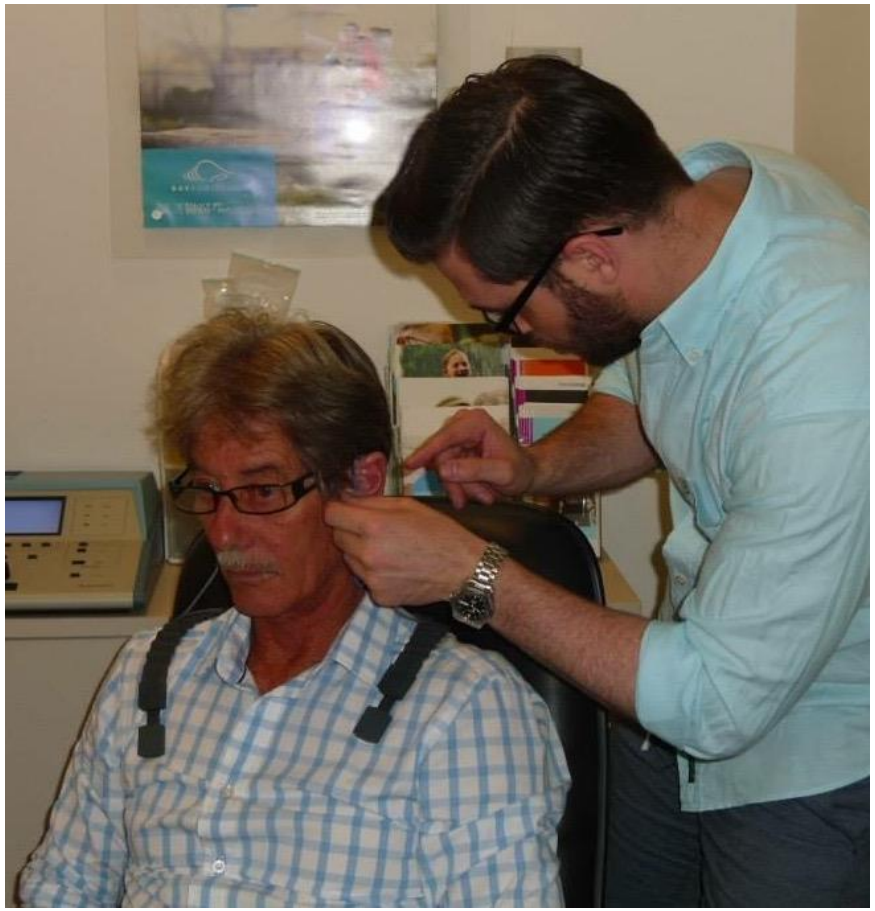
Why should you listen to me?



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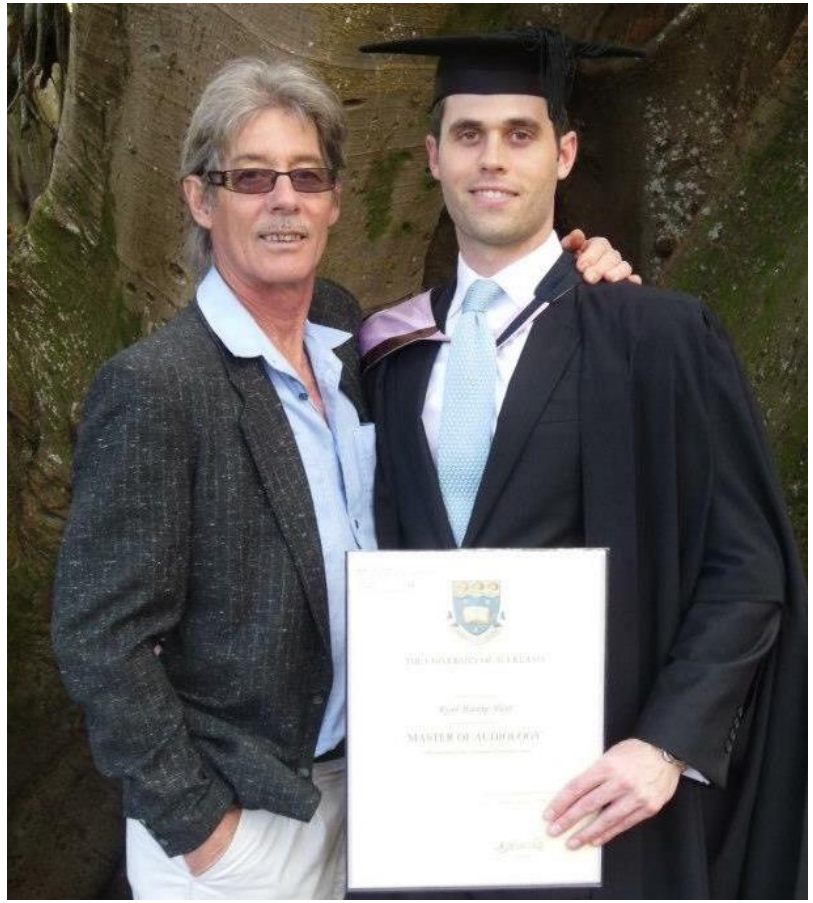
Why should you listen to me?



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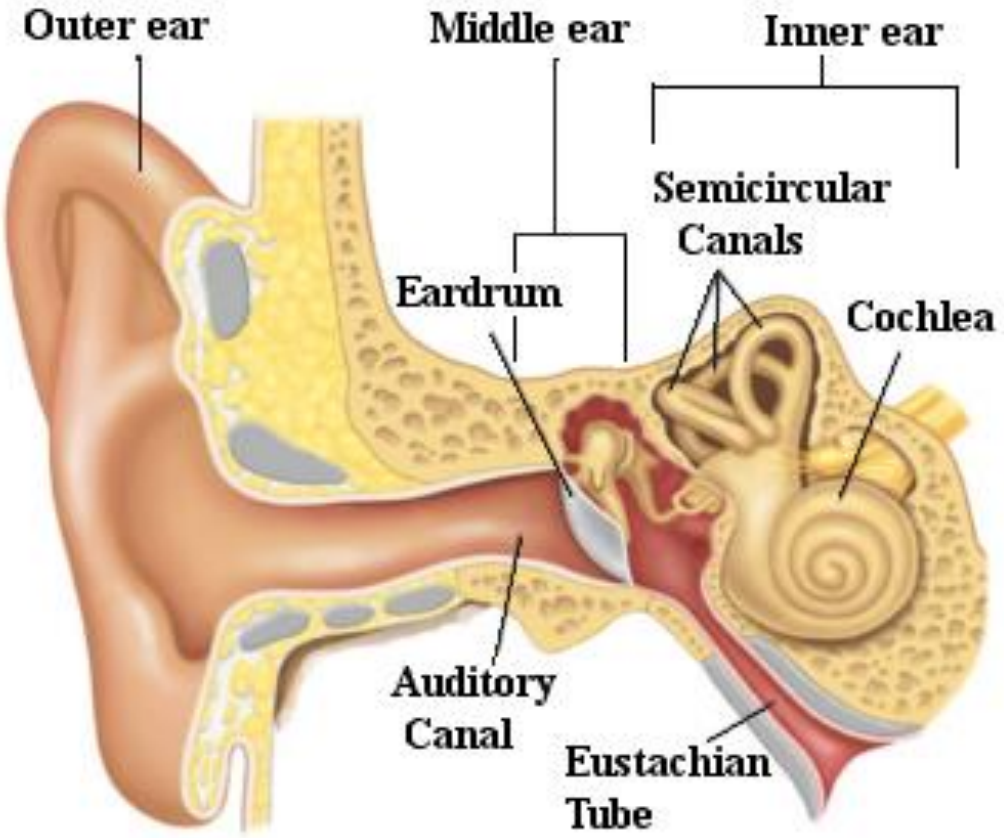
The Hearing System



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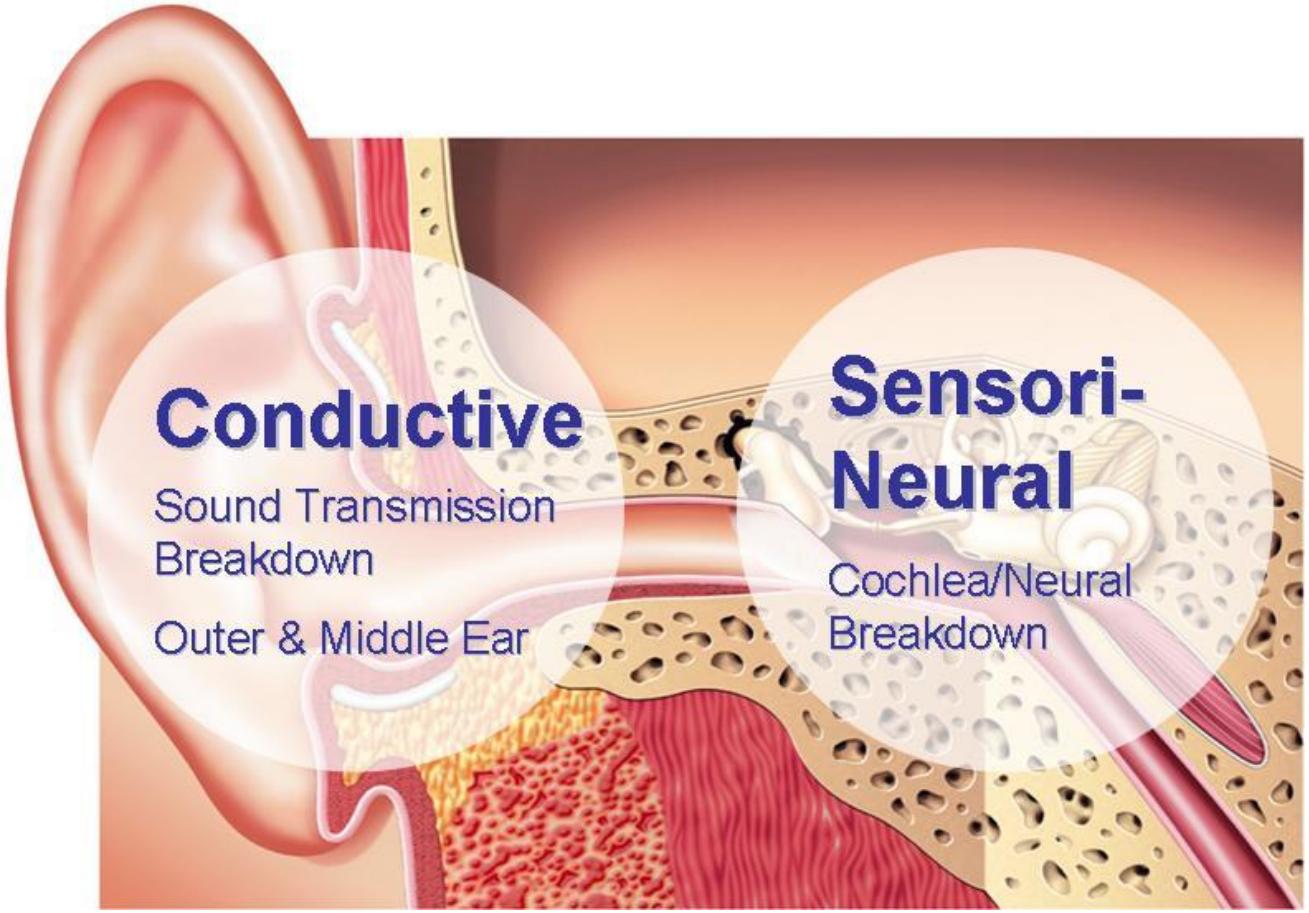
Hearing Loss



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Conductive Hearing Loss

1. Eustachian tube dysfunction
2. Cholesteatoma
3. Wax
4. Otitis media
5. Otosclerosis
6. Ossicular disorders

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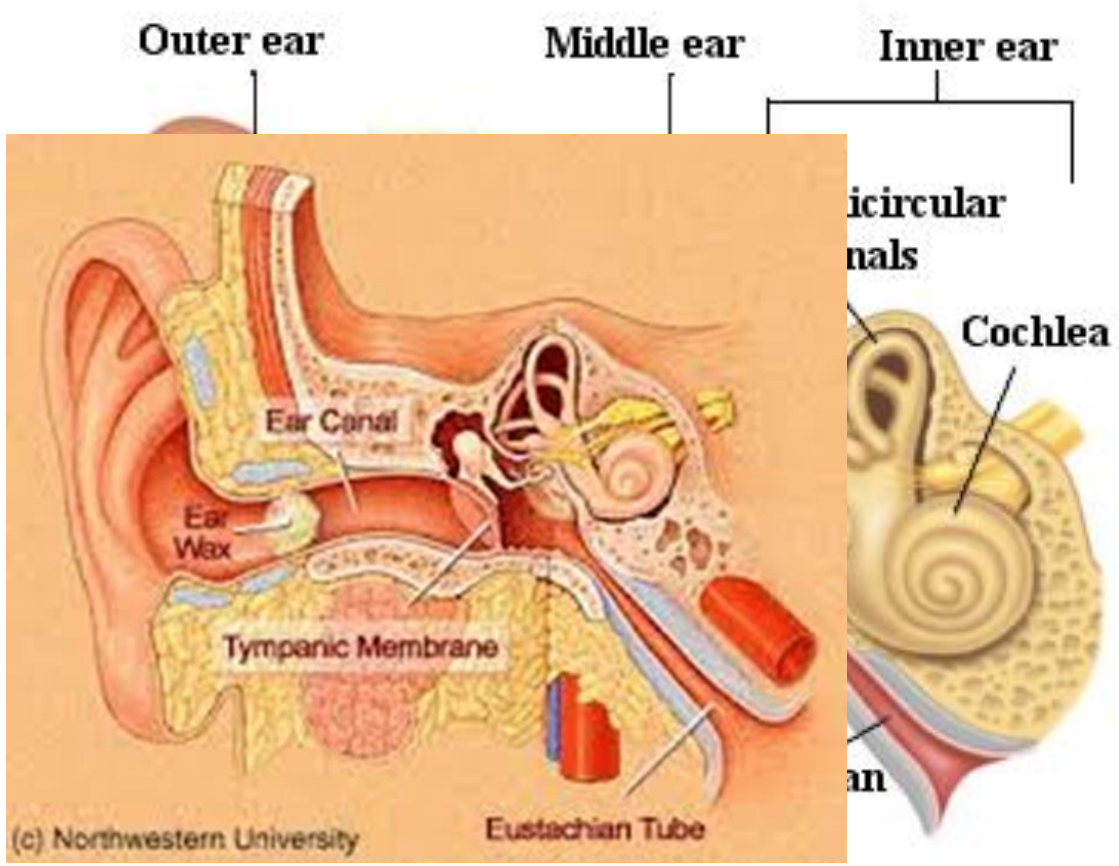
Conductive Hearing Loss - Wax



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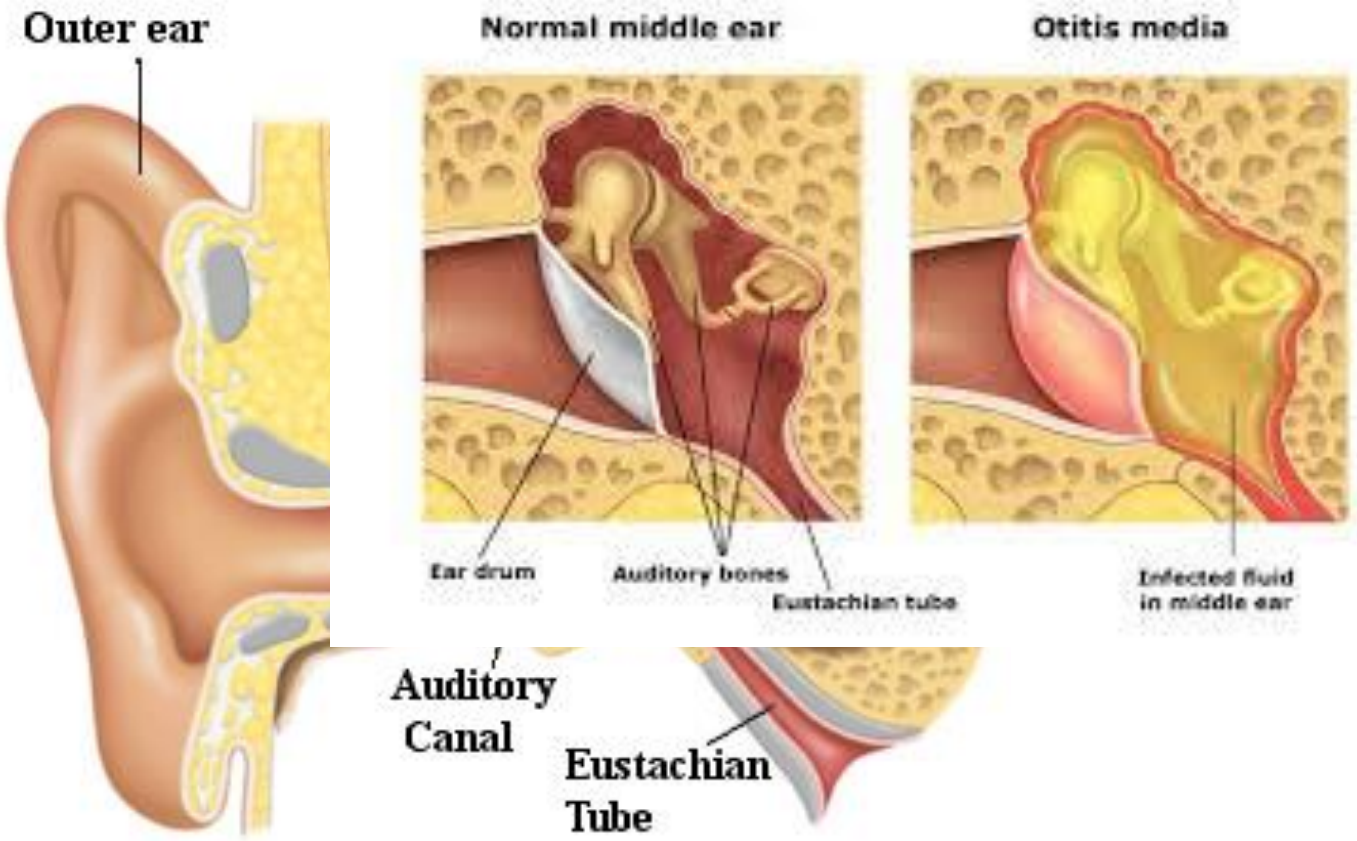
Conductive Hearing Loss – Otitis Media



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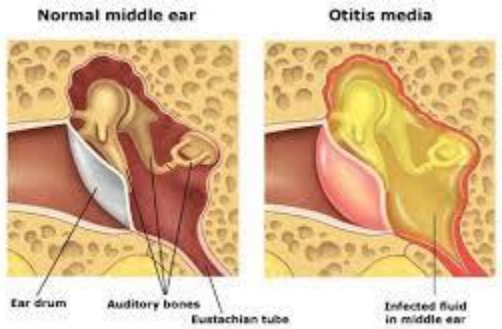
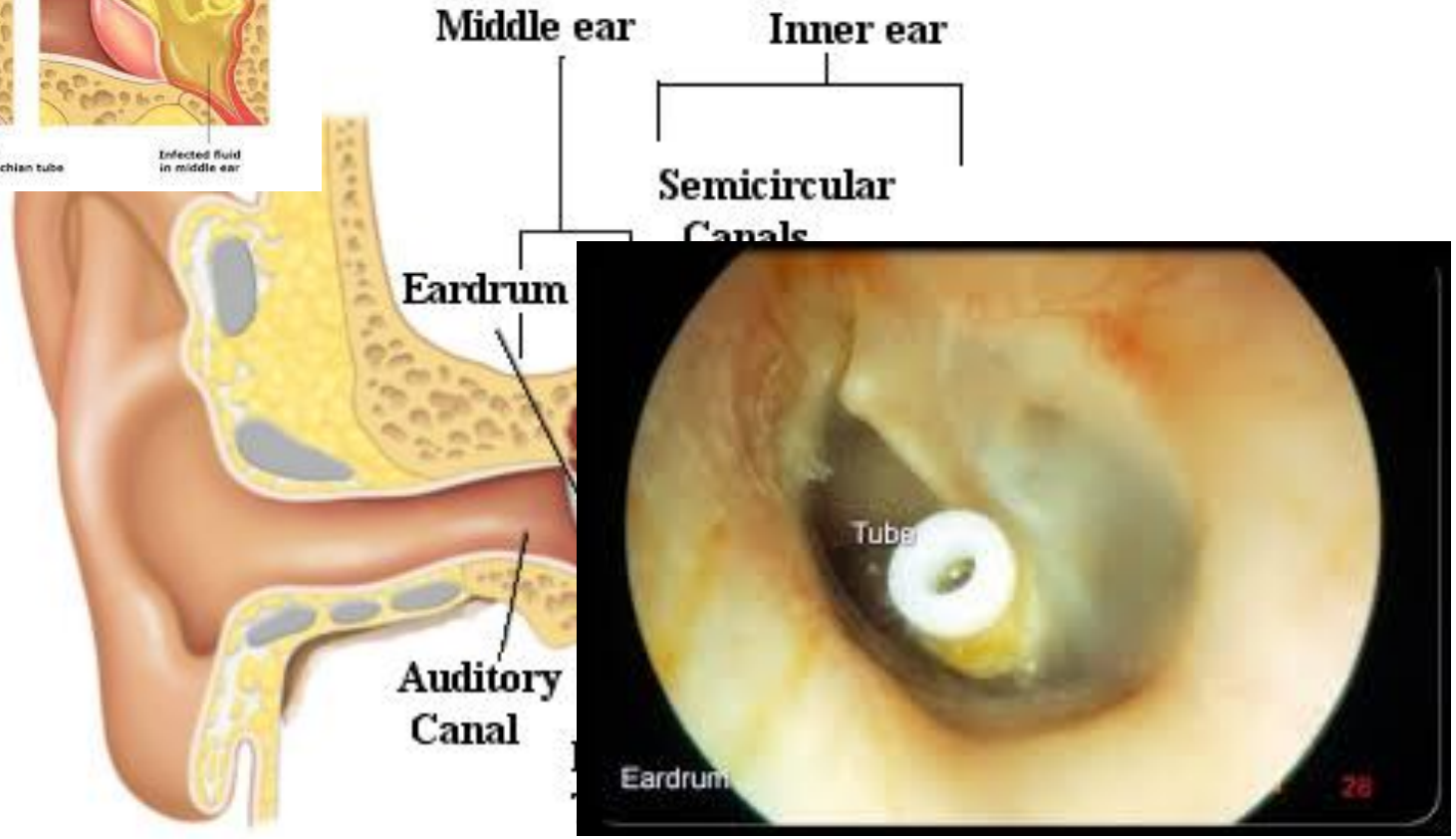
Conductive Hearing Loss – Otitis Media





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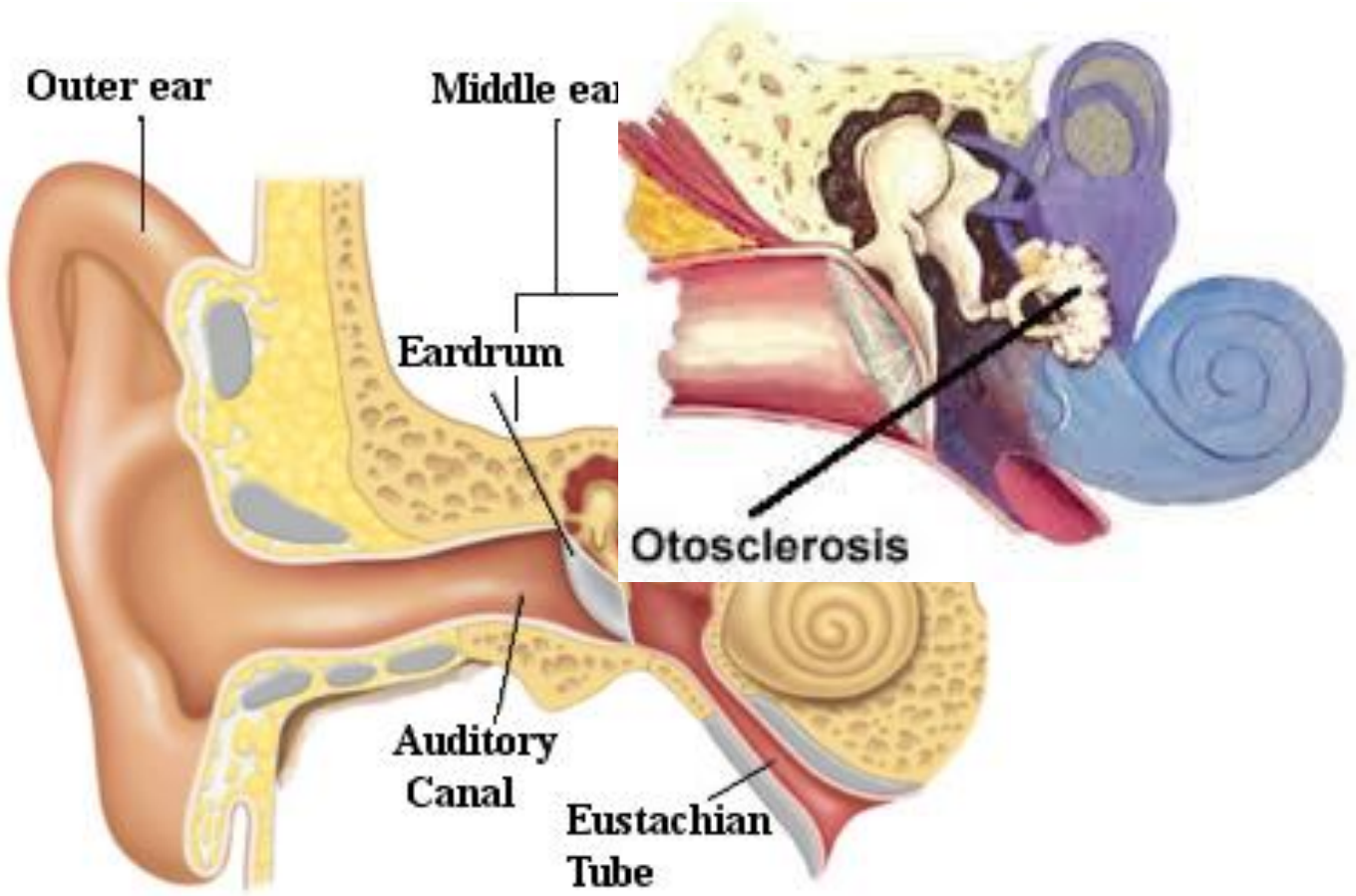
Conductive Hearing Loss - Otosclerosis



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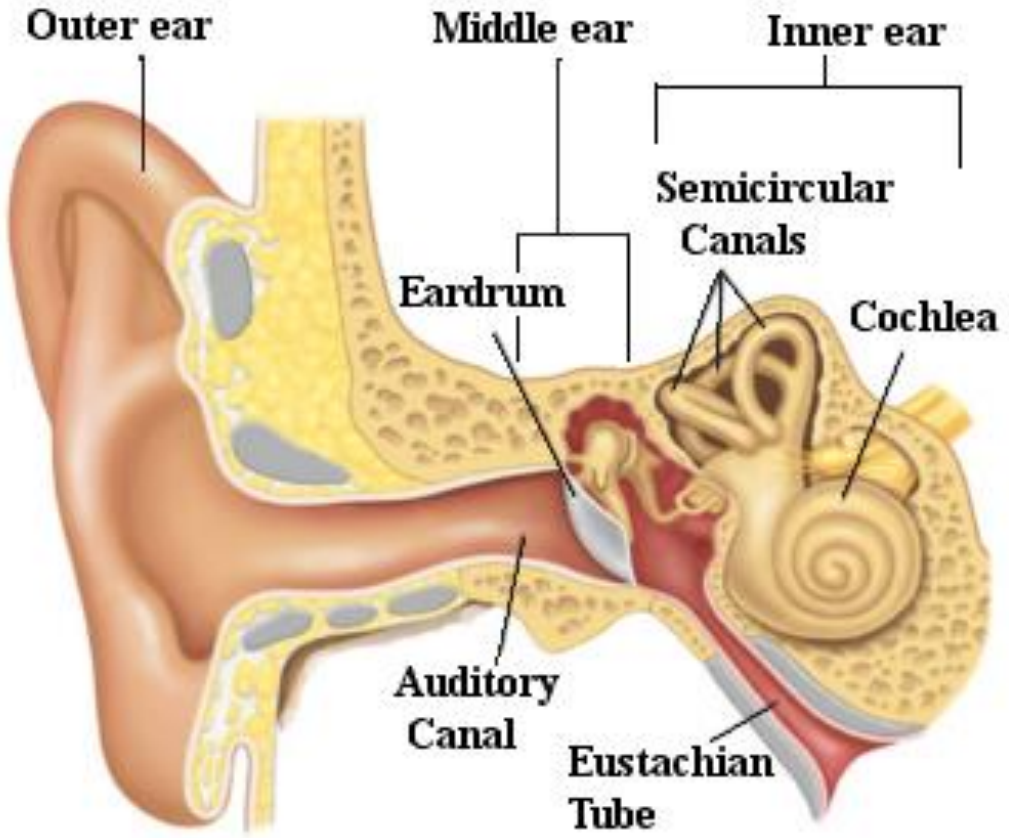
Sensorineural Hearing Loss



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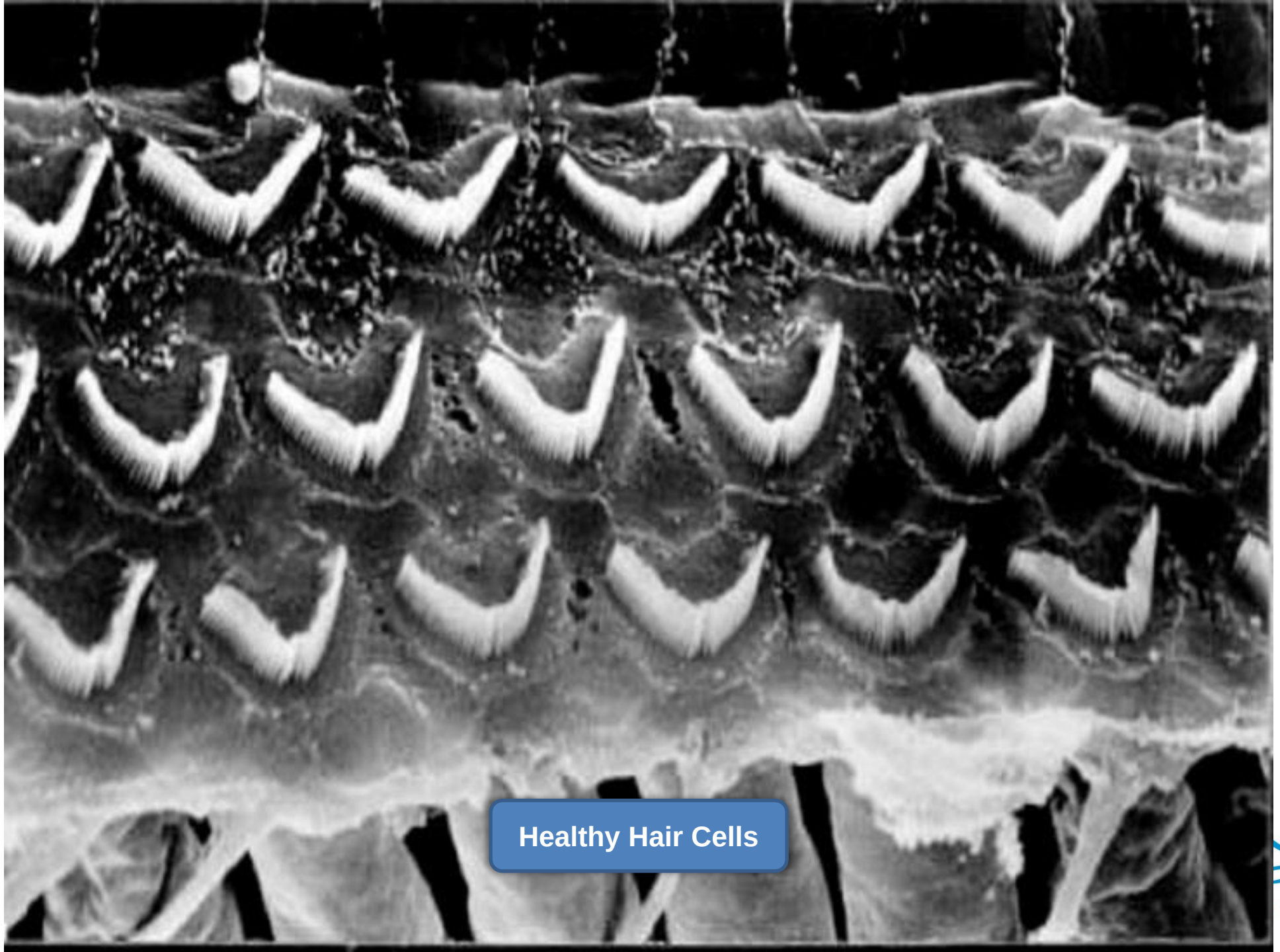
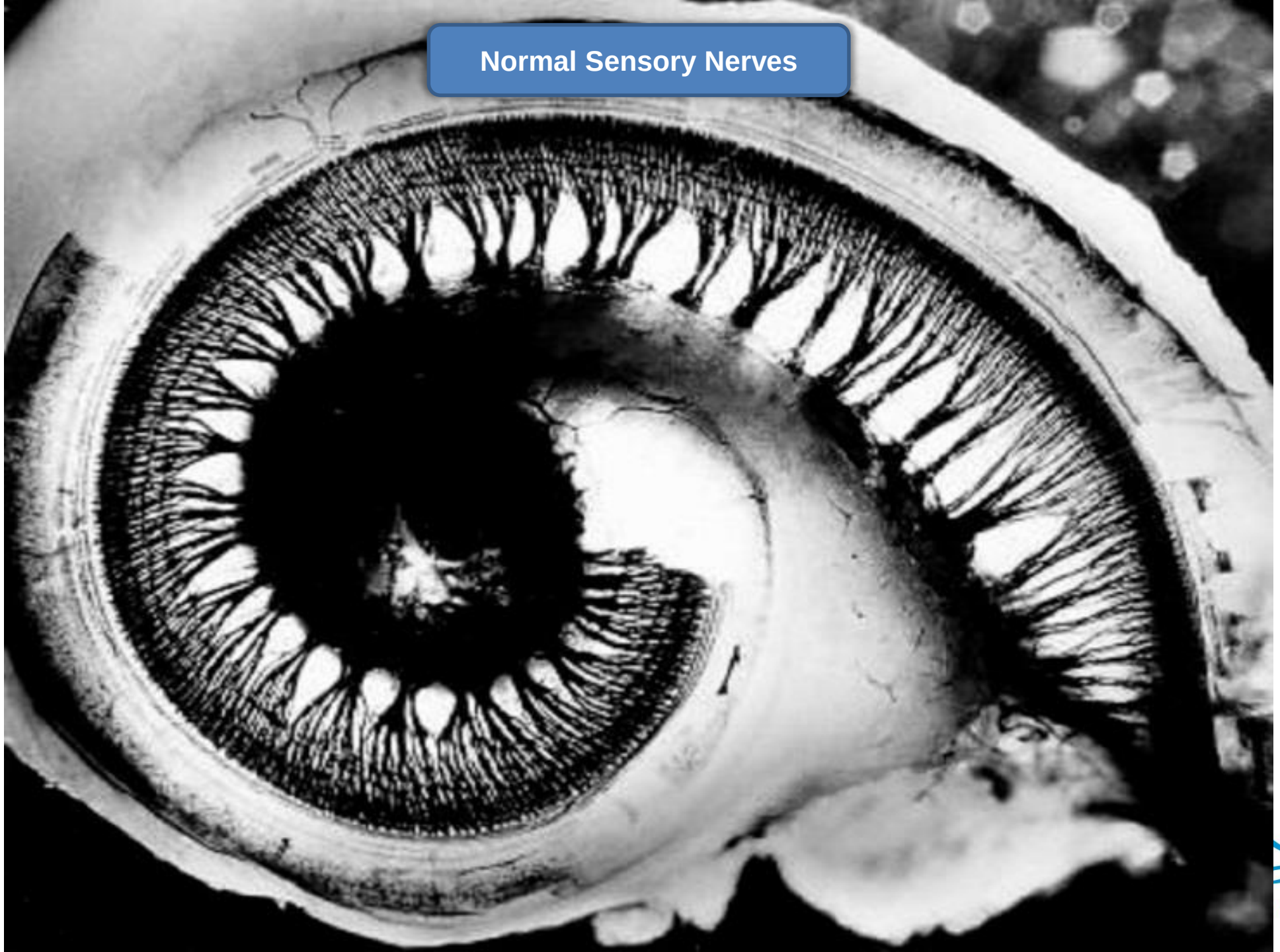
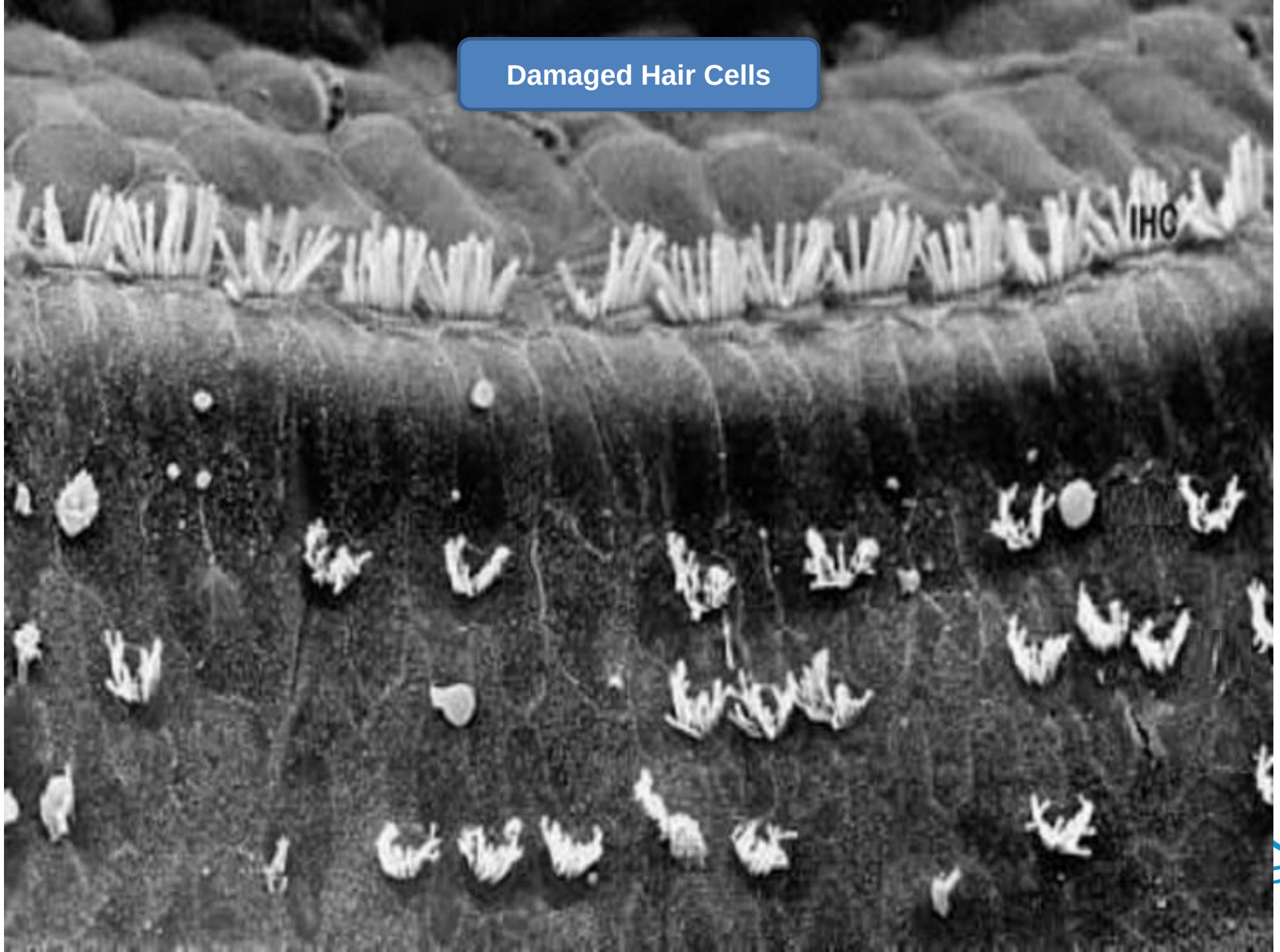

Healthy Hair Cells


Normal Sensory Nerves


Damaged Hair Cells
IHC


Damaged Auditory Nerves

Causes of Permanent Hearing Loss

- Hereditary
- Ototoxic drugs
- Virus
- Noise Induced Hearing Loss (NIHL)
- Aging/Presbycusis

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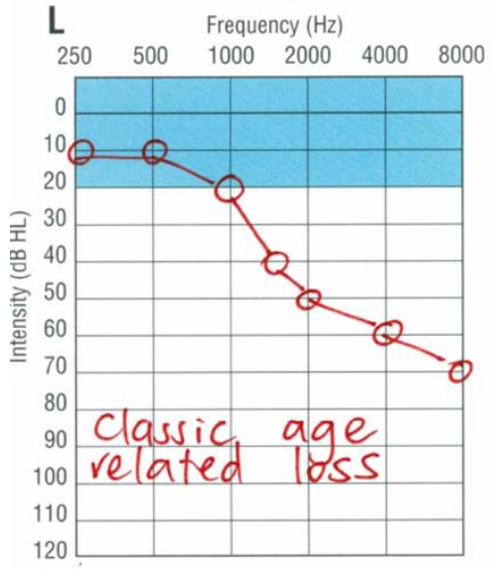
Main types of Sensorineural Loss

Presbyacusis

- Age Related and wear & tear
- Hair cell damage, high frequency hearing affected first
- Bilateral



Affects

- Clarity/speech intelligibility
- Volume

People with hearing loss…

- Over 60 – 1 in every 2 (55%)
- Over 80 – 9 out of 10 (93%)

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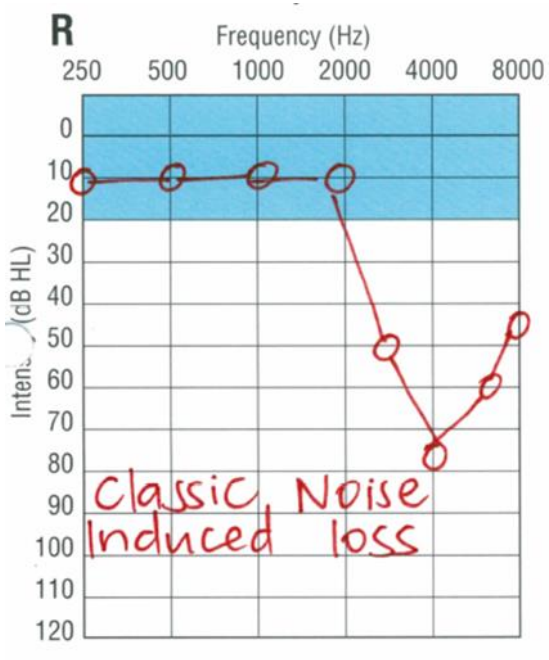
Main types of Sensorineural Loss

Noise Induced Hearing Loss (NIHL)

- Mainly high frequencies
- Bilateral
- Historically difficult to correct
- Problem with clarity/
  Speech intelligibility
- Volume is not usually affected



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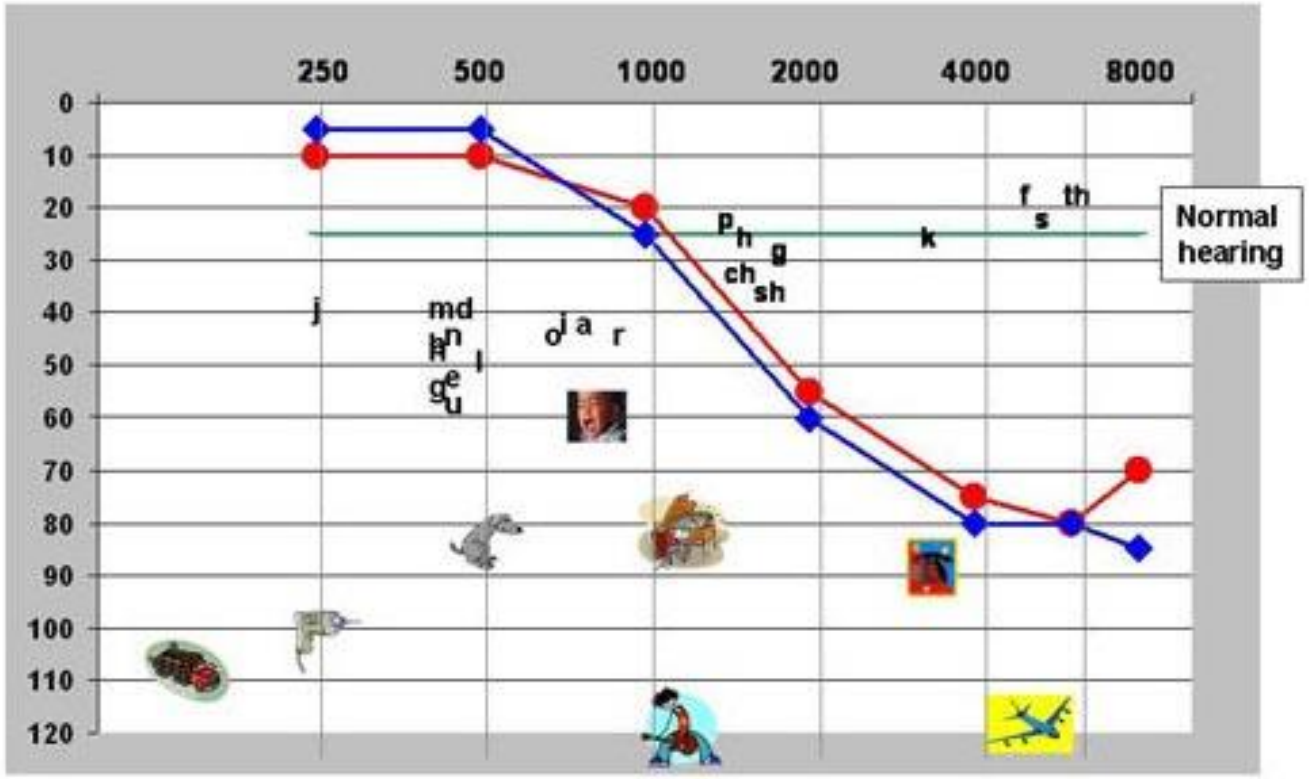
Sensorineural Hearing Loss



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The Impact of Untreated Hearing Loss

Communication Difficulties

Cognitive

Quality of Life & Overall functioning

Depression & Social isolation

Social and Emotional decline

Frustration and Tiredness

When someone in the family has a hearing problem, the whole family has a hearing problem.

Dr. Mark Ross

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Untreated Hearing Loss

Individuals with mild hearing loss were twice as likely to develop dementia as those with normal hearing.

Dr. Frank Lin, Johns Hopkins University

Self-reported hearing loss is associated with accelerated cognitive decline in older adults; hearing aid use attenuates such decline.

Amieva et al; 2015

The difference in age-equivalent to the cognitive reduction associated with a 25 dB increase in hearing loss is 7 years.

Lin, 2013

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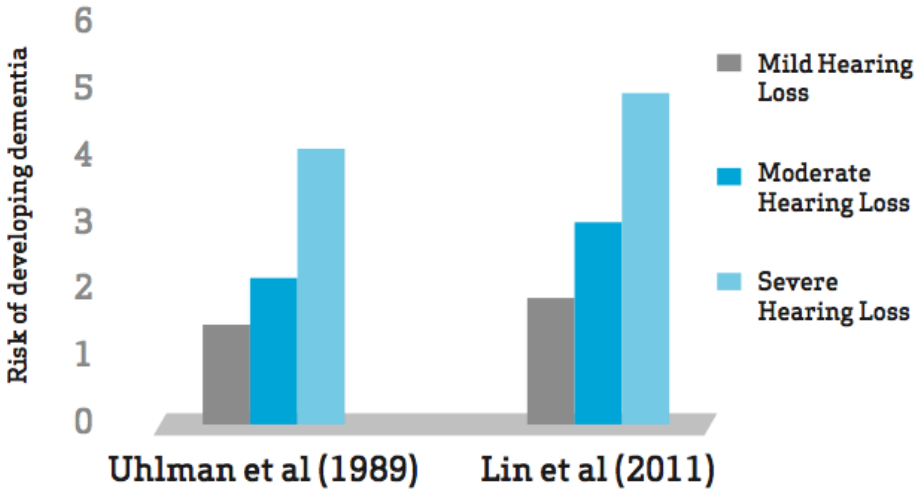
Research on the Correlation between Hearing Loss and Cognitive Ageing

Older patients with hearing loss significantly more likely to develop dementia over time compared to those with normal hearing.

- Hearing loss leads to social isolation
- Increased cognitive load due to listening effort

Risk of developing dementia in relation to hearing loss (Uhlmann et al, 1989 & Lin et al, 2011)



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What can be done?

- Nothing?
- Hearing Therapy?
- Assistive listening devices?
- Hearing Aids?
- Cochlear Implants?

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Hearing Therapy

Listening strategies

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Assistive Listening Devices

Amplified telephones

Wireless headphones for TV

Integrated home systems

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Amplification through Hearing Aids

Open Fit Behind the Ear

Receiver in the Ear

In the Canal

Behind the Ear

In the Ear

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Advances in Hearing Aid Technology

- Smaller, lighter
- Better feedback management (SQUEALING)
- Faster processing
- Better performance in crowds and background noise
- Water and dust resistance
- Wireless - Mobile phones, TV
- CROS and BiCROS systems

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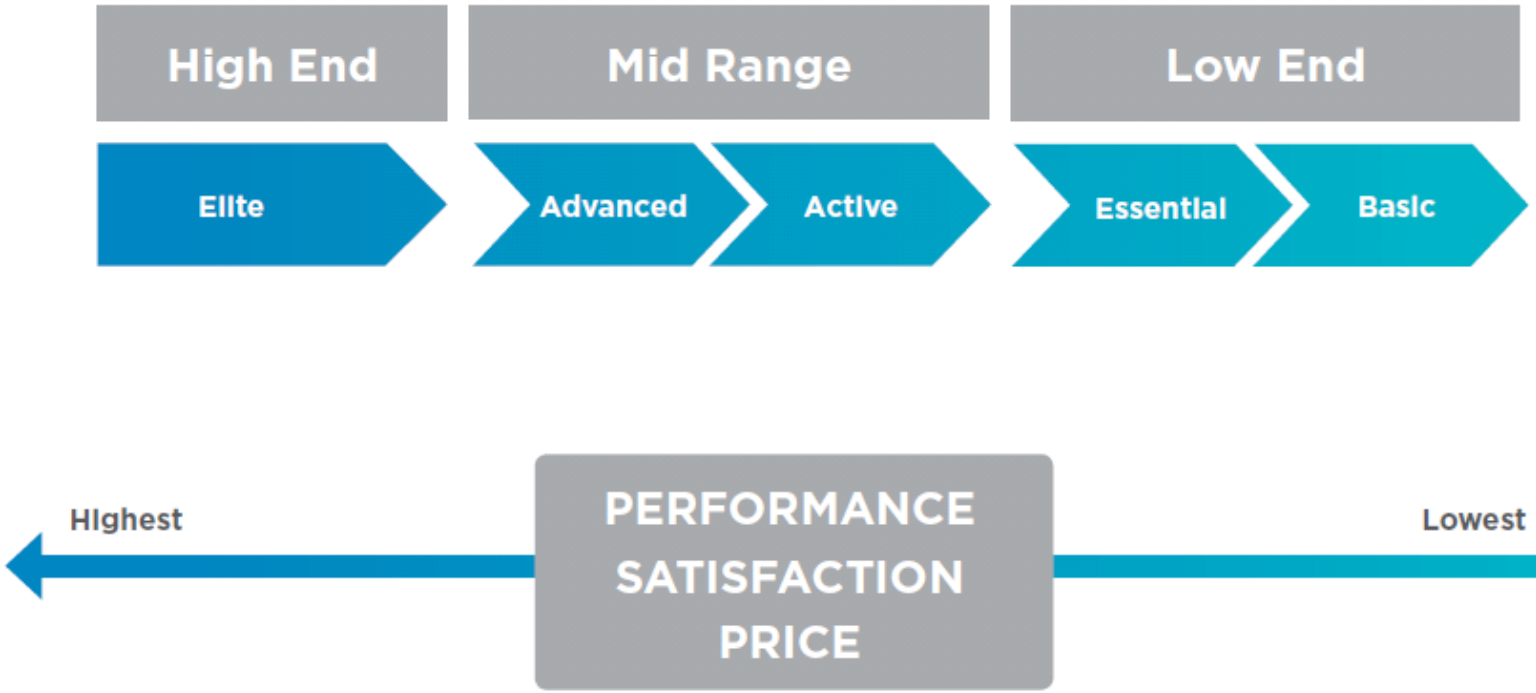
Levels of Hearing Aid Technology

Hearing aids come in a range of technology levels. The highest levels of technology are the closest we can get to the normal hearing experience. The technology level also determines the price.



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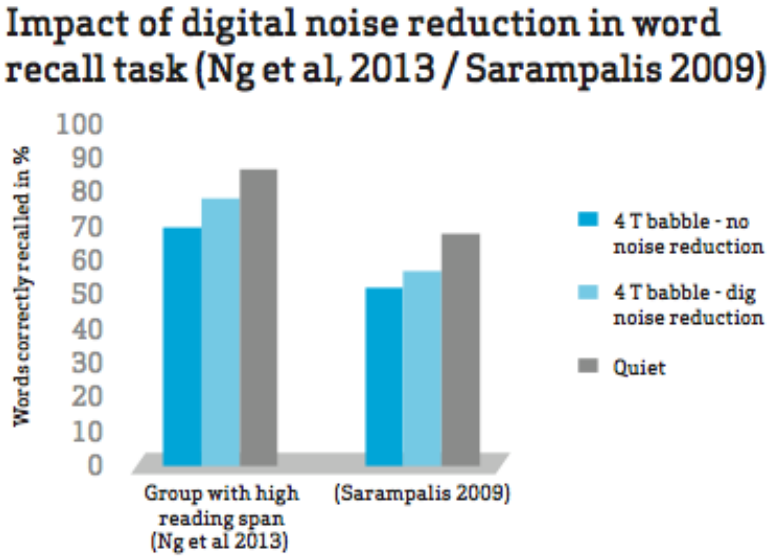
Can Amplification Prevent or Reverse Cognitive Decline?

- Hearing aids
  - Have a positive effect on overall quality of life,
  - Help reduce isolation,
  - Reduced cognitive load.



Research supporting positive long term effect of amplification on cognitive functioning is ongoing

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Funding options for Hearing Aids

- Hearing Aid Subsidy (Ministry of Health)
- Ministry of Health Hearing Aid Funding
- War Pensions (Veterans Affairs NZ)
- ACC
- WINZ Loan (Work and Income)

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Hearing Aid Subsidy (Ministry of Health)

- Available for ALL NZ citizens and permanent residents
- $511 per aid ($1022 for pair), eligible again 6 years later
- This alone will cover basic entry level hearing aids - good option if finances very limited or reluctant to commit to amplification

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Hearing Aid Funding Scheme (Ministry of Health)

- Hearing aid(s) fully funded, patient pays a fixed clinical management fee ($1200-$1500)
- NZ citizens and permanent residents that fit one of these criteria for extra assistance:
  1. Have had a significant hearing loss from childhood
  2. Have hearing loss and a significant visual impairment, intellectual disability or a physical disability that limits their ability to communicate safely and effectively

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Hearing Aid Funding Scheme (Ministry of Health)

3. Have a Community Services Card and are:
    - in paid employment for 30 hours per week or more, or
    - a registered job seeker seeking paid employment, or
    - doing voluntary work (more than 20 hours per week), or
    - studying full time, or
    - caring full time for a dependent person.

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War Pensions (Veterans Affairs NZ)

- Eligible if have served overseas in a recognised conflict and had hearing loss recognised as a result of their service
- Audiologist liaises directly with Veterans Affairs regarding the Veterans needs
- Fully funded hearing aids and repairs, receive money in pension for batteries

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ACC

- For NIHL, Trauma and Medical Misadventure Claims
- GP to start claim process using ACC45 form, no prior HT necessary
- ACC allocates lump sum based on % loss work related (different criteria for trauma or medical claims), 3 funding bands: approx $3000, $4000, $5000
- Topping up optional - ALWAYS a “no top up” option

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ACC

- Client can “top up” if required to invest in the level of technology appropriate for their listening needs. More advanced technology indicated for more active lifestyles.
- Some Audiology service providers will offer devices fully covered by ACC funding if patient has limited finances

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WINZ Loan (Work and Income)

- Work & Income
- WINZ often provide an advance, patient pays back small amount each week from their benefit.
- Maximum limit is on a case by case basis, but $800-$1500 is common.

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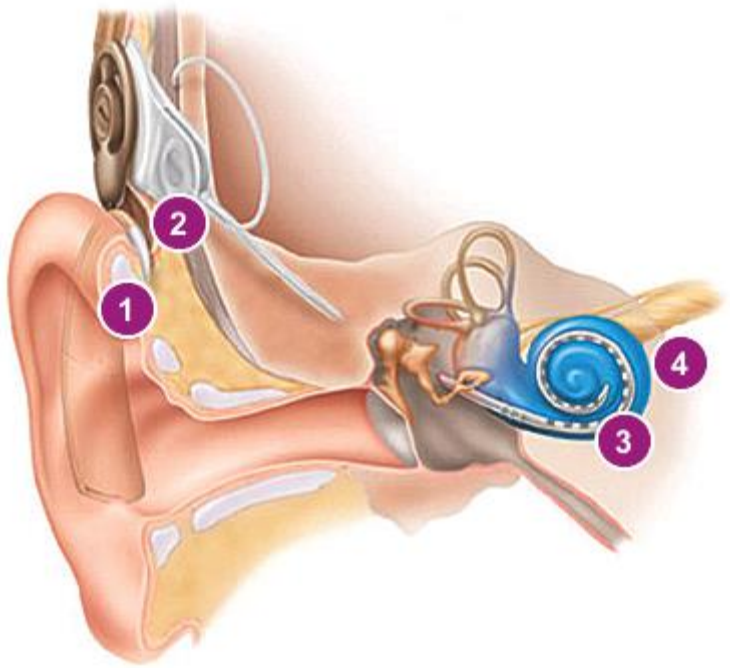
Cochlear Implants



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What is a Cochlea Implant?

- Medical device with external (Speech Processor and Transmitting Coil) and internal parts
- Direct stimulations of the auditory nerve
- External speech processor captures sound and converts it to a digital signal
- Processor sends digital sound to the internal implant
- Internal Implant converts to electrical signal, sent to the electrical array
- Electrodes stimulate auditory nerve directly

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Eligibility Criteria

Adults:

- Severe to profound bilateral hearing loss
- Limited benefit from hearing aids – must be a ‘good’ hearing aid wearer
- Eligible for publically funded health services
- Must pass the assessment tests
  - audiological, scans, psychological
- **No maximum age criteria**

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Funding of Cochlear Implants

Full Funding

- Includes assessment, device, surgery, audiology services, maintenance and support, rehabilitation, replacement
- Does not include batteries, repairs and spare parts for speech processors
- Only 1 implant is funded for adults (except in cases of meningitis)

Partial Funding is also available in some cases

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Referrals

- NCIP www.ncip.org.nz (Taupo + Northwards)
- SCIP www.scip.co.nz (Rest of NZ)

Referrals can be made by:

- ENT specialists
- Audiologists
- Advisors on Deaf Children
- GPs

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Role of the GP in Hearing Related Issues

- Long term relationship of trust - refer to audiologist
- Widespread impact on overall health, well-being and independence.
- Promotes healthy ageing

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Hearing Loss in General Practice

How can you detect hearing loss in your patients?

Ask these questions:

- Do you often think people mumble?
- Do you ask others to repeat themselves?
- Do your family members tell you the TV is too loud?
- Do you have difficulty hearing when someone faces away from you?
- Do you find that background noise frequently overwhelms your ability to hear conversation
- Do you feel like you miss out on the conversation in a group, miss the punch lines, or have difficulty keeping up?

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Denial and Avoidance is Common!

The lengthy road to better hearing…

- Ignorance and denial
- Accommodation and avoidance
- Isolation and depression

External events prompt action

- Comment from a friend or family member
- Embarrassment
- Advertisement

Any reported difficulty hearing at home or work?

- Often first signs are difficulty in crowds or background noise, or has the TV turned up too loud for others.

GP plays key role in prompting action

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When to refer to an Audiologist

- It is recommended that any patient over the age of 55 years old has a hearing check (baseline)
- Patient concerns
- Unsure about hearing levels
- Tinnitus assessment
- Unilateral HL or tinnitus –ENT referral
- Sudden loss – **immediate** ENT referral

Refer earlier rather than later, no matter the level of difficulty.

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The Hearing Consultation Appointment

To determine degree and nature of hearing loss and need for referral and/or rehabilitation (45-60 minutes)

In the appointment:

- Review case history and additional hearing and medical information with client
- Identify potential funding streams.
- Complete needs assessment to understand clients communication needs
- Perform otoscopy, pure tone and speech audiometry and acoustic immitance testing
- Interpret results and communicate to client.
- Address any reason for referral and relate back to needs assessment.
- Report to GP/referrer, with copy to client

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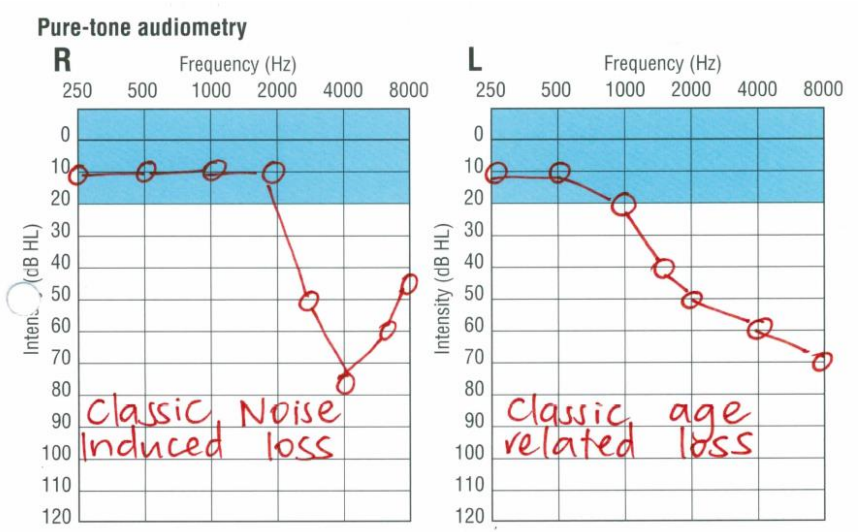
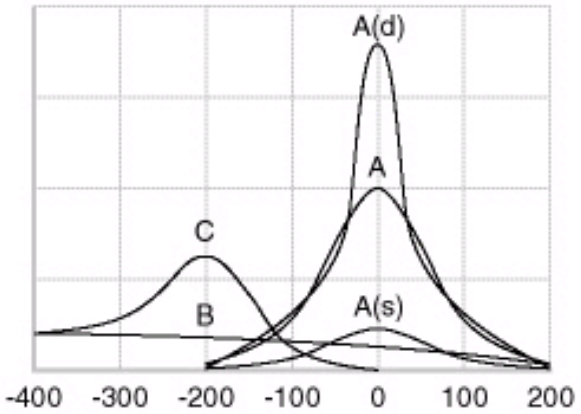
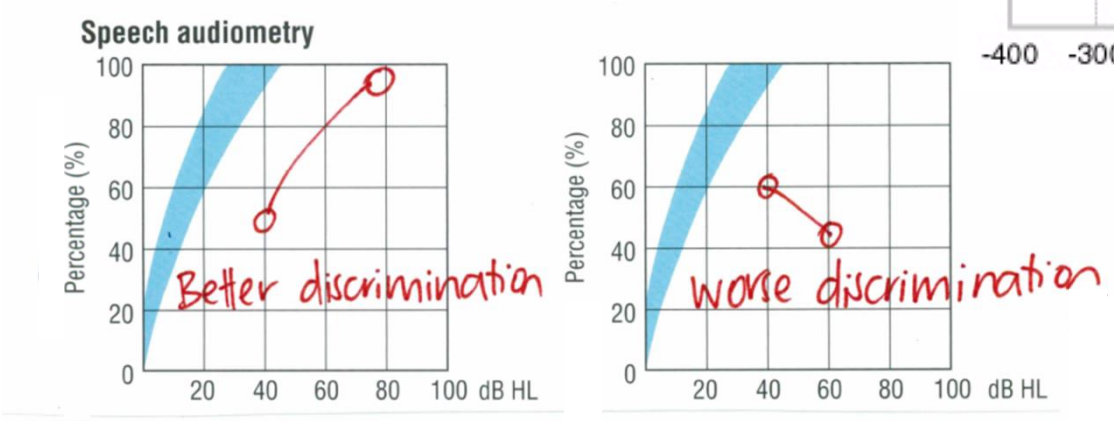
Interpreting Audiograms







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The Device Consultation Appointment

To determine or confirm client's listening needs and make a rehabilitation recommendation (30-45 minutes)

In the appointment:

- Establish any new information since last appointment
- Set up hearing aid demo if appropriate
- Confirm hearing needs and commitment to proceed with hearing aids discuss queries/concerns
- Establish measurable goals
- Review hearing aid options with client covering style, technology and price using visual aids (match hearing needs with financial needs)
- Provide take home materials
- Explain what happens next and discuss expectations

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Overall Goal: Healthy Hearing

The maintenance of quality of life

by ensuring hearing is not a barrier to social interactions and communication.

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Key Points

- Hearing loss is very common – particularly in the over 65 age bracket.
- The most common causes of permanent hearing loss are age, and noise exposure.
- Untreated hearing loss reduces an individual's quality of life and impacts cognitive health
- NZ offers many funding options – usually "free to ear" options for basic aids when these are suitable
- Medical professionals play a cardinal role in ensuring that patients access the necessary help in a timely manner.

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Feel free to contact us for a copy of the presentation or for any audiology enquiries:

linda.hartstonge@bayaudiology.co.nz

Any Questions?

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