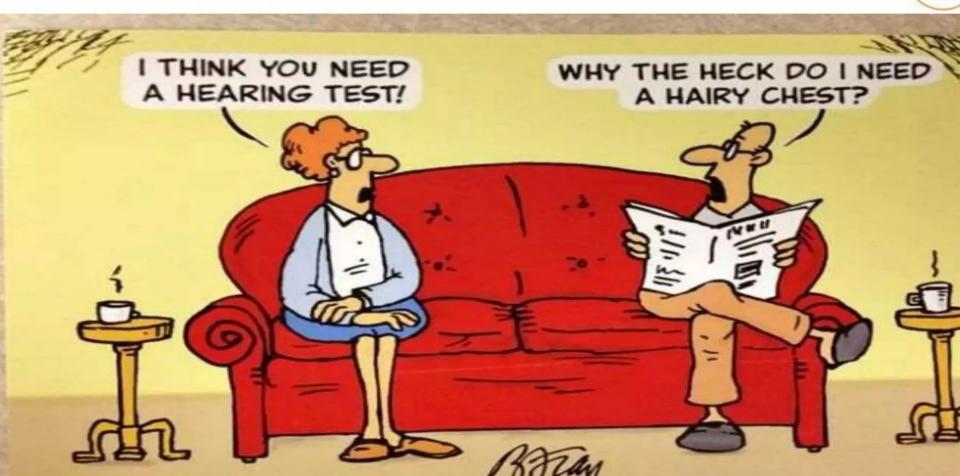
# **HEARING LOSS**



Poonya

### DEFINITION

impairment is when an individual loses the ability to hear in either one or both ears. The level of impairment can vary from mild to severe or total loss of hearing.

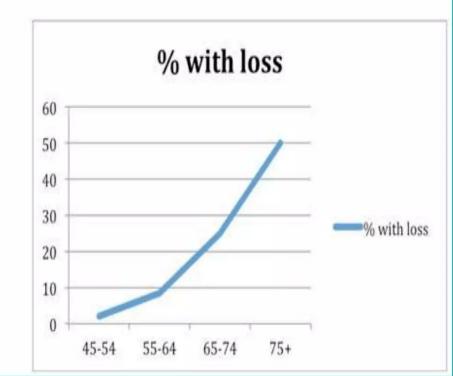
Hearing loss or Hearing





# Hearing Loss: A Common Problem

Hearing loss is a common problem caused by noise, aging, disease, and heredity. People with hearing loss may find it hard to have a conversation with friends and family. They may also have trouble understanding a doctor's advice, responding to warnings, and hearing doorbells and alarms.



# EPIDEMIOLOGY OF HEARING LOSS



- Approximately one in three people between the ages of 65 and 74 has hearing loss, and nearly half of those older than 75 has difficulty hearing.
- Hearing loss is the third most prevalent condition in older adults.
- There are 164.5 million persons of above 65 years with disabling hearing loss, i.e. 33% of the world's population above 65 years. <u>World Health</u> <u>Organization (WHO).</u>
- Over 5% of the world's population or 466 million people has disabling hearing loss (432 million adults and 34 million children). It is estimated that by 2050 over 900 million people – or one in every ten people – will have disabling hearing loss.

# Emotional impact of hearing loss

### Problems that stem from hearing loss in the elderly include:

- Depression
- Withdrawal from social life
- Loneliness
- Anger
- Decreased personal safety
- Cognitive decline
- Poor health



# **SIGNS OF HEARING LOSS**

Some people have a hearing problem without realizing it. You should see your doctor if you:

- Have trouble hearing over the telephone
- Find it hard to follow conversations when two or more people are talking
- Often ask people to repeat what they are saying
- Need to turn up the TV volume so loud that others

- Have a problem hearing because of background noise
- Think that others seem to mumble
- Can't understand when women and children speak to you
- Having trouble hearing in a noisy background like in a restaurant
- Complaining of dizziness, pain, or ringing in their ears



Poonval

# **TYPES OF HEARING LOSS**



Hearing loss comes in many forms. It can range from a mild loss, in which a person misses certain high-pitched sounds, such as the voices of women and children, to a total loss of hearing.

### There are two general categories of hearing loss:

- Sensorineural hearing loss occurs when there is damage to the inner ear or the auditory nerve. This type of hearing loss is usually permanent.
- Conductive hearing loss occurs when sound waves cannot reach the inner ear. The cause may be earwax buildup, fluid, or a punctured eardrum. Medical treatment or surgery can usually restore conductive hearing loss.

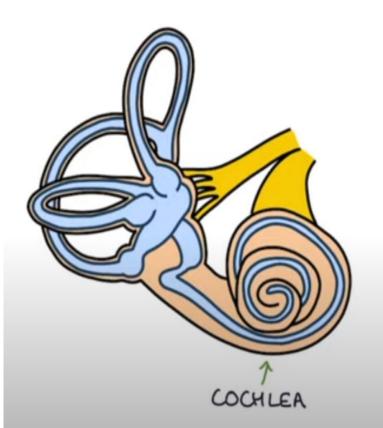
# Age-Related Hearing Loss (Presbycusis)



One type of hearing loss, called presbycusis, or age-related hearing loss, comes on gradually as a person ages. It seems to run in families and may occur because of changes in the inner ear and auditory nerve. Having presbycusis may make it hard for a person to tolerate loud sounds or to hear what others are saying.

Age-related hearing loss most often occurs in both ears, affecting them equally. Because the loss is gradual, someone with presbycusis may not realize that he or she has lost some of his or her ability to hear. nuerstanding Presbycusis. Age-Related Realing Loss OSIS

(AGE-RELATED HEARING LOSS)



CAUSES ARE COMPLEX LOSS OF HAIR CELLS LOSS OF NEURONES ATROPHY OF THE STRIA VASCULARIS REQULATES ENDOLYMPH

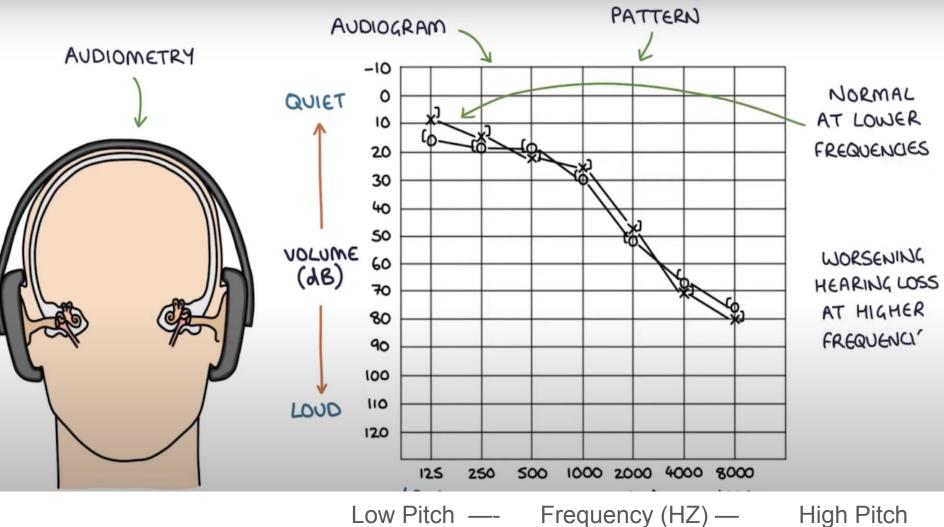
+ ENDOLYMPHATIC POTENTIAL



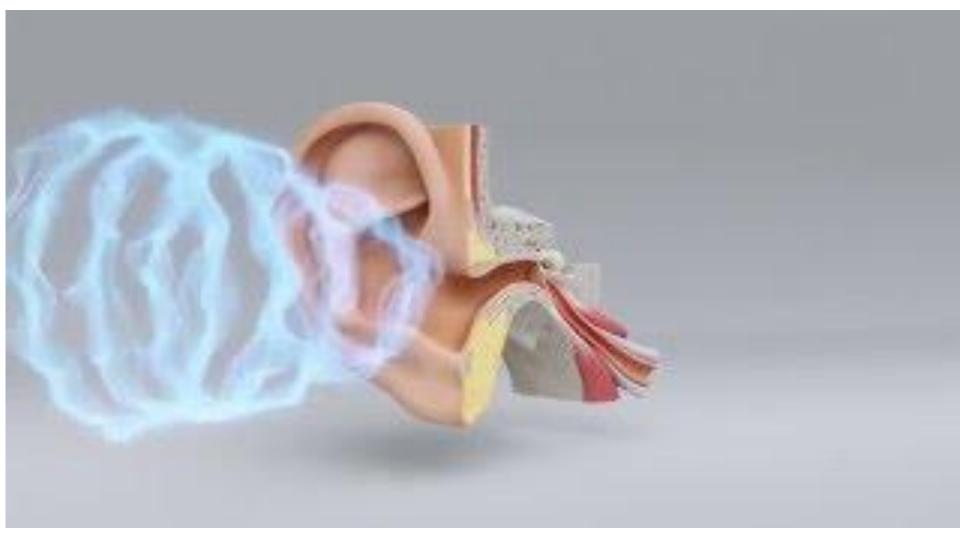
- $\rightarrow \uparrow AGE$
- -> MALE GENDER
- -> FAMILY HISTORY
- -> LOUD NOISE EXPOSURE
- -> DIABETES
- -> HYPERTENSION
- -> OTOTOXIC MEDICATION
- -> SMOKING







Frequency (HZ) — Low Pitch —-



Tinnitus

<u>Tinnitus</u> is also common in older people. It is typically described as ringing in the ears, but it also can sound like roaring, clicking, hissing, or buzzing. It can come and go. It can be heard in one or both ears, and it may be loud or soft. Tinnitus is sometimes the first sign of hearing loss in older adults. It can accompany any type of hearing loss.

Tinnitus is a symptom, not a disease. Something as simple as a piece of earwax blocking the ear canal can cause tinnitus. It can also be a sign of other health conditions, such as <u>high blood pressure</u> or allergies. Tinnitus can also occur as a side effect of certain medications

# **CAUSES OF HEARING LOSS**

Loud noise is one of the most common causes of hearing loss. Noise from lawn mowers, snow blowers, or loud music can damage the inner ear, resulting in permanent hearing loss. Loud noise also contributes to tinnitus. You can prevent most noise-related hearing loss. Protect yourself by turning down the sound on your stereo, television, or headphones; moving away from loud noise; or using earplugs or other ear protection



Earwax or fluid buildup can block sounds that are carried from the eardrum to the inner ear. If wax blockage is a problem, try using mild treatments, such as mineral oil, baby oil, glycerin, or commercial ear drops to soften earwax. A punctured eardrum can also cause hearing loss. The eardrum can be damaged by infection, pressure, or putting objects in the ear, including cotton-tipped swabs. See your doctor if you have pain or fluid draining from the ear.

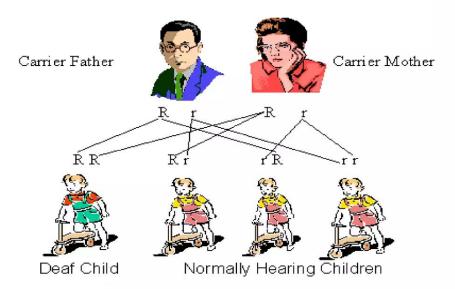




Hearing loss can also result from taking certain medications. "Ototoxic" medications damage the inner ear, sometimes permanently. Some ototoxic drugs include medicines used to treat serious infections, cancer, and heart disease. Some antibiotics are ototoxic. Even aspirin at some dosages can cause problems.



Heredity can cause hearing \*\* loss, as well. But not all inherited forms of hearing loss take place at birth. Some forms can show up later in life. For example, in otosclerosis, which is thought to be a hereditary disease, an abnormal growth of bone prevents structures within the ear from working properly.



### How to cope with hearing loss

If you notice signs of hearing loss, talk with your doctor. If you have trouble hearing, you should:

- Let your family and friends know you have a hearing problem.
- Ask people to face you and to speak louder and more clearly. Ask them to repeat themselves or reword what they're saying.
- Pay attention to what is being said and to facial expressions or gestures.
- Let the person talking know if you do not understand what was said.
- Find a good location to listen. Place yourself between the speaker and sources of noise or look for quieter places to talk.

# **Tips for Talking with Someone** with Hearing Loss



- In a group, include people with hearing loss in the conversation.
- Find a quiet place to talk to help reduce background noise, especially in restaurants and at social gatherings.
- Stand in good lighting and use facial expressions or gestures to give clues.
- Face the person and speak clearly.
- Speak a little more loudly than normal, but don't shout.



- Do not hide your mouth, eat, or chew gum while speaking.
- Repeat yourself if necessary, using different words.
- Try to make sure only one person talks at a time.
- Be patient. Stay positive and relaxed.
- Ask how you can help.



# DEVICES TO HELP WITH HEARING LOSS



Your doctor or specialist may suggest you get a hearing aid. Hearing aids are electronic, battery-run devices that make sounds louder. There are many types of hearing aids. Before buying a hearing aid, ask if your health insurance will cover the cost. Also ask if you can have a trial period so you can make sure the device is right for you. An audiologist or hearing aid specialist will show you how to use your hearing aid.

Many types of assistive devices are available to help people with hearing loss. These devices can amplify sounds, provide alerts, and help you communicate with others. For example, alert systems work with doorbells, smoke detectors, and alarm clocks to send visual signals or vibrations. Devices that use keyboards, touch screens, or text-to-speech technology can help you give and receive information more effectively.

<u>Hearing aids</u> are electronic, battery-run assistive devices that make some sounds louder. Hearing aids make sound louder so damaged ears can hear it. There are two main ways to get a hearing aid: by prescription or over the counter.

- An audiologist or hearing aid specialist can prescribe hearing aids for people with significant or complicated hearing loss. Prescription hearing aids require a medical exam, and then the health care professional will fit and adjust the device.
- Hearing aids have <u>recently become available</u> without a prescription.
  <u>Over-the-counter hearing aids</u>, which are sold in stores and online, may help people with mild to moderate hearing loss.

### Safebao Wireless Door Bell Waterproof Plug-in Door Chime

A doorbell chime with flashing lights let seniors with hearing impairment know when someone is at the door.



### TV Ears Original TV Headset System – Wireless, Voice Clarifying

This wireless headphone set allows seniors to turn up the TV volume as loud as they need without disturbing anyone else. If others are watching too, you can keep the TV sound on its own volume level.





Williams Sound PKT D1 EH Pocketalker Ultra Duo Pack Amplifier with Single Mini Earbud and Folding Headphone

This sound amplifier is great for seniors who don't want to wear hearing aids. It boosts sound closest to the listener and reduces background noise. It works well for one-on-one conversation, in small groups, watching TV, or talking in the car. It can be used with or without hearing aids.



# **COCHLEAR IMPLANT**

- A cochlear implant is a small, complex electronic device that can help to provide a sense of sound to a person who is profoundly deaf or severely hard-of-hearing.
- As of December 2012, approximately 324,200 registered devices have been implanted worldwide. In the United States, roughly 58,000 devices have been implanted in adults and 38,000 in children. (Estimates provided by the U.S. Food and Drug Administration [FDA], as reported by cochlear implant manufacturers.)

