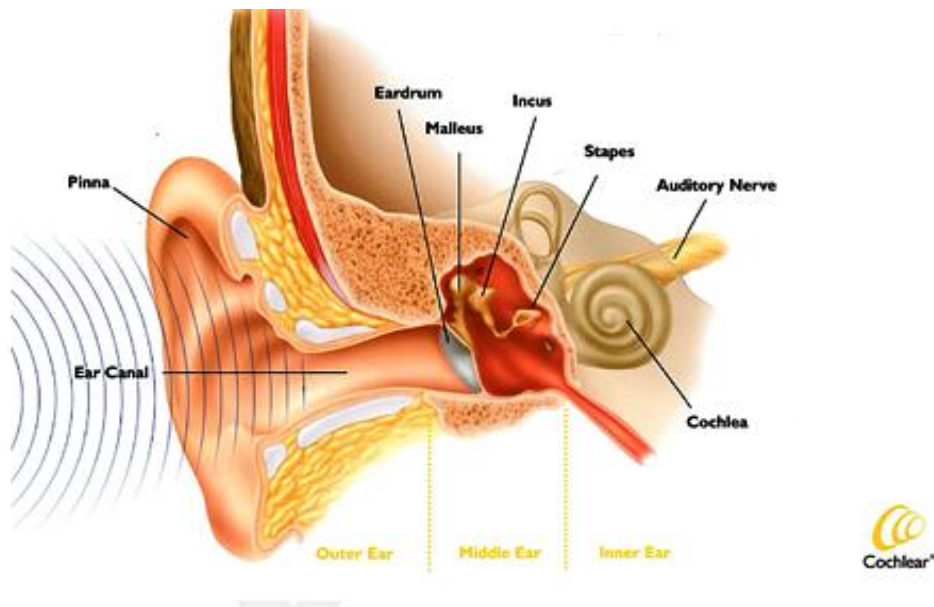


Causes of Hearing Loss

www.betterhearingaustralia.org.au

Hearing loss can be inherited or acquired from illness, ototoxic (ear-damaging) drugs, exposure to loud noise, tumors, head injury, or the aging process. This loss may occur by itself or with tinnitus (ringing in the ears). Some causes of hearing loss are described below.



Acoustic neuroma is an example of a tumor that causes hearing loss. Symptoms can include hearing loss or ringing in one ear accompanied by a feeling of fullness. Treatment for acoustic neuroma is medical.

Autoimmune inner ear disease: This sudden-onset hearing loss is fast, dramatic, and should be medically treated as soon as possible. With swift medical treatment, the hearing loss from this disease can be reduced.

Down's Syndrome: This often involves external abnormalities with a strong tendency towards repeated otitis media (middle ear infection) and a high incidence of sensori-neural, conductive and mixed hearing loss.

Hereditary: Some causes of hearing loss can be hereditary.

Loud noise can cause permanent hearing loss. This is called noise-induced hearing loss. Listening to loud noise for long periods of time can damage the hair cells in the inner ear. Noise-induced hearing loss usually develops gradually and painlessly. A single exposure to an extremely loud sound such as an explosion can cause a sudden loss of hearing. This is called acoustic trauma.

Ménière's disease affects the inner ear. The cause of Ménière's disease is unknown. It usually begins between the ages of 30 and 50. A person with Ménière's disease will often have a combination of sensorineural hearing loss, dizziness (vertigo), ringing in the ear (tinnitus), and sensitivity to loud sounds. This type of hearing loss is managed by a doctor and audiologist. Some people with Ménière's disease report mild symptoms, but for others the symptoms are much worse. The hearing loss comes and goes, but over time some loss becomes permanent.

Otosclerosis is a disease involving the middle ear. It affects the movement of the tiny bones in the middle ear. Otosclerosis can cause a conductive type of hearing loss. This condition is often surgically treatable.

Ototoxic medications can cause hearing loss. Some drugs known to be ototoxic are:

- Aminoglycoside antibiotics (such as streptomycin, neomycin, or kanamycin)
- Salicylates in large quantities (aspirin)
- Loop Diuretics (Lasix or ethacrynic acid)
- Drugs used in chemotherapy regimens (Cisplatin, carboplatin, or nitrogen mustard)

Pierre Robin Syndrome: May include a variety of middle ear anomalies, with congenital conductive and/or sensori-neural hearing loss.

Physical head injury can lead to traumatic brain injury (TBI), skull fractures, a hole in the eardrum, and damage to the middle ear structures, resulting in hearing loss.

Presbycusis is a sensorineural hearing loss that occurs gradually later in life. The condition affects hearing in both ears over time. Speech begins to sound muffled or unclear because the ability to hear high pitch sounds is the first to go. Rhyming mistakes can occur—for example, the high-pitched sound /t/ in the word *tin* is heard as /f/ in the word *fin*, causing confusion: “The roof is made of tin” is heard as “The roof is made of fin.”

Pyle's Disease: A genetic disorder which may include progressive hearing loss.

Treacher Collins Syndrome: May include facial abnormalities. Atresia of external auditory canal is common.(ie outer ear canal is blind-ended). Associated deafness is generally conductive but may be sensori-neural.

Turner's Syndrome: A chromosome defect, not inherited. Affects only females and commonly associated with hearing loss.

Usher's Syndrome: A genetic condition including congenital deafness and progressive loss of vision.

Vestibular Disorders: The vestibular system includes the parts of the inner ear and brain that process the sensory information involved with controlling balance and eye movements. If disease or injury damages these processing areas, vestibular disorders can result. Vestibular disorders can also result from or be worsened by genetic or environmental conditions, or occur for unknown reasons.

References: <http://www.emedicinehealth.com>
Northern and Downs 1991 “Hearing in Children” 4th edition. Williams and Wilkins Baltimore

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