American Speech-Language-Hearing Association

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Type, Degree, and Configuration of Hearing Loss

When describing hearing loss we generally look at three attributes: *type of hearing loss*, *degree of hearing loss*, and the *configuration of the hearing loss*.

Type of Hearing Loss

Hearing loss can be categorized by where or what part of the auditory system is damaged. There are **three basic types** of hearing loss: ***conductive hearing loss***, ***sensorineural hearing loss*** and ***mixed hearing loss***.

Conductive Hearing Loss

Conductive hearing loss occurs when sound is not conducted efficiently through the outer ear canal to the eardrum and the tiny bones, or ossicles, of the middle ear. Conductive hearing loss usually involves a reduction in sound level, or the ability to hear faint sounds. This type of hearing loss can often be medically or surgically corrected.

Examples of conditions that may cause a conductive hearing loss include:

- Conditions associated with middle ear pathology such as fluid in the middle ear from colds, allergies (serous otitis media), poor eustachian tube function, ear infection (otitis media), perforated eardrum, benign tumors
- Impacted earwax (cerumen)
- Infection in the ear canal (external otitis)
- Presence of a foreign body
- Absence or malformation of the outer ear, ear canal, or middle ear

Sensorineural Hearing Loss

Sensorineural hearing loss occurs when there is damage to the inner ear (cochlea) or to the nerve pathways from the inner ear (retrocochlear) to the brain. Sensorineural hearing loss cannot be medically or surgically corrected. It is a permanent loss.

Sensorineural hearing loss not only involves a reduction in sound level, or ability to hear faint sounds, but also affects speech understanding, or ability to hear clearly.

Sensorineural hearing loss can be caused by diseases, birth injury, drugs that are toxic to the auditory system, and genetic syndromes. Sensorineural hearing loss may also occur as a result of noise exposure, viruses, head trauma, aging, and tumors.

Mixed Hearing Loss

Sometimes a conductive hearing loss occurs in combination with a sensorineural hearing loss. In other words, there may be damage in the outer or middle ear and in the inner ear (cochlea) or auditory nerve. When this occurs, the hearing loss is referred to as a *mixed* hearing loss.

Unilateral Hearing Loss

Unilateral hearing loss (UHL) means that hearing is normal in one ear but there is hearing loss in the other ear. The hearing loss can range from mild to very severe. Approximately one out of 1000 children is born with UHL. Unilateral hearing loss can occur in both adults and children. Nearly 3% of school-aged children have UHL.Children with UHL are at higher risk for having academic, speech/language and social/emotional difficulties than their normal hearing peers. Some children with UHL experience these difficulties but others do not.

Many times we do not know the cause of hearing loss. Below are some possible causes of UHL:

- Hearing loss that runs in the family (genetic or hereditary)
- An outer, middle or inner ear abnormality
- Specific syndromes
- Specific illnesses or infections
- Skull (temporal bone) fractures
- Excessive or extreme noise exposure
- Traumatic brain injury

For more information, see Unilateral Hearing Loss in Children: Guidance for Parents and Caregivers.

Degree of Hearing Loss

Degree of hearing loss refers to the severity of the loss. The numbers are representative of the patient's thresholds, or the softest intensity at which sound is perceived. The following is one of the more commonly used classification systems:

Degree of hearing loss	Hearing loss range (dB HL)
Normal	-10 to 15
Slight	16 to 25
Mild	26 to 40
Moderate	41 to 55
Moderately severe	56 to 70
Severe	71 to 90
Profound	91+

Source: Clark, J. G. (1981). Uses and abuses of hearing loss classification. *Asha, 23,* 493–500.

Configuration of Hearing Loss

The configuration or shape of the hearing loss refers to the extent of hearing loss at each frequency and the overall picture of hearing that is created. For example, a hearing loss that only affects the high frequencies would be described as a high-frequency loss. Its configuration would show good hearing in the low frequencies and poor hearing in the high frequencies. On the other hand, if only the low frequencies are affected, the configuration would show poorer hearing for low tones and better hearing for high tones. Some hearing loss configurations are flat, indicating the same amount of hearing loss for low and high tones.

Other descriptors associated with hearing loss are:

- **Bilateral versus unilateral.** Bilateral hearing loss means both ears are affected. Unilateral hearing loss means only one ear is affected.
- **Symmetrical versus asymmetrical.** Symmetrical hearing loss means that the degree and configuration of hearing loss are the same in each ear. An asymmetrical hearing loss is one in which the degree and/or configuration of the loss is different for each ear.
- **Progressive versus sudden hearing loss.** Progressive hearing loss is a hearing loss that becomes increasingly worse over time. A sudden hearing loss is one that has an acute or rapid onset and therefore occurs quickly, requiring immediate medical attention to determine its cause and treatment.
- **Fluctuating versus stable hearing loss.** Some hearing losses change—sometimes getting better, sometimes getting worse. Fluctuating hearing loss is typically a symptom of conductive hearing loss caused by ear infection and middle ear fluid, but also presents in other conditions such as Meniere's disease.