Medical Audiology Services

Hear the best you can!

Degrees of Hearing Loss and Expected Challenges

By Andre Wedekind, Audiologist

The degree or severity of hearing loss is defined by the threshold of hearing. Below is the most commonly used classification, which divides hearing levels into 5 broad bands of severity. We list some of the difficulties expected at each level, without amplification.

The affected frequencies and the type of hearing loss (conductive, mixed or sensorineural) result in different communication challenges.

Degree of hearing loss	Hearing Thresholds	Sound examples in this range	Possible challenges and needs
Normal Hearing	Up to 20dB HL	Rustling leaves, clock ticking	None
Mild Hearing Loss	25 - 40dB HL	Quiet speech, clicking fingers	This is comparable to lightly plugging both ears. The child has difficulty hearing soft speech or from a distance. Noisy settings like classrooms and playgrounds pose extra difficulty. Difficulties may be wrongly attributed to behavioural or attention problems
Moderate Hearing Loss	45 - 70dB HL	Normal conversational speech	This is comparable to wearing well-fitting earplugs in both ears. Approximately 50% of speech is inaudible. The child may understand conversational speech at close proximity, in quiet, when facing the speaker. Listening in background noise is very difficult. Obvious hearing difficulties are observed by teachers and parents. Speech-language development is affected in all children.
Severe Hearing Loss	75 – 90dB HL	Telephone ringing, baby crying	Most environmental sounds are inaudible. There is no understanding speech without amplification. The child may have a heavy reliance on visual cues, even with hearing aids. Early intervention is required for speechlanguage development. Cochlear implants may be recommended.
Profound Hearing Loss	95dB HL	Truck, chainsaw	The child's natural hearing is not functional. Early intervention and cochlear implants are required.

Modified from PHONAK

Unilateral hearing loss in childhood: Isn't one ear good enough?

By Dr Vesna Maric, Senior Audiologist, Medical Audiology Services

Permanent unilateral hearing loss (UHL) refers to normal hearing in one ear and a hearing loss in the other ear ranging from mild to profound. Prevalence at birth is around 1 in 1000, and increases to 3 in 100 by school entry. As for bilateral hearing loss, the leading causes are prematurity, genes, infections, syndromes, noise and head trauma.

Good binaural hearing is critical for sound localisation and hearing in background noise. For toddlers, this allows opportunities for incidental language learning during daily interactions with parents. For older children, it is additionally important in social communications, further language development and classroom listening.

Despite research dating back to the 1980s identifying poorer academic performance in children with unilateral hearing loss, its significance has been downplayed by professionals and parents over the years. While many develop normal speech and language, there is now good evidence that UHL is associated with increased rates of grade failures, need for educational assistance, perceived behavioural issues, social and emotional problems and poorer self-rated quality of life.

With earlier identification of hearing loss from neonatal screening programs and growing awareness of UHL, there is now a focus on treatments beyond preferential seating in the classroom. Amplification with conventional hearing aids is an option for mild to moderate losses. If no functional hearing is present in the affected ear, CROS hearing aids and bone conduction implants can be used to send information from the affected ear to the good ear. Such contralateral routing does not provide localisation or benefits in noise, but it does increase awareness of sound from the affected side.

Children with a severe or profound hearing loss in one ear are starting to be offered the option of cochlear implants. Similarly to adults, early evidence suggests good integration of the electrical signal with natural hearing from the good ear, as well as benefits for listening in background noise and localisation.