Unilateral hearing loss

The loss of hearing on just one side is much more common than generally believed. According to a study by the Bochum University Clinic, three out of 1000 school children suffer of single sided hearing loss and, in the USA alone, some 60'000 people annually are affected by it. People with unilateral hearing loss face new challenges, daily: Everyday situations like crossing roads, meetings or conversations in loud environments quickly become a major burden for them. Thanks to advanced technologies in the area of hearing aid supplies, solutions exist today that can significantly facilitate life with one-sided hearing loss.

One-sided hearing loss – what does it mean?
People with a single sided hearing loss, suffer a severe hearing loss in one ear that cannot be supported with a hearing aid. The unaidable ear cannot or at best just barely can register sounds and speech. Single-sided hearing loss may be congenital, though it can also develop during life. It can be triggered due to bacterial or viral infections (measles, mumps), injuries to head and/or ears, strokes, tumours, head surgeries, Morbus Ménière or acute hearing loss. Symptoms of a single sided hearing loss vary from person to person. Most frequent is a severe restriction to directional hearing – a source of sound cannot or just barely can be localized. Further, unilateral hearing loss often disrupts selective hearing respectively understanding, especially in loud environments.

Unilateral hearing loss challenges those affected in multiple ways in their everyday life. The diminished sense for sound direction can create awkward situations and the acoustical orientation in a given area may become difficult. Addressed „from the wrong side“ an affected person will either not respond or will have great difficulties to promptly localize the direction of the voice. This can be particularly dangerous in traffic. Crossing a road and misjudging where from a vehicle is approaching or underestimating how far away it still is can have fatal consequences.

Further, clearly restricted is the communication in noisy environments or among large groups. People with unilateral hearing loss often hardly manage to follow a conversation, as it becomes difficult to distinguish between useful sound (i.e. speech) and disturbing sound (i.e. babble of voices, loud music). An affected person very often focuses so much on hearing and understanding that an active participation in the conversation turns close to impossible. Misunderstandings, feelings of exclusion or missing self-confidence are just some of the possible consequences.

Caused by the energy overconsumption in every day life, people with one side hearing loss – children in particular – fatigue quicker and have a shorter span of concentration. Day in day out those affected need to pay attention to i.e. ensuring a proper seat respectively hearing angle during meetings. And if need be, double checking, maintaining eye contact with conversation partners plus a stronger reliance on the eyes in general.

Are there possibilities for treatments? / CROS, BICROS /BAHA
As in the case of hearing loss in both ears, there is no known way to reverse a unilateral hearing loss. Once the delicate hair cells inside the ear are damaged no further impulses can be transmitted to the hearing nerve or the brain. Special hearing aids can, though, restore the feeling of hearing from both sides to a large extent. Most often they are equipped with
speech processors that optimize the filtering of speech and balance the hearing, should talk come from the „wrong side“.

One option is CROS (Contra lateral Routing of Signals). It balances the hearing by transmitting sound signals respectively sound waves from the unaidable ear to the healthy ear. A device with a microphone (sender) will be worn on the non-hearing side and a receiving device on the hearing side. Is the better ear also affected by hearing loss, the hearing aid receives the sound signals and amplifies them. The solution then is called BICROS. Both devices exist with wires or wireless.

Phonak offers people with unilateral hearing loss flexible and strongly performing support through its advanced CROS solutions. CROS is available in two versions, one behind the ear the other in the ear. The innovative Spice technology allows for a broadband audio transmission of the voice to the hearing ear in optimal sound quality.


A further option to treat single sided hearing loss is BAHA (Bone Anchored Hearing Aid). BAHA is attached to a titanium bolt, anchored into the skull behind the non-hearing ear. A minor surgery with local anaesthesia is necessary to implant it. The titanium bolt will convert sound signals respectively sound waves into vibrations (principle of a tuning fork) and transmit them through the cranial bone directly to the healthy ear – ear canal and middle ear are bypassed. This allows the wearer to hear and understand sound reaching him from both sides.

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