

Sudden sensorineural hearing loss

What is sudden sensorineural hearing loss?

Sudden sensorineural hearing loss is the sudden loss of hearing in the ear or the hearing nerve. It can occur over a period of hours, or up to three days and causes a noticeable hearing loss for most sounds. Many patients wake up with the hearing loss. The hearing loss usually occurs in one ear and can vary in severity.

Other symptoms which may accompany the sudden loss in hearing include:

- Distortion of sounds in the poorer hearing ear
- Tinnitus, which is the awareness of noises in the ears or head
- Imbalance or dizziness
- A blocked or full feeling in the ear (aural fullness)
- Nausea/vomiting.

The hearing loss may be temporary or permanent. There is a low incidence of sudden sensorineural hearing loss, with 5 to 20 cases per 100,000¹. It occurs most often in people aged 30 - 60 years old. Both males and females are equally affected¹.

Sensorineural hearing loss is caused by a loss of sensitivity of the cochlea (hearing organ), which is usually permanent. However, in cases of sudden sensorineural hearing loss there is a chance that hearing may partially or fully recover.

What causes it?

There are many potential causes of sudden sensorineural hearing loss^{1, 2}. In many cases, the specific cause of hearing loss remains unknown.

Causes of sudden sensorineural hearing loss include:

- Idiopathic (unknown)
- Viral infection of the cochlea
- Blood flow abnormalities of the cochlea
- Immune disorders (autoimmune inner ear disease)
- Metabolic causes
- Toxic causes (drugs that harm the ear as a side effect)
- Trauma or head injury
- In very rare cases, the sudden hearing loss may be caused by a growth on the auditory (hearing) nerve.

¹ Mamak, Yilmaz, Cansiz, Inci, Guclu, & Derekoyl. (2005). A study of prognostic factors in sudden hearing loss. *Ear, Nose and Throat Journal*, 84 (10), 641-644.)

² Xenellis, J., Karapatsas, I., Papadimitriou, N., Nikolopoulos, T., Maragoudakis, P., Tzagkaroulakis, M., Ferekidis, E (2006). Idiopathic sudden sensorineural hearing loss: prognostic factors. *The Journal of Laryngology & Otology*, 120, 718-724.



Will my hearing recover?

Recovery of hearing can often depend on a number of factors. Prompt diagnosis and medical treatment provides the best chance of recovery. Some literature reports that in 50% of cases, hearing can spontaneously recover³. The outcomes are better if:

- The hearing loss is accompanied by tinnitus (noises in the ear)
- The hearing loss is worse for low pitched sounds than high pitched sounds
- The hearing loss is considered to be mild or moderate in degree
- Treatment is received within 7 days.⁴

Often, the greatest recovery in hearing will occur one to two weeks after the incident, however, some rare patients may have an improvement over a 12 month period. Patients with a lesser degree of hearing loss often have a greater improvement in hearing than those with greater degrees of hearing loss.

What can be done?

Treatment

Corticosteroids are commonly administered in cases where the cause of the sudden hearing loss is unknown. Steroids may significantly improve the recovery of hearing, by reducing inflammation and swelling of the cochlea.

Long term outcomes

In some cases of sudden sensorineural hearing loss, hearing may not recover. If this occurs, preservation of remaining hearing in both ears is important. Ways to prevent hearing deterioration include limiting the amount of noise exposure, and using hearing protection when in noisy environments.

If hearing does not recover either spontaneously or with medical treatment, a hearing aid may be an option.

Tinnitus can also continue to be present, regardless of whether hearing recovers or not. Relaxation and distraction techniques can be of benefit to help reduce the perception of tinnitus. For further information on tinnitus and tinnitus management speak to your audiologist.

3 Burton M. & Harvey R (2007), Idiopathic sudden sensorineural hearing loss. In Scott-Brown's Otolaryngology, Gleeson, M. (ed), Chapter 131. Butterworth-Heinemann, Oxford.

4 Ceylan, A., Elenk, F., Kemaloglu Lu, Y., Bayazit, Y., Gokkusu, N., & Zibilien, Z. (2007). Impact of prognostic factors on recovery from sudden hearing loss. The Journal of Laryngology & Otology, 121, 1035-1040.

