



Faculty of Medicine, Dentistry & Health Sciences

# Melbourne Audiology & Speech Pathology Clinic



## Sudden Sensorineural Hearing Loss

### WHAT IS IT?

Sudden sensorineural hearing loss, as the name implies, is the rapid loss of hearing in the ear or the hearing nerve, occurring over a period of up to 72 hours. It causes a noticeable hearing loss for most sounds, typically in one ear and can vary in severity. Most commonly, a person will wake up and notice the hearing loss.

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 internal sounds in the ears or head
- Imbalance, dizziness.

- A blocked or full feeling in the ear (aural fullness).
- Nausea/vomiting.
- Feelings of anxiety.

There is a low incidence of sudden sensorineural hearing loss, with 5-20 cases per 100000 people<sup>1</sup>. It occurs most often in people aged 30-60 years old. Both males and females are equally affected<sup>1</sup>.

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 recover.

## WHAT CAUSES IT?

There are many potential causes of sudden sensorineural hearing loss<sup>1,2</sup>. The specific cause of the hearing loss remains unknown in over 75% of cases.

Causes of sudden sensorineural hearing loss include:

- Idiopathic (unknown)
- Viral infections 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.

## WILL MY HEARING RECOVER?

Recovery of the hearing can often depend on a number of factors. Prompt medical treatment (and prompt diagnosis) will ensure that there are the best chances of recovery.

### The outcomes are better if:

- The hearing loss is accompanied by tinnitus
- The hearing loss is not accompanied by vertigo
- 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<sup>3</sup>

Often, the greatest recovery in hearing will occur 1–2 weeks after the incident, however, some patients may have an improvement over a 12 month period<sup>4</sup>.

## WHAT CAN BE DONE?

### Treatment:

Steroids are commonly administered in cases where the cause of the sudden hearing loss is unknown. Steroids have been shown to significantly improve the recovery of hearing<sup>5,6</sup>. They work 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 for the rehabilitation of the hearing loss.

Tinnitus can also continue to be present, regardless of whether hearing recovers or not. Tinnitus management, including relaxation and distraction techniques, can be of benefit to help reduce the perception of tinnitus.

### Sources:

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