

What is tinnitus?

Tinnitus is the awareness of noises in the ears (one or both) and/or in the head that are not present in the environment. It is common and normal to experience tinnitus in quiet environments.

This is usually due to background electrical activity in the nerve cells in the hearing system. It is also quite normal to experience a loud ringing sound occasionally for a few seconds. Some people may experience temporary tinnitus when they have ear infections, or after exposure to loud sounds e.g. after attending a rock concert.

Tinnitus is not a disease but a symptom of malfunction or change in the auditory or hearing system, which includes the ears and the brain.

What can tinnitus sound like?

Most commonly people describe tinnitus as a ringing or hissing sound. However people may experience many different sounds including buzzing, roaring, humming and cicada-like noise. The sound can also change spontaneously for the individual. Tinnitus can be in one ear, both or sound like it is inside the head.

Is tinnitus common?

Approximately 17-20% of the population report that they have tinnitus of varying degrees. Between 0.5 and 2% of the population report that they experience tinnitus that severely disturbs their way of life. It is very common for people who have a hearing loss to experience tinnitus. However many people who have normal hearing also have tinnitus.

What causes tinnitus?

Tinnitus can usually be associated with any condition that affects the hearing. Sometimes no cause can be pinpointed. However, some of the factors that have been linked with tinnitus onset include:

- Extreme stress, anxiety or trauma.
- Damage to the hearing organ in the inner ear (the cochlea). This can be caused by a number of factors including exposure to loud noise, especially if it is over a long period of time.
- Degeneration of cells within the hearing organ due to ageing.



- Malfunction of the eardrum or the bones in the middle ear.
- Meniere's syndrome, a balance disorder involving swelling in a duct in the inner ear.
- Some prescription and non-prescription drugs.

What makes tinnitus worse?

There are other factors that may aggravate existing tinnitus. The main ones are:

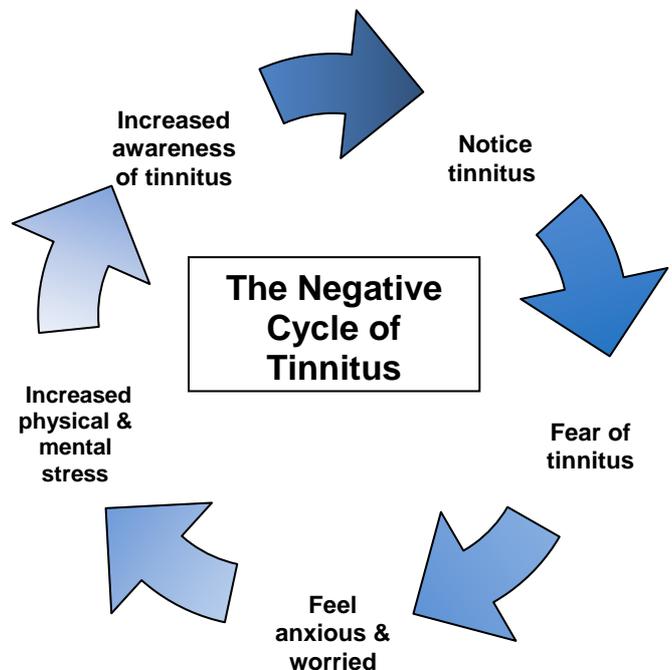
- Stress, anxiety and fatigue.
- Concentrating or focusing on the tinnitus – this can make it seem louder and more distressing which, in turn, can lead to higher stress levels.
- Smoking, alcohol and food intolerances.

What is the mechanism of tinnitus?

Generally, it is thought that when the hearing organ is damaged the structures responsible for sending sound to the brain become more sensitive to soft sounds and this is perceived as tinnitus.

When our brains first hear tinnitus it is not always able to appropriately decide on the importance of the sound. As we might not have experienced the sound before, it is effectively magnified and brought to your conscious attention. The Limbic System in our brain is responsible for this reaction, similar to the 'fight or flight' response we get when you hear a strange sound at night and become more aware of these sounds. The presence of tinnitus can elicit a fear response that in turn brings your attention to the tinnitus and a negative cycle arises whereby your body constantly reacts to the tinnitus in a way that makes you notice it more.

People often worry that tinnitus is a symptom of cancer, a tumour or stroke. Tinnitus is usually caused by a benign (non-life threatening) condition and consulting with an ear specialist usually helps to relieve these fears. If you are experiencing tinnitus, it is important to consult your doctor, audiologist and an ear specialist to establish whether there is any underlying treatable cause.



How does tinnitus affect people?

People perceive and are affected by tinnitus in different ways. For some people it does not impact greatly on life, while for others it can be debilitating, affecting work and social life. Some reactions include:

- Distress (especially in the early stages)
- Sleep disturbances – some people hear tinnitus more at night, when it is quiet
- Irritability, tension and frustration
- Helplessness, anger, depression and anxiety
- Poor concentration
- Mood swings.

What can I do about my tinnitus?

Tinnitus management

There are many things people can do to manage their tinnitus and many professionals you can get assistance/advice from. Most of these involve teaching your body to control its response to the tinnitus instead of having tinnitus control you. Changes to behaviour and relaxation strategies are very helpful. Surgery is rarely warranted and has actually been known to aggravate tinnitus. There are also no specific medications to effectively treat tinnitus. The aim of all tinnitus management strategies is to achieve habituation. Habituation means that the tinnitus is usually still heard but no longer causes distress. In this way the 'tinnitus sufferer' moves on to become someone who experiences tinnitus.

- **Hearing aids:** Managing hearing loss can help in the management of tinnitus. Correctly fitted hearing aids can reduce the perception of tinnitus by improving the ability to hear. They can also alleviate stress by reducing the strain of listening.
- **Sound enrichment:** This involves focusing your attention away from the tinnitus by using an external sound source such as the radio, television, music and/or environmental sound CDs (e.g. the sound of the surf). Listening to soothing music or environmental sounds using a pillow speaker may benefit people whose tinnitus disrupts their sleep.
- **Distraction strategies:** The aim of these strategies is to avoid focusing on the tinnitus. One way of doing this is to undertake activities that take your mind off the tinnitus such as walking, reading, watching TV, listening to music, playing games and doing puzzles, gardening and other favourite pastimes. Gradually, the periods of time that you are not focussing on your tinnitus will increase in frequency.



- **Stress management/relaxation:** As tinnitus can be exacerbated by stress, many people find that reducing stress in their lives can, in turn, reduce the impact of tinnitus. Relaxation therapies such as yoga, tai chi, relaxation tapes, hypnotherapy, breathing and muscle relaxing techniques may be beneficial.
- **Avoiding loud sounds:** Loud noise can exacerbate tinnitus. Make sure you wear hearing protection (ear plugs or muffs) when involved in very loud activities (e.g. mowing the lawn). [Note: hearing protections should not be worn continuously, only when there is a chance of exposure to loud noises].
- **Tinnitus re-training therapy (TRT):** TRT is based on the principle that tinnitus becomes distressing because the brain has become overattentive to low-level sounds and that this process is reinforced by anxiety and fear associated with the tinnitus. TRT aims to retrain the subconscious auditory system to accept tinnitus as something that occurs naturally, rather than to view it as a threat. This treatment involves the fitting of a wide band noise generator, a device that looks like a hearing aid but that emits a hissing noise. The device should be worn for at least six waking hours per day.
- **Cognitive therapy:** This would be carried out by a psychologist. Cognitive therapy aims to modify the way you think about and react to tinnitus. It involves learning how to focus attention away from the tinnitus and reduce the associated stress.

Additional services

No treatment path is right for everyone as tinnitus varies greatly for each person. The above management strategies can be further discussed and implemented with the help of the following organisations and professionals.

Tinnitus Association of Victoria

The Tinnitus Association of Victoria provides information and support for people with tinnitus. They provide both an anonymous counselling service as well as a DVD (for purchase) of seminars with trained counsellors that aim to empower you to manage your tinnitus.

Phone: 03 9770 6075

Website: www.tinnitus.org.au

Dineen and Westcott Audiology

Dineen and Westcott Audiology in Heidelberg, Victoria is a private audiology clinic that specialises in counselling, discussing and implementing management options for tinnitus problems.

Phone: 03 9457 6588

Website: www.dineenandwestcott.com.au



Expression Audiology

Expression Audiology is a non-for-profit audiology clinic located in East Melbourne, Box Hill and Oakleigh. Expression Audiology is a division of the Victorian Deaf Society and run individual tinnitus management sessions at all three sites. As a non-for-profit organisation, Expression Audiology are able to provide a reduced price rate for eligible clients.

Phone: 1300 30 20 31

Website: www.expression.com.au

General practitioner

Your GP can review your medications to determine if tinnitus is a side effect. A GP can also refer you to a sleep clinic, an Ear, Nose and Throat specialist or psychologist.

Psychologist

Your general practitioner can refer you to a psychologist and you may be eligible for a number of subsidised or free sessions. Seeing a psychologist does not mean that you have a mental condition but they can help you to deal with the mental impact of tinnitus.

Neuromonics Tinnitus Treatment

Neuromonics is a newly developed therapy that customises the type of wide band noise generator to your specific hearing levels and to your everyday needs. The treatment program initially lasts for 6 months and has been based on extensive research in Western Australia. Visit www.neuromonics.com for more information.

Your local audiologist

An Audiologist specialises in the hearing system and hearing aid fittings. To find out more about how our ears work, hearing aids, any strategies or other questions you have, contact your local audiologist. A list of audiologists can be found at: www.audiology.asn.au

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