

## EAR, NOSE & THROAT

### The sound of silence

ringing in the ears is a condition that can be extremely annoying to its sufferers. While no cure is currently available, it can be successfully managed.



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**T**innitus or ringing in the ears is the sensation of hearing hissing, clicking, buzzing, chirping, roaring, pulsing or swooshing sounds. Very rarely, it is heard as repeated loops of music.

For most people, tinnitus is merely an annoyance. In severe cases, however, it impairs socialisation, work and general well-being. It can cause anxiety, mood swings, and problems in sleep and concentration.

Over 15% of the population have tinnitus. The typical tinnitus sufferer is older, male (perhaps because men are exposed more often to noisy environments), Caucasian, a professional and loves music. The condition is worsened by anxiety, Obsessive-Compulsive Disorder, depression and stress.

1% of tinnitus is objective, where the sound is audible to others too. 90% of tinnitus is subjective and perceived only by the patient. Of this, an overwhelming 80% is due to hearing loss, with the brain processing sound frequencies inappropriately. Using hearing aids or cochlear implants often allows some relief by masking tinnitus, stimulating the hearing system and improving communication. Hearing loss can be age-related, noise-induced or due to infection, Meniere's disease, middle ear bone pathology and tumours.

Other causes are sinus pressure (when you have a cold or sinusitis, for example), barotrauma (that occurs when you go diving or fly), temporomandibular joint dysfunction, irritation of the ear drum due to wax or debris, medication (such as NSAIDS, certain antibiotics and cancer medication, diuretics and

quinine) and head, neck or traumatic brain injuries. Anaemia, hypertension, as well as thyroid, autoimmune and psychiatric disorders may sometimes need to be excluded.

A proper investigation by your ear doctor is important. After going through your history and examining you, a formal hearing evaluation with various specific tests will be done. Tinnitus is also measured with various indexes and questionnaires. Treatable or sinister causes of tinnitus need to be first excluded or managed.

Though there is no cure currently, there are many treatment options for the condition, allowing sufferers to lead normal lives. The aim is to lower the perceived presence and intensity of tinnitus. Treatment needs to be individualised and target emotional, cognitive and attentional aspects. To be effective, a tinnitus education programme and counselling should be offered in tandem.

#### Managing tinnitus

- Modern digital hearing aids can be customised to the patient's profile of hearing loss. Very small or open-fit hearing aids that leave the canal open can be used for those with mild to moderate hearing loss. The benefit is that the wearer's voice doesn't sound strange as it may with other styles.
- Sound maskers or therapy devices masks can distract from, habituate to or neuro-modulate the cause of tinnitus.
- Behavioural therapy remains one of the most effective forms of treatment as severe



tinnitus is usually defined by how stressful it is to the specific patient, and not by its loudness or pitch. Behavioural therapy reduces stress and depression with long-lasting positive effects. Examples include cognitive behavioural therapy, mindfulness-based stress reduction and tinnitus retraining therapy.

- Drug therapy for severe tinnitus can be started after checking first with your doctor. Antianxiety and antidepressant drugs in acute stages help, but may impair habituation to tinnitus in the long term. Antihistamines and anticonvulsants are used sometimes. Many over-the-counter drugs and herbs promise miracle cures, but their effectiveness is not documented.
- Experimental research trials include repetitive transcranial magnetic or direct current stimulation, deep brain and vagus nerve stimulation.
- For Meniere's disease, a disorder of the inner ear that gives episodes in which you feel like you are spinning, reducing salt, caffeine and alcohol intake would help.
- Stress reduction through exercise and meditation, and a good support and social network, will be helpful. 