

RINGING IN THE EARS

IF YOU HEAR SOUNDS THAT OTHERS DON'T, YOU ARE NOT NECESSARILY HALLUCINATING; RATHER, YOU COULD HAVE A CONDITION KNOWN AS TINNITUS.



Tinnitus is the sensation of hearing sounds in the ears, such as ringing, buzzing, hissing, whistling, roaring and clicking.

Occasionally, the sound is perceived as a pulse-like thumping or whooshing that is in sync with the heartbeat (pulsatile tinnitus). The sound can be intermittent or continuous, and can vary in loudness. It is normally more apparent when the background noise is low, such as when you

are trying to fall asleep in a quiet room at night.

All of us may occasionally experience a few seconds of tinnitus that is physiological and, therefore, considered normal. Persistent tinnitus, on the other hand, affects up to 10–15% of the population. For some, tinnitus can cause difficulty in concentrating and sleeping, and may interfere with work and personal relationships, resulting in psychological distress.

HOW THE EAR WORKS

Sound enters the ear via the external ear canal. The sound vibrates the eardrum located at the deep end of the ear canal. The middle ear space lies behind the eardrum and is connected to the back of the nose (nasopharynx) by the Eustachian tube. The middle ear space houses three small bones, which serve to transmit vibrations of the eardrum to the inner ear, where the cochlear hair cells transform the incoming

sounds into electrical signals. The electrical signals can then be transmitted along the hearing nerve to the brain, where it is perceived as sound.

COMMON CAUSES OF TINNITUS

Disorders anywhere along the hearing system can result in tinnitus.

In the inner ear, damage to the hair cells can be subtle without obvious hearing loss. A common cause of inner ear damage is exposure to loud noise. Our ears are at risk when they are exposed to sounds louder than 85dB; the longer the exposure, the higher the risk.

Another common cause is age-related degeneration of the cochlear. At least 50% of persons above 80 years of age experience significant hearing loss. Medications such as certain antibiotics and anti-inflammatories can also affect the inner ear.

Common disorders affecting the outer ear include earwax and infections. In the middle ear, infections are frequent, especially in children. Pain and stiffness in the head and neck region can also result in a type of tinnitus called somatic tinnitus.

UNCOMMON BUT SERIOUS CAUSES

Tinnitus can occasionally be due to more serious underlying conditions.

For example, a tumour arising from the hearing nerve (acoustic neuroma) can present with just one-sided tinnitus. Nasopharyngeal carcinoma, a cancer arising from the back of the nose, is common among the Chinese. It can affect the Eustachian tube and cause tinnitus, hearing loss and a sensation of ear blockage. A



glomus tumour (a bloody tumour consisting of abnormal blood vessels) in the vicinity of the ear may present as pulsatile tinnitus.

TREATMENT OPTIONS

The ENT specialist will conduct a thorough medical evaluation to exclude treatable causes, especially the serious ones. If such causes are found, they are treated accordingly and the tinnitus can possibly be relieved.

However, such treatable causes are often not found, even after exhaustive investigations. It should be emphasised that this does not mean that nothing can be done to relieve the disturbance caused by tinnitus — patients do not have to be resigned and live with it passively.

People experiencing tinnitus are often worried that the symptom is a manifestation of a more serious medical condition. As a result, they can — understandably — be anxious and depressed over their condition. Unfortunately, tinnitus is often aggravated by such emotions.

Hence, if a medical professional has ascertained that there is no serious underlying condition, the patient

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should be adequately reassured as such. This can be augmented by appropriate medications and cognitive therapy, if necessary. There are also medications that have nutritional value to the inner ear and nerve cells, which can be helpful.

When there is associated hearing loss, suitable technology — such as modern hearing aids and even cochlear implants — can be beneficial. In recalcitrant cases, habituation therapy such as modulated sound therapy and tinnitus retraining therapy can be considered. Acupuncture treatment may have a role in selected patients, particularly in somatic tinnitus.

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CLINIC PROFILE

The Hearing Health & Cochlear Implant Unit @ Novena ENT – Head & Neck Surgery Specialist Centre considers its mission as optimising ear health in children and adults in a holistic way that is consistent with international best practices.

It is the first and — to date — only private specialist clinic in Singapore to provide full in-house ear health and cochlear implant services for adults and children. It specialises in providing an array of diagnostic and treatment options to people with hearing loss as well as other ear disorders, particularly people who may require cochlear implants.

In addition to competent medical staff, the team at this clinic also consists of professionals in the audiological and rehabilitative spheres. This is so that patients can get the best holistic care, supported by modern facilities and equipment as well as administrative staff.

Testament to the clinic's focus on service and quality is the numerous awards its staff have won, such as the National Excellent Service Award (Gold, 2009) and Singhealth Service Quality Award (Gold, 2011). The staff stay abreast of their fields of expertise and contribute articles to academic journals, some of which have won awards

such as the SGH Excellent Publication Award (2000) and Best Research Publication awarded by the Singapore College of Surgeons (2007).

MEET THE DOCTOR

Adjunct Associate Professor Low Wong Kein was instrumental in implementing universal newborn hearing screening in Singapore. Having run regular clinics as Visiting Specialist at KK Women's and Children's Hospital for a number of years, he is familiar with managing children with other general ENT conditions such as tonsil infections, adenoids, Eustachian tube dysfunction and bleeding or sensitive nose.

Adjunct A/Prof Low went for advanced training in Australia in conditions such as hearing loss, tinnitus and vertigo after completing his ENT specialist training in England and Singapore in 1995. Keen on the traditional Chinese medicine practice of acupuncture, especially its role in modern ENT treatments, he took a course and now has a Diploma in Acupuncture.

Despite the time and energy his medical practice takes up, Adjunct A/Prof Low believes in giving back to society. Besides having served as president of the Singapore Association for the Deaf, he has gone on mission trips to China and Indonesia.

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PROFESSOR LOW WONG KEIN
EAR, NOSE & THROAT SPECIALIST

Adjunct A/Prof Low Wong Kein was instrumental in implementing universal newborn hearing screening in Singapore. The ENT specialist, who was conferred a PhD in recognition of his work relating to ear disorders, has an interest in the role of traditional Chinese medicine in modern medical practice.

SERVICES

- **Hearing loss assessments for adults and children of all ages**
- **Treatments: medications, surgeries and acupuncture (if indicated)**
- **Hearing aids, cochlear implants and other hearing devices**
- **Tinnitus management**
- **Vertigo management**
- **Management of other ear disorders**