



About Tinnitus

What is Tinnitus?

Tinnitus refers to the perception of sound without an external acoustic source. Healthy ears may occasionally experience tinnitus such as perceiving a buzzing sound in a very quiet environment or sporadic perception of hissing for a few seconds. Such cases are very common. It is advised to seek help if tinnitus persists for more than 5 minutes, or cause annoyance. According to literature, one out of five adults has experienced some extent of tinnitus and 5% are annoyed by tinnitus. About 13% of children and teenagers has tinnitus but only 2-3% are annoyed.

Persistent tinnitus can be a symptom of hearing problem. Tinnitus has different causes. Identification of its cause and triggering factors will facilitate treatment.

Causes and Classification of Tinnitus

"Objective tinnitus": This is sound produced inside the patient's head and neck, and can be heard by others with a stethoscope. Common causes include:

1. Vascular diseases in the head and neck (such as arterial, venous and glomus), mostly sounds like vascular pulse
2. Muscle spasm (such as muscle spasm in the middle ears, Eustachian tube, soft palate, etc)
3. Temporomandibular joint (i.e. jaw) problem

"Subjective tinnitus": This is only perceived by the patient alone, which cannot be heard by others. This is mainly the sensation of sound arising from the spontaneous physiological activities of inner ears and auditory nervous system. This kind of tinnitus mostly sounds like long-ringing sirens or noises made by the wind blowing.

In general, ambient noises in daily situation are adequate to mask tinnitus. In a very quiet environment (such as a sound-insulated room) even healthy ears can experience tinnitus.

Among adults with persistent tinnitus, about 70% of them have hearing impairment. About 59% of hearing impaired children and teenagers experience tinnitus, the figure is higher than that for normally hearing children and teenagers (13%). Ears with hearing loss receive less sensation from external sound and this is not adequate to mask tinnitus. Therefore, tinnitus in hearing impaired ears can be more obvious and persistent. Diseases in outer ears (such as cerumen obstruction, otitis externa) and those in the middle ears (such as perforated eardrum, otitis media, otosclerosis) are usual causes of tinnitus.

The cause of hearing loss is usually a concurrent cause for tinnitus. Impairment in inner ears and auditory nervous system will intensify the spontaneous physiological activities related to tinnitus and make tinnitus louder and more persistent. Typical examples include:

- Injury to inner ears due to exposure to loud noises
- Ageing of auditory organs
- Diseases in inner ears such as Meniere's disease
- Pathological changes in auditory nervous such as acoustic neuroma
- Intake of ototoxic drugs (such as streptomycin and excessive aspirin)
- Head injury

Not every hearing impaired person may suffer from tinnitus. Likewise, people with normal hearing may suffer from tinnitus. Tinnitus will affect the concentration of people who are suffering from it, though tinnitus itself will not cause any further hearing impairment.

Usually, people who are having tinnitus would accustom to it within 3-6 months. After that, they need to listen very carefully in a quiet place in order to detect tinnitus again. Anxiety and nervousness may hinder people to accustom to tinnitus, making them more sensitive to tinnitus, leading to greater emotional reaction or even insomnia.

How to Prevent Tinnitus?

Loud noise may cause tinnitus. Avoid staying too long in noisy places. Do not play toys that generate extremely loud sound e.g. air gun. Protect your ears from sources of loud noises (e.g. construction sites or road repair) by covering both ears with hands. When using earphones, tune the device to no more than 60% of its maximum volume. Use earphones for less than cumulative 60 minutes a day at such level. If you need to use the headset for a longer time (such as online learning), the volume should be adjusted to medium/ low (50% of the maximum output volume or below), the ears should be rested regularly, and prolonged use should be avoided..

Take medicine only under the advice of doctors. Overdose of some drugs e.g. aspirin may cause tinnitus and hearing loss. Research in recent years showed that smoking may increase the risk of persistent tinnitus in teenagers and adolescents.

What Can We Do with Tinnitus?

If you suffer from tinnitus, please consult a doctor as soon as possible. If you suffer from dizziness, pressure in your ears or unilateral hearing loss in addition to tinnitus, you should consult a doctor immediately to prevent further impairment to your hearing system.

If your tinnitus is caused by hearing loss, wearing hearing aids prescribed by an audiologist may improve your perception of external sound and reduce the impact of tinnitus effectively.

An extremely quiet environment may exacerbate tinnitus. Using a tinnitus masker with low-volume broad band sound (such as the sound of rain, waves or noises similar to a badly-tuned radio) may help mask tinnitus. If you cannot sleep because of tinnitus, you may try playing discs or cassette tapes containing sounds of raining, running water or waves, which may help you relax and reduce the impact of tinnitus.

If your tinnitus is confirmed not to be caused by diseases, you can relax and treat it optimistically. Please remember that our brain can adapt to tinnitus and daily noises in a relaxing manner. You are capable of controlling tinnitus, so, don't be afraid of it. Relaxation exercise may help you reduce unnecessary anxiety and nervousness. Avoiding stress and anxiety can help you accustom to tinnitus faster. When tinnitus appears, you can tell yourself "Keep calm, it is harmless" and carry on with your current activity. Gradually, you will no longer be annoyed by tinnitus.



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