

# QUESTIONS ABOUT TINNITUS

## WHAT IS IT?

Tinnitus is a subjective experience where one hears a sound when no external physical sound is present. Some call it "head noises," "ear-ringing," or use similar terms to describe it.

**WHAT DOES THE WORD "TINNITUS" MEAN?** The word is of Latin origin and it means 'to tinkle or to ring like a bell.' It has two pronunciations, both correct: "ti-night-us" or "tin-ni-tus."

## WHAT CAUSES IT?

There are many causes; indeed almost everything that can go wrong with the ear can have tinnitus associated with it as a symptom. Problems ranging in severity from overproduction of wax to ear infections to acoustic neuromas (benign tumors) can produce tinnitus. One cause of tinnitus is exposure to loud sounds either on the job (musicians, carpenters, pilots) or recreationally (shooting, chain saws, loud music). Sometimes problems having nothing to do with the ear can cause tinnitus such as painful disorders of the head or neck [such as the temporomandibular joint (TMJ) syndrome]. Pulsatile tinnitus can be caused by abnormal blood vessels. It's important to note that tinnitus can sometimes even be a side effect of medications (prescription or non-prescription).

**HOW COMMON IS TINNITUS? VERY COMMON.** It is currently estimated that about one out of every ten American adults have chronic tinnitus to some degree. For the vast majority of people, their tinnitus is little more than a minor nuisance. Yet, it has been estimated that 1 of every 200 adults in this country consider their tinnitus as interfering with their ability to lead a normal life.

## WHAT IS IT LIKE TO HAVE TINNITUS?

People with the recent onset of tinnitus can have a very difficult time for the first couple of months before they become adapted to this new experience. Fortunately, for most people their tinnitus eventually becomes no more than a nuisance. In its severe form, however, tinnitus can be a chronic condition causing loss of concentration, sleep

problems, and psychological distress. It can also make a deteriorating hearing condition or balance disorder appear worse. Tinnitus can fluctuate from day to day, and even from hour to hour. Tinnitus can be perceived as being in the ears or in or around the head, and can have one or a variety of different sounds such as ringing, hissing or roaring.

## DO WE KNOW WHAT TINNITUS IS?

The actual mechanism responsible for tinnitus is not yet known. It is likely that there is more than one way tinnitus can develop. Many different theories have been proposed and there is good evidence supporting some of them.

## IS IT ASSOCIATED WITH HEARING LOSS? SOMETIMES

Tinnitus does not necessarily cause hearing loss, and hearing loss does not necessarily cause tinnitus, although the two often co-exist. In many cases tinnitus is present where there is no loss of hearing. In others there can be hearing loss and yet no tinnitus. In some cases, tinnitus is associated with hearing loss. For example, some of those who have been exposed to excessively loud sounds will develop a high frequency hearing loss and high pitched tinnitus.

## DOES TINNITUS MEAN THAT ONE IS GOING DEAF? NO.

Tinnitus is an indication that there has been some kind of change in the hearing mechanism, but in no way does it mean the patient will become deaf.

## WHAT IS SENSITIVITY TO SOUND? A

small percentage of tinnitus patients also experience more than the usual sensitivity to sound. This tolerance problem can occur in individuals with or without a hearing loss. Although this problem is difficult to manage, some relief can occur through the reasonable use of ear protection and/or the use of medications

## WHAT MAKES TINNITUS WORSE?

In general there is a wide variation amongst tinnitus patients. What might worsen one person's tinnitus will have no effect on another person's tinnitus. Worsening is nearly always temporary. After the offending agent

(such as a food or medication) is stopped the tinnitus will gradually return to its baseline.

1. Psychological factors. Nearly everyone notices that their tinnitus is worse during times of stress, anxiety or depression. These are virtually the only things that worsen nearly everyone's tinnitus. 2. Loud Noise. Some find their tinnitus worsens when they are exposed to loud sounds. Like all people, tinnitus patients should protect their ears from loud sounds: power tools, guns, motorcycles, noisy vacuum cleaners, etc. should be used only with ear protection - ear plugs and/or ear muffs. 3. Caffeine almost never affects tinnitus. 4. Aspirin and quinine in high dosages can cause a temporary tinnitus.

**IS MY TINNITUS GOING TO GET EVEN WORSE? VERY UNLIKELY.** The general pattern of tinnitus severity usually decreases gradually from the time of its first occurrence. Sometimes the tinnitus even disappears altogether: it does not often get markedly worse.

**DOES TINNITUS GO AWAY? SOMETIMES.** It is difficult to predict for any individual. In general, tinnitus that is constant tends to be persistent and does not go away. Tinnitus that is on and off, sometimes goes away and stays away.

**WHAT SHOULD A TINNITUS PATIENT DO?** Initially each tinnitus sufferer should be examined by a physician with expertise in tinnitus such as an otologist or otolaryngologist. The purpose of the examination is to determine the cause of the tinnitus and whether there are SPECIFIC ways to correct or control the underlying condition. For example, treatment of ear conditions (such as Meniere's syndrome or otosclerosis) can sometimes result in the tinnitus disappearing. Treatments for head, neck or temporomandibular jaw joint (TMJ) problems associated with tinnitus have been effective for some who suffer from both conditions.

#### **WHAT NONSPECIFIC TREATMENTS ARE AVAILABLE FOR TINNITUS?**

Several nonspecific treatments are currently available and several other experimental approaches hold promise for the future. These include: 1. **Medications** Many medications have been investigated as possible relief agents for tinnitus. These medications have included anticonvulsant medications, tranquilizers, antianxiety medications, and antihistamines. For some patients, these medications are effective in helping them cope with the tinnitus. For example, depressed patients with chronic tinnitus often perceived treatable disability due to depression (with antidepressant medications) as untreatable disability due to chronic tinnitus. It is also well established that Lidocaine will offer complete or partial relief for a large number of patients. However, because this medication must be administered intravenously and its effect is not long lasting, it is not a medication of choice for treating this symptom. Research continues in an attempt to identify a medication that can be administered orally and have a comparable effect to Lidocaine without serious side effects. 2. **Shifting Of Attention.** The fundamental problem with troublesome tinnitus is that the patient is unable to ignore (that is shift her/his attention away from) the tinnitus. Techniques that have reported success with shifting attention away from the tinnitus include hypnosis, "self-hypnosis,"\* and "auditory habituation." [a highly promoted technique said to 'retrain' the brain to ignore the tinnitus sounds. A device resembling a hearing aid is used to generate a soft sound (noise) and is worn nearly continuously during the waking hours. The level of the noise is set low so that, in fact, the tinnitus can still be heard. Improvement is not usually immediate and the recommended course of treatment can be up to two years.] 3. **Relaxation Techniques.** Relaxation aids in coping with psychological distress. Since stress seems to worsen tinnitus, being able to control stress and tension can be very helpful in coping with tinnitus. All relaxation techniques, when well done, are probably equally effective: they include biofeedback and meditation. 4. **Counseling,** behavioral

modeling, cognitive therapy, patient education, and support groups have all been shown to be useful for many patients who are having trouble coping with tinnitus. 5. **Masking.** Masking refers to using an external sound to mask or cover up the tinnitus. With a masker the patient hears the masking sound and not her/his tinnitus. Anything that generates a sound can be used as a masker. Commonly used items are fans, air conditioning units, radios or televisions. Sometimes effective masking can be produced by the use of bedside maskers, commercial and custom-made audio tapes and even FM radio static. Also available are devices resembling hearing aids (and worn in the ear) that present a selected band of noise to the patient's ear. Masking seems to work for only a few patients, but [like most treatments] it is impossible to predict in advance of testing and trial which patients can be helped with this treatment. Masking does not seem to damage hearing when used over long periods of time. 6. **Amplification.** If a patient has a hearing loss and the tinnitus is in the medium or low pitches, often a hearing aid will help. The hearing aid renders the patient capable of hearing ambient environmental noises instead of the tinnitus. The use of hearing aids can reduce or even eliminate some forms of tinnitus. 7. **Electrical Stimulation** is a therapy involving electrical energy transmitted to the cochlea via electrodes placed near the ears. Unfortunately there is no such device commercially available at this time. Patients, who have a cochlear implant to treat their profound hearing loss, find that electrical stimulation from their implant always improves their tinnitus. 8. **Other.** Additionally, some patients have reported finding help through various home remedies that are of unproven value as yet. It is important to remember that a natural remission can occur, perhaps coinciding with the start of a new treatment or spontaneously with no treatment at all.

IS THERE AN OPERATION FOR TINNITUS? NO. Patients sometimes report that following successful surgical treatment for ear pathologies their tinnitus will also disappear. Consequently, many patients inquire about the possibility of having the hearing nerve severed to eliminate tinnitus. This surgical procedure has not proven successful consistently. In fact, destruction of the hearing mechanism most often leaves tinnitus still present.

GENERAL RECOMMENDATIONS for shifting your attention away from the tinnitus (or "how to learn to live with it")

- Avoid the quiet. Always keep some competing sound around, such as low level background sound from a fan, music, radio etc.
- Minimize reading about tinnitus, support groups, internet, chat rooms, etc. These activities only draw your attention toward the tinnitus.
- Stay busy with things unrelated to tinnitus (e.g. family, friends, work, hobbies, religion, etc). Always have more than enough things to do. Idle time is the ally of tinnitus.
- Minimize discussion of tinnitus with family and friends. This only draws your attention to your tinnitus. Only you should bring up the subject, if you feel you must.

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\* Contact John Hurley, PhD of the Massachusetts General Hospital for a trial of self-hypnosis (617-720-4908)