

## TINNITUS

### WHAT IS TINNITUS?

The word "tinnitus" is of Latin origin and means "to tinkle or to ring like a bell." It has two pronunciations, ti'-ni-tus or ti-ni'-tus. Both are the correct. It is the perception of sound in the head or ears when no such sound is present. Some people describe it as a sensation of "head noise," "ringing," "clicking," or "ocean roar." Tinnitus is a symptom, not a disease. Although it can be quite distressing, it usually is not specifically treatable and does not cause hearing loss.

### WHAT CAUSES TINNITUS?

Tinnitus is a common symptom. Usually the underlying cause is not serious. Occasionally, however, it may indicate that there is a more serious problem such as a growth or infection. Therefore, it is important to determine the cause.

#### Inner Ear (Sensorineural)

Whenever there is a disturbance of, or damage to, some part of the hearing mechanism, there is the potential for developing tinnitus. This may occur from a variety of causes, including infection, noise, injury or changes due to aging/degeneration. In this category, there is usually an identifiable hearing loss on the hearing test that diagnoses the sensorineural-related tinnitus. Sometimes the patient is aware of this hearing loss while, in others, it occurs at such a pitch or frequency that the patient is not aware of a hearing impairment. There is not necessarily a direct relationship between the degree of hearing loss and intensity of the tinnitus. Although the hearing loss develops gradually, the onset of tinnitus is often sudden. It may come and go, change in character, be in one or both ears, and become more apparent when under stress.

#### Middle Ear

Disturbances of the function of the middle ear may result from allergy, infection, injury, tumor or impaired motion of the three middle ear hearing bones which are called ossicles. Often, there is a hearing impairment due to the middle ear disorder which is called a conductive hearing loss.

#### External Ear

Occasionally, blockage of the external ear canal by wax, foreign objects, or swelling may produce tinnitus.

### WHAT METHODS ARE USED TO DIAGNOSE THE CAUSE?

Most causes of tinnitus can be diagnosed by a careful history, ear examination and a hearing test. Further tests might be required, such as specialized hearing tests and x-rays.

### WHAT IS THE TREATMENT FOR TINNITUS?

In most cases, there is not medical or surgical treatment that will completely eliminate the tinnitus, which is a self-limited or intermittent disorder which can be quite distressing. Occasionally, the examination will reveal a cause which can be treated to alleviate the tinnitus.

## General Measures

1. Maintain good general health by getting adequate sleep, exercising regularly, keeping your weight near ideal body weight and eating a healthy diet.
2. Anxiety makes tinnitus worse. Make every effort to avoid anxiety and reduce emotional stress. People differ greatly in their response to stress. What is tolerable for one person might be intolerable for another. Stimulants such as caffeine and nicotine may contribute to the body's stress reaction and should be avoided.
3. Learn to accept the existence of the tinnitus as a bothersome reality and make every effort to maintain work and other activities.
4. Tinnitus is usually more noticeable in a quiet setting, such as lying in bed at night. Any noise in the room, such as soft music, will serve to mask the distressing tinnitus and allow restful sleep.
5. Avoid exposure to excessively loud noises, such as shooting, heavy equipment, loud music, rock concerts or other environmental noise. Loud noises can cause inner ear injury which would trigger a flare of tinnitus.

## Hearing Aids

Many patients with tinnitus will also have a hearing problem. In appropriate individuals, hearing aid use will not only improve the hearing, but will also minimize the patient's perception of tinnitus by replacing the head noise with environmental sound.

## Biofeedback Training

Biofeedback exercises are not for all patients. Reducing stress and coping with stress can be difficult. For some patients, biofeedback training has been an effective adjunct to the general measures in reducing the intensity of tinnitus. Treatment consists of biofeedback exercises which train the patient to control various body functions, such as heart rate, and to relax muscles in order to accomplish relaxation and reduction of tinnitus. Should you be interested in treatment, your otologist will refer you to a biofeedback center.

## Tinnitus Maskers

A small percentage of patients have been helped by the use of a tinnitus masker, which is a small electronic instrument which delivers a noise, preventing a wearer from hearing the tinnitus. If you are interested in using a tinnitus masker, your otologist will discuss this option with you further.

## CONCLUSION

The hearing system is one of the most delicate and sensitive mechanisms of the human body. Because it is directly associated with the nervous system, its responses are increased by anxiety. To achieve maximum success in the management of tinnitus, it is important to have an understanding of this very common and quite distressing symptom.