TINNITUS

WHAT IS IT?
Tinnitus is a subjective experience: One hears sound when there is no external physical sound present. People experience it as head noises or ear-ringing and use a variety of terms such as hissing, roaring, or chirping 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: “tin-NIGHT-us” or “TIN-it-us.”

WHAT CAUSES IT?
There are many causes; indeed almost anything that can go wrong with the ear has tinnitus associated with it as a symptom. Problems ranging in severity from overproduction of wax to ear infections to acoustic tumors can produce tinnitus. One of the most common causes of tinnitus is exposure to excessively loud sounds either on the job (musicians, carpenters, pilots) or recreationally (shooting, chain saws, loud music). Tinnitus can sometimes result from problems not associated with the ear, such as head injury or disorders of the neck vertebrae or the temporomandibular (jaw) joint. It can also be caused by cardiovascular disease, allergies, Meniere’s disease, thyroid disorders, or degeneration of the bones in the middle ear. It’s important to note that more than 200 prescription and non-prescription drugs list tinnitus as a potential side effect.

THE AUDITORY SYSTEM

DO MANY PEOPLE SUFFER FROM TINNITUS?
Yes. It is currently estimated that 50 million American adults have tinnitus to some degree. Of that number, 12 million have it severely enough to seek medical help.
WHAT IS IT LIKE TO HAVE TINNITUS?
When tinnitus is severe, it can cause 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.

DO WE KNOW WHAT TINNITUS IS?
The actual mechanism responsible for tinnitus is not yet known. We do know that it is a real—not imagined—symptom of something that has gone wrong in the auditory or neural system. There is reason to be hopeful: Current research efforts using a physiological model may soon provide the necessary information for identifying its cause(s).

IS IT ASSOCIATED WITH HEARING LOSS?
In most cases, tinnitus is associated with some hearing loss. For example, those who have been exposed to excessively loud sounds often have a high-frequency hearing loss. And if they have tinnitus, too, it is often identified as a high-pitched tone in the region of the hearing loss. In some cases, tinnitus is present where there is no loss of hearing.

DOES TINNITUS MEAN THAT ONE IS GOING DEAF?
No, tinnitus is an indication that there has been some kind of damage to the auditory system, but it does not mean that patient will become deaf. Tinnitus does not cause hearing loss, although the two often exist together.

WHAT IS SUPER-SENSITIVITY TO SOUND?
Some tinnitus patients also experience hyper-sensitivity to sound. This tolerance problem is exhibited both in individuals who have hearing loss and patients who have normal or near-normal hearing. Although this problem can be difficult to manage, relief can occur through reasonable use—but not overuse—of hearing protection devices (earplugs, earmuffs) and by carefully exposing the ears to a low-level broadband noise. The noise level is slowly increased to help desensitize the ears to environmental sounds. The Hyperacusis Network and the ATA can provide additional information about sound sensitivity disorders.

WHAT MAKES TINNITUS WORSE?
1. **Loud Noise.** Avoid loud sounds at all costs! Use power tools, guns, motorcycles, and noisy vacuum cleaners only with hearing protection.
2. **Excessive use of alcohol** or so-called recreational drugs can exacerbate tinnitus in some individuals.
3. **Caffeine,** in coffee, tea, chocolate, and cola drinks, can for some people increase tinnitus.
4. The vascular effects of **nicotine,** found in tobacco, are associated with an increase in tinnitus.
5. **Aspirin, quinine,** some antibiotics, and hundreds of other drugs can cause tinnitus and make existing tinnitus worse. If you are prescribed medication, tell your physician about your tinnitus and discuss drug and dosage options. ATA can provide you and your physician with information regarding drugs that affect tinnitus.
6. **Stress.** Many people notice a reduction in the volume of their tinnitus when they are able to control their stress levels.

WHAT SHOULD A PERSON WITH TINNITUS DO?
Contact an otologist or an otolaryngologist for an examination as soon as possible. The purpose of the examination is to determine if there is a treatable medical condition causing tinnitus. *It is important to remember that a natural remission can occur at any time.*

WHAT TREATMENTS ARE AVAILABLE FOR TINNITUS?
1. **Sound Therapies.** Amplification with hearing aids can reduce or eliminate some forms of tinnitus. If a person with hearing loss has medium- or low-pitched tinnitus, a hearing aid might provide relief. Hearing aids help people hear ambient environmental sounds instead of their tinnitus. **Masking** units, resembling hearing aids, emit a band of sound—a :shhh” sound—that is often perceived as more...
pleasant than the tinnitus. A “tinnitus instrument” combines a hearing aid with a masker. Beside sound devices, CDs, and even radio static can produce a masking effect. Some people experience “residual inhibition”—the reduction or elimination of tinnitus after the masking sound is removed. The period of residual inhibition is usually very short, often less than a minute. Music therapy, used mostly outside of the U.S., is now being studied in the U.S. as a tinnitus treatment. Retraining therapy, designed to retrain the brain to ignore the tinnitus, combines directive counseling with exposure to steady, quiet, broadband sounds. This sound exposure is often achieved with behind- or in-the-ear sound generators. Treatment can take more than a year.

2. Drug Therapies. Many drugs have been studied as possible relief agents for tinnitus. They include anti-depressants, anticonvulsants, anti-anxiety medications, and vasodilators. These and others have helped some patients successfully manage their tinnitus. In laboratory studies, many patients got temporary tinnitus relief from lidocaine, an anesthetic drug. However, because it must be given intravenously, its side effects can be serious, and its tinnitus-reducing effect is not long lasting, it is not a drug of choice for treating this condition. Researchers continue to look for a safe, orally administered drug that can relieve tinnitus.

3. Counseling. Cognitive therapy is a reliable counseling technique that helps patients change negative ways of thinking about tinnitus and improve their emotional state. Relaxation techniques—such as meditation, yoga, progressive muscle relaxation, and guided imagery—often augment counseling and help the patient feel better overall.

4. Biofeedback is a relaxation process in which a person learns to control his or her blood pressure, pulse, and other physiological reactions to stress. Since stress can worsen tinnitus, controlling one’s reaction to stress can help lower the tinnitus.

5. Dental Treatment for temporomandibular joint (TMJ) problems associated with tinnitus is effective for some who suffer from this dual problem. Symptoms of damage to this joint (located just below the ear) include tinnitus, jaw clicking, and pain.

6. Cochlear Implants are surgically implanted electrical devices, and are intended for people with little or no hearing. Some cochlear implant patients report—along with restored hearing—post-operative improvement in their tinnitus. Researchers are looking to see if an implant can be devised for tinnitus patients with normal hearing.

7. Electrical Stimulation for tinnitus, though still experimental, holds promise as a treatment. With this therapy, varying kinds of electrical pulses are sent to the inner ear by an electrode placed either on the outside of the head near the ear, or inserted through the ear onto the cochlea. Transcutaneous magnetic stimulation of the brain is a non-invasive tinnitus treatment also being studied. Some tinnitus researchers are studying the effects of combined magnetic and electrical stimulation.

8. Other. Some patients find tinnitus relief with hypnosis, acupuncture, cranio-sacral therapy, vitamin and herbal supplements, naturopathic therapies, or control of allergies.

IS THERE AN OPERATION FOR TINNITUS?
Many patients ask if the severing of the hearing nerve would eliminate tinnitus. This permanent, deafness-producing procedure is not reliable for tinnitus relief. In fact, the surgical destruction of a person’s hearing most often leaves the tinnitus as the only sound heard.

HOW CAN I LEARN MORE ABOUT TINNITUS AND FIND HELP?
Join the American Tinnitus Association. ATA is a non-profit, donation-supported organization dedicated to advancing tinnitus research, and to helping tinnitus patients and the professionals who treat them. ATA produces and distributes educational materials, sponsors self-help groups, and promotes community hearing protection programs. ATA contributors receive the quarterly journal, Tinnitus Today, lists of local tinnitus clinics and self-help contacts, and discounts on books, CDs, and videos. Please write, call, or look on our web site for more information (www.ata.org).

Information provided by the American Tinnitus Association.