

listening to FM music at low volume. Many patients have been helped by dialing between two FM stations for the purpose of picking up subdued static, again at low volume. Such static may be extremely soothing, with a soft rushing kind of sound known as white noise. Other patients prefer small electrical devices (e.g. Sleep Mate) which produce soothing background noise. These are sold through certain department stores and catalogs.

The tinnitus masker is a small electronic instrument built into or combined with a hearing aid. It generates a competitive but pleasant sound which for some individuals masks the tinnitus by reducing awareness of head noise. The result is similar to successful use of white noise- by helping a patient overcome his awareness of tinnitus before going to sleep at night.

WILL HEARING AIDS HELP REDUCE THE NOISE?

People with impaired hearing sometimes find that their hearing aids reduce head noise and occasionally cause it to go away. Even a person with a minor hearing loss may find that hearing aids relieve his tinnitus. However, when the hearing aid is removed, the tinnitus often returns to its former level.

CONCLUSION

Prior to any treatment of tinnitus or head noise, it is important that you have a thorough examination by your otolaryngologist. Once your doctor has completed this evaluation, an essential part of the treatment will be to help you to understand your tinnitus, what has caused it, and how best it may be treated.

Your hearing is too precious to treat carelessly. That is why this pamphlet is offered. We hope it has been helpful. If you have further questions, your otolaryngologist will be happy to answer them for you

*American Academy of Otolaryngology
Head and Neck Surgery, Inc..*

TINNITUS

*Ringling
in the
Ears*

**Marshall J. Zamansky, M.D.
Stephen R. Kurland, M.D.
Christopher C. Charon, M.D.**

*Ear, Nose and Throat Associates
of
Worcester, Inc.*

WHAT IS TINNITUS?

Tinnitus is the name for ringing that some people hear in their ears. Nearly 36 million Americans suffer from this discomfort. Tinnitus may come and go, or you may be aware of a continuous sound. It can vary in pitch from a low roar to a high squeal or whine, and you may hear it one or both ears. When the ringing is constant it can be annoying and distracting. More than 7 million people are affected so severely that they cannot lead normal lives.

CAN OTHER PEOPLE HEAR THE NOISES IN MY EARS?

Not usually, but sometimes they are able to hear a certain type of tinnitus. This is called objective tinnitus, and it is caused either by abnormalities in blood vessels around the outside of the ear or by muscle spasms which may sound like clicks or cracklings inside the middle ear.

WHAT CAUSES TINNITUS?

There are many possible causes for subjective tinnitus, the noise only the patient can hear. Some causes are not serious. (For instance, a small plug of wax might cause temporary tinnitus.) Tinnitus can also be a symptom of more serious middle ear problems such as an infection, a hole in the eardrum, an accumulation of fluid or stiffening (otosclerosis) of the middle ear bones. Tinnitus can also be a symptom of a head and neck aneurysm or acoustic neuroma, either of which can be life threatening. These problems often involve a loss of hearing. Tinnitus may also be caused by allergy, high (or low) blood pressure, a tumor, diabetes, thyroid problems, injury to the head or neck, and a variety of other specific causes including: anti-inflammatories, antibiotics, sedatives/antidepressants and aspirin. (Aspirin can be a possible cause of tinnitus if over-used, depending on the size of the patient. Talk to your doctor if you take aspirin and your ears ring.) The treatment will be quite different in each case. It is important to see a physician who specializes in

ear disorders (an otolaryngologist) to attempt to determine the cause of your tinnitus, and what kind of treatment, if any, may be needed.

WHAT IS THE MOST COMMON CAUSE OF TINNITUS?

Most tinnitus comes from damage to the microscopic endings of the hearing nerve in the inner ear. The health of these nerve endings is important for acute hearing, and injury to them brings on hearing loss and often tinnitus. Advancing age is generally accompanied by a certain amount of hearing nerve impairment- and even tinnitus. Exposure to loud noises is probably the leading cause of tinnitus in today's world, and it often damages hearing as well. Unfortunately, many people are unaware of, or unconcerned about, the harmful effects of excessively loud industrial noise, firearms noise, high intensity music and other loud noises. Stereo headsets played too loudly appear to be an increasing cause of ear damage in otherwise healthy young people.

WHAT IS THE TREATMENT OF TINNITUS?

In most cases, there is no specific treatment for noises in the ear or head. If an otolaryngologist finds on examination that your tininess has a specific cause, he may be able to remove the cause and thus eliminate the noise. This investigation may require a fairly extensive workshop including x-rays, balance testing and laboratory work. However, most causes of tinnitus cannot be identified. Occasionally, medicines may help the noise even though no cause can be identified. The medicines used are many. Frequently, the patient is requested to take a medicine to see if it helps.

WHEN THERE IS NO IDENTIFIABLE CAUSE, CAN SOMETHING BE DONE TO LESSEN THE TINNITUS?

Yes, the following list of do's and don'ts can help lessen the severity of tinnitus. First of all, remember that the auditory (hearing) system is one of the most delicate and sensitive mechanisms of the human body.

Since it is a part of the general nervous system, its responses are affected to some degree by the anxiety state of the person involved.

Therefore, it is advisable to make every effort to:

- 1 Avoid exposure to loud sounds and noises.
- 2 Get your blood pressure checked; if it is high, seek your doctor's help to get it under control.
- 3 Decrease your intake of salt(which impairs good blood circulation). Avoid salty foods and do not add salt to your food on cooking or at the table.
- 4 Avoid nerve stimulants such as coffee and colas (caffeine), tobacco (nicotine) and marijuana.
- 5 Exercise daily. It improves your circulation.
- 6 Get adequate rest and avoid over fatigue.
- 7 Stop worrying about the noise. Tinnitus will not cause you to go deaf or result in losing your mind or your life. Recognize your head noises as an annoying but minor reality, and then learn to ignore them as much as possible. This type of control can sometimes be greatly enhanced via the techniques of biofeedback and/or masking.
- 8 Reduce nervous anxiety, which may further stress an already tense hearing system.

WHAT IS BIOFEEDBACK? DOES IT REALLY WORK?

Biofeedback involves concentration and relaxation exercises designed to teach voluntary control of the circulation to various parts of the body and how to relax muscle groups throughout the body. When this type of control is accomplished, it may be effective in reducing the intensity of tinnitus in some patients.

WHAT ABOUT MASKING? WHAT IS A TINNITUS MASKER?

Tinnitus is usually more bothersome when the surroundings are quiet, especially when you are in bed. A competing sound such as a ticking clock or a radio may help mask the head noises, making them less noticeable. Some physicians suggest