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A Patient's Guide to Tinnitus: 2003 Update

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Tinnitus -- ringing, buzzing or hissing sounds in the ears or head -- is a symptom that can be related to almost every known hearing problem. Tinnitus can be temporary (acute) or permanent (chronic). It can also be constant or intermittent. Temporary tinnitus can be caused by exposure to loud sounds, middle or inner ear infections. Even ear wax on the eardrum can cause tinnitus. Because tinnitus can sometimes be treated medically, all patients who develop tinnitus should first consult with an ear, nose and throat physician (otolaryngologist). Chronic tinnitus is usually associated with some degree of hearing loss. 90% of all patients who come to our Tinnitus Clinic have at least some hearing loss.

Below are common questions asked by tinnitus patients:

Q: Does tinnitus cause hearing loss?

A: No. In fact, the opposite is generally true. Whatever caused the person to have hearing loss (including noise exposure, infections, aging or genetic factors) is probably also responsible for the tinnitus.

Q: Does tinnitus interfere with hearing?

A: No, tinnitus does not typically interfere with hearing. However, tinnitus may affect one's attention span and concentration. On the other hand, tinnitus might seem louder if hearing loss increases, or if you wear ear plugs or ear muffs, because outside sounds will no longer mask or reduce the perception of tinnitus.

Q: Does cutting the hearing nerve cure tinnitus?

A: Unfortunately, cutting the auditory nerve does not relieve tinnitus often enough to recommend it as a treatment. In fact, cutting the nerve produces total deafness in the operated ear, may cause balance problems, and in some cases may make tinnitus worse.

Q: How many people have chronic tinnitus?

A: According to Seidman & Jacobson,¹ approximately 40 million Americans have chronic tinnitus. For 10 million of these people, tinnitus can be a debilitating condition. However, for 30 million Americans with tinnitus, it is not bothersome. Tinnitus does not interfere with the enjoyment of life for the majority of people who experience it.

Q: What can be done to help people who are bothered by chronic tinnitus?

Duckro et al² wrote: "As with chronic pain, the treatment of chronic tinnitus is more accurately described in terms of management rather than cure."

Therefore, the goal of tinnitus management is not necessarily to mask or remove the patient's physical perception of tinnitus. Successful tinnitus management enables patients to pay less attention to their tinnitus. An effective tinnitus management program helps patients understand and gain control over their tinnitus, rather than allowing tinnitus to control them.

Ultimately, we help most patients progress to the point where tinnitus is no longer a negative factor in their lives. We want patients to move from the "severely debilitated" group of tinnitus sufferers, to the "not bothered by tinnitus" group and to enjoy their lives as much as possible.

There is usually no cure for chronic tinnitus after it has been present for a year or more. One day, medical science will probably develop a way to eliminate tinnitus. In the meantime,

there are several effective management strategies that provide relief for most tinnitus patients.

Elements of an effective tinnitus management program:

- It is preferable for the program to have a Tinnitus Management Team, rather than one clinician. Depending on the clinical expertise required to help a particular patient, a Tinnitus Management Team might be composed of an otolaryngologist, an audiologist, a neurologist, a psychologist, a psychiatrist, and sleep or pain specialists.
- The Tinnitus Management Team members should be willing and able to spend significant time with each patient.
- As much information as possible should be gathered about each patient's medical, hearing, tinnitus, and psychosocial histories and conditions. Because each tinnitus patient is unique, therapeutic interventions should be individualized. The most successful treatment programs employ multimodal strategies that are designed to address the specific needs of each patient.
- Patients should meet with Tinnitus Management Team members for an in-depth interview and review of their histories and conditions. Patients should receive education about possible causes of tinnitus as well as reassurance and counseling regarding factors that could exacerbate or improve their condition.
- Thorough otolaryngologic and neurologic examinations.
- Comprehensive audiologic evaluations.
- Tinnitus evaluation, including matching the pitch and loudness of tinnitus to sounds played through headphones.
- Evaluations of acoustic therapies: based on the patient's audiological evaluations, various devices should be described and demonstrated. These might include hearing aids, in-the-ear sound generators, combination instruments (combinations of hearing aids + sound generators), tabletop sound generation machines, Sound Pillows, tapes or CDs. For patients with hearing loss, hearing aids will not only improve their hearing ability, the devices should also reduce their perception of tinnitus. For patients with normal hearing, in-the-ear sound generators usually provide relief from tinnitus.
- The Tinnitus Management Team should review the results of evaluations and explain them to the patient.
- Recommendations can then be formulated and explained to the patient. Referral and contact information regarding physical or psychiatric evaluations, psychological counseling, and other recommended services or products should be provided.
- Follow-up: patients should be encouraged to contact the clinic anytime if they have questions and also to inform clinicians of their progress

Some tinnitus patients also experience insomnia,³ anxiety⁴ or depression.⁵ These symptoms can form a vicious circle and exacerbate each other as illustrated in the diagram below:



Tinnitus is not always the starting point of this cycle. The cycle can begin at any point and progress in any direction. Some patients experienced depression, insomnia, or anxiety before their tinnitus began.

Patients who experience depression, insomnia, or anxiety report that an increase in these factors can cause their tinnitus to seem worse. In these cases, effective treatment of depression, insomnia, and anxiety is necessary. A combination of medication and/or psychotherapy will typically reduce the severity of these symptoms and associated tinnitus.

Are tinnitus management strategies effective?

A long-term follow-up study of tinnitus patients was conducted and published in 2002.⁶ One hundred ninety patients (133 males, 57 females; mean age 57 years) returned follow-up questionnaires 6 to 36 months (mean = 22 months) after their initial appointment in the OHSU Tinnitus Clinic. Findings of the study were as follows:

This group of patients exhibited significant long-term reductions in self-rated tinnitus loudness, Tinnitus Severity Index scores, tinnitus-related anxiety and prevalence of current depression. Patients who improved their sleep patterns or Beck Depression Inventory scores exhibited greater reductions of tinnitus severity scores than patients who continued to experience insomnia and depression at follow-up.

Identification and treatment of patients experiencing anxiety, insomnia or depression are vital components of an effective tinnitus management program. Utilization of acoustic therapy also contributed to improvements exhibited by patients in this study. Individualized treatment programs that were designed for each patient contributed to the overall improvement in tinnitus severity reported on follow-up questionnaires.

Many clinicians agree that a combination of tinnitus management strategies is more effective than any one form of remediation used in isolation. Even though a customized combination of recommendations is effective for many patients with chronic and bothersome tinnitus, the process can be very time consuming. The time required for patient assessment, education, reassurance, and counseling, as well as for designing and initiating an individualized tinnitus management program, might require four hours during the initial appointment. Follow-up appointments can last two hours or more. Most family physicians and otolaryngologists are not able to spend this much time with one patient during an office visit.

If a clinician has assessed and treated every reasonable medical cause for a patient's tinnitus, and the patient reports little improvement in tinnitus severity, the clinician should refer the patient to a comprehensive tinnitus management program with experienced personnel who are willing and able to spend a substantial amount of time with each patient.

Things to Avoid

- 1) Harmful Sounds -- Wear ear plugs or ear muffs as protection against loud sounds such as gunfire, gas lawn mowers, leaf blowers, chain saws, circular saws, other power tools and heavy machinery. Exposure to loud sounds can make tinnitus worse and can cause additional hearing loss.
- 2) Excessive use of alcohol, caffeine, or aspirin -- However, moderate use of these products is usually O.K.

3) False claims about tinnitus "cures" or herbal "remedies." These do not exist for most cases of chronic tinnitus.

Even though a true "cure" for most cases of chronic tinnitus is not yet available, patients can obtain relief from the symptom now with assistance from qualified and experienced clinicians.

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