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This report is offered as current information available about tinnitus, for your own education and enjoyment. If you have been told by a healthcare professional that you have tinnitus, or if you experience tinnitus-like symptoms, then it is imperative that you seek medical attention and the advice of your healthcare provider.

As always, never begin a dietary, supplement or exercise program without first consulting a qualified healthcare professional. Your use of this report indicates your agreement to these terms.

# Tinnitus Treatment Report: How to Silence the Ringing in Your Ears

Everyday, we are bombarded by sound. Whether it's the chirping of song birds in the park, a mellifluous orchestral piece played over the radio, the humdrum of keystrokes in the office, or the pitter-patter of giant rain drops as they fall on rooftops, sounds are the soundtracks of our lives.

But imagine what it must be like if the soundtrack never ended. Long after a bell tolled, a siren squealed, or a whistle blown, there was a persistent ringing that never faded away.

Well, for millions of Americans, this is exactly what life is like. It's called tinnitus, and it's a whole lot more common than you think.

#### What Is Tinnitus?

Tinnitus (pronounced tin-EYE-tis) is a condition with symptoms that are most frequently described as ringing in the ears. It's basically where there's a persistent sound (all the time, but occasionally sporadically) that only you yourself hear, but its effects are all pervasive. The constant ringing, buzzing, whirring or chirping devastates the quality of life of a person from sun up to sun down.

An estimated 50 million Americans have some kind of tinnitus at least once in their lives; how severe the condition is varies from person. About a quarter of those with tinnitus seek medical attention because the ringing is constant, and about five percent are permanent disabled by it.

Unlike other conditions, where certain genders, age groups and races are more at risk than others, tinnitus is an equal opportunity cacophony. White or black, fat or thin, male or female, young or

old, tinnitus can hit at any time. As with other hearing-related conditions, tinnitus risk is exacerbated by being around loud environments (e.g. rock concerts, jet planes, construction sites, sports arenas filled with noisemaking fans), but there are no in-borne characteristics that make one person any more susceptible than another.

### **What Causes Tinnitus?**

As aforementioned, tinnitus is most often a consequence of being around loud environments too often. But there are lesser known causes for tinnitus as well.

## Meniere's disease

Perhaps the most obvious "lesser known" cause is Meniere's disease. Meniere's disease is another condition that affects the ears (i.e. usually just one ear), and is one of the more common causes of hearing loss. Doctors believe that it often leads to tinnitus because of the excess fluid that builds up in the inner ear canal.

## **Cotton Swabs**

Cotton swabs are a fairly frequent culprit for tinnitus. Of course, cotton swabs are meant to clean out excess earwax in the outer ear canal, but people often use cotton swabs to fish out earwax in the inner ear canal instead.

Never mind the fact this is exactly how not to use cotton swabs, but this only exacerbates earwax buildup. Because while trying to fish out the excess earwax, it just gets pushed deeper and deeper into the ear. And the deeper the earwax goes, the closer it gets to the eardrum. If the eardrum is scratched or pushed too hard, tinnitus often develops.

Other common causes for tinnitus development are things that are taken orally, such as over-the-counter drugs, prescription drugs, even ingredients and additives in foods and drinks. Aspartame is probably the best example.

## **Aspartame**

There's no shortage of information on the negative health effects of aspartame, the artificial sweetener that's in more than 5,000 different foods and drinks (even gum). From cancer to Parkinson's disease, Alzheimer's disease to depression, aspartame is exhibit A for how artificial ingredients adversely affect our health.

It's not too hard to understand why either, as 10 percent of aspartame is made up of a toxic poison called methanol. Unlike other toxins that are absorbed and excreted by the body without much of a problem, methanol isn't released in as clean a fashion. Much of it stays behind. So for people who are chain gum chewers or diet soda chuggers, you can only imagine the kind of adverse health effects they're setting themselves up for.

But don't take my word for it. The Environmental Protection Agency says that "in the body, methanol is oxidized to formaldehyde and formic acid; both of these metabolites are toxic."

## **Aspirin**

Aspirin, an over-the-counter medication that people take as regularly as they take showers (i.e., every day) is a major contributor to tinnitus. Ear, nose and throat doctors are well aware of this link and advise patients to decrease their dosage should they experience tinnitus symptoms. But because aspirin is found in so many over-the-counter pills and medications, that person is still at risk for it simply because of its ubiquity.

# **Brain Damage**

While loud noise or physical damage done to the eardrum is the most common cause of tinnitus, new research suggests it may stem from brain damage.

Researchers from SUNY-Buffalo believe that the buzzing and ringing that typifies tinnitus may result from weakened neurons that connect the auditory cortex to the inner ear.

"For many years it was thought that the buzzing or ringing sounds heard by people with tinnitus originated in the ear," said Dr. Richard Salvi, the study's principal investigator in a press release provided by the university. "But by using [PET scanning] to view the brain activity of people with tinnitus, we've been able to show that these phantom auditory sensations originated somewhere in the brain, not in the ear."

That's all well and good, but this knowledge isn't worth a hill of beans if something can't be done to mute the ringing.

Enter researchers from Western Australia. They think they may have discovered a way, but to work, it would require some significant surgery.

Their discovery came after performing a surgical procedure on a tinnitus affected animal. By removing part of the animal's cochlea—the inner part of the ear that the brain's nerve endings "speak" to—they were able to diminish the unusually high number of nerve impulses that neurons send to the ear.

Of course, more research needs to be done before they'd perform a similar operation on a tinnitus-affected person, but even if it is considered safe and effective, the window in which to perform the operation is small. Researchers say that if the symptoms are not addressed quickly (i.e., within the first six days of hearing the ringing), the damage is irreversible.

#### Can Tinnitus Be Cured?

Though the American Tinnitus Association is, as their slogan says, "committed to a cure," there is no official "cure" or "panacea."

But that's not to suggest that tinnitus can not be managed and treated effectively in the meantime.

As you might imagine, people suffering from tinnitus are often given medications. These have been useful to some extent, but in the majority of cases, they cause more problems than they solve. In fact, sometimes the medication a person is *taking* causes their tinnitus. Antibiotics (like Gentamicin), antidepressants (like Paxil) and NSAIDS for arthritis treatment (like Trilisate) are all known for their tinnitus side effects. If you're on any of these medications (i.e., amazingly, some doctors have prescribed antidepressants to *treat* tinnitus), check with your doctor to see if he or she can lower the dosage (or, better yet, get off the medication altogether).

One medicinal treatment that has shown some significant results is lidocaine. Lidocaine is a localized anesthetic that's used to dull pain receptors. It's typically administered in injection form, but it can be administered topically in a lotion, foam, ointment or gel.

Several studies have used lidocaine as a treatment for tinnitus, and several have come back with positive results. At a 2000 meeting of the American Otological Society in Orlando, Fla., for example, researchers reported on how effective lidocaine was in their testing trials. In 70 percent of the cases, the participants had at least partial tinnitus relief.

Here's the problem, though: The relief lasts for only a short period of time (approximately five minutes after injection). What's more, many people can't tolerate lidocaine because of the adverse side

effects that so often result, like difficulty swallowing, difficulty breathing, tingling at the site of application, rash at the site of the application, and itchiness.

And that's not taking into account the reports of lidocaine being potentially carcinogenic!

#### **How Can Tinnitus Be Treated?**

To treat tinnitus effectively, you really have to approach it with a wait-and-see attitude. Some treatments are effective for some; for others, not so much. Because the damage done by tinnitus varies so significantly, it's relatively understandable why treatments are so hit and miss.

Because of this, natural treatments are the best approach to take. The science behind how effective natural treatment is somewhat spotty, but it's no "spottier" than the research done on traditional medications' effectiveness.

And as is always the case with natural treatments, there are no side effects, which can't be said for medicinal treatments.

# **Sound Therapy**

Ever heard the phrase, "the silence is deafening"? Tinnitus sufferers certainly have, because they live it every day. Dr. Robert J. Olsson, an audiologist from the Naval Medical Center, says that tinnitus sufferers bear there biggest burden in quiet confines. The lack of sound magnifies the ringing because there's nothing to distract the person from the ringing.

What's required, then, is what Olsson calls a "retraining" for the ear. Sound therapy doesn't get rid of the sound, but rather helps the ears and brain ignore the sound so that it's not such a significant source of distress.

Some of the more common devices used in sound therapy include sound-making machines (usually emitting peaceful sounds, like crashing waves or chirping crickets), hearing aids and music therapy.

Olsson says that while sound therapy is overwhelmingly effective, it may not be enough for everyone. Adherents of sound therapy often combine sound therapy with professional counseling.

#### **Biofeedback**

Biofeedback is similar to sound therapy in that the person going through it learns how to better cope with the ringing.

During a biofeedback session, electrodes are strategically placed on various parts of the body. These electrodes are attached to a monitor that allows you and the doctor to see how stressed the body is. Stress levels are measured by skin temperature, pulse, blood pressure and brain wave activity.

The hope is that through a series of these sessions, you can reduce stress levels via the coping mechanisms that the doctor teaches. Stress tends to exacerbate the loudness of the ringing.

The biofeedback machine is sort of like using training wheels to ride a bicycle. It helps you along the way to recognize when you're stressed and how the body reacts when it's "de-stressed" (e.g. lower skin temperature, lower heart rate, etc.). Then, once the "destressing" skills are mastered, the biofeedback machine is taken

away (just as the training wheels on a bicycle are taken away) leaving you with the ability to manage your stress levels effectively.

Biofeedback sessions typically last one hour, and depending on the severity of someone's condition can take months to master. It's traditionally used to help regulate pain, but tinnitus sufferers have good things to say about it too. A Cornell University study found that 43 percent of tinnitus sufferers had "substantial" improvements after using biofeedback, and 30 percent had at least "moderate" improvement.

Like sound therapy, biofeedback doesn't get rid of the ringing, but it teaches the person how to manage it.

# Magnesium

Speaking of stress, did you know that magnesium is known as the "anti-stress mineral"? It's known for its ability to reduce the symptoms of stress (e.g., high blood pressure, rapid heart rate) and is crucial to muscle cell repair. It's also crucial to inner ear protection. Magnesium is one of many mineral compounds in inner ear fluid, and studies have found that when nerve damage is done to the inner ear, magnesium levels drop off significantly.

But when these low levels were replaced with magnesium-infused injections to subjects' inner ear, the ringing stopped!

This is not to suggest that magnesium is the cure for tinnitus (i.e., once the doctors stopped supplying magnesium via a catheter, symptoms returned two days later). But oral magnesium medications have proven to be effective for managing tinnitus symptoms, as reported in a 1998 issue of the journal *Acta-Otolaryngologica*.

Consumer Labs, an independent organization that tests supplements to see if they really provide what they say they provide, gave the majority of magnesium supplements tested the "all systems go." Where you'll get the most bang for your buck is with Vitamin World's High Potency Magnesium (500 mg per capsule) and Twinlab Magnesium capsules (400 mg per capsule).

Because only one percent of the body's magnesium is found in the blood, it's important to keep magnesium levels high so that magnesium can work its magic (i.e. poor circulation of blood to the ears is almost always a cause of tinnitus). So supplement with 1,000 to 1,500 mg of magnesium per day.

## **Vitamin B Complex**

Otolaryngologists (ear nose and throat doctors) have found that a high number of tinnitus sufferers are low in vitamin B. Besides what vitamin B does for the body in general (e.g., assists in muscle growth and tone, promotes healthy skin, hair) it's crucial to the proper function of the central nervous system. This may explain why scientists have targeted the brain as the chief organ responsible for tinnitus onset.

At any rate, vitamin B supplementation has proven effective for some tinnitus sufferers, as it helps reduce ear pressure and restore what's so often lacking in people with hearing loss.

A simple blood test can help you find out if you're lacking in B vitamins, and if so, what kind (Vitamin  $B_1$ =thiamine, Vitamin  $B_2$ =riboflavin, Vitamin  $B_3$ =niacin, Vitamin  $B_4$ =adenine, Vitamin  $B_5$ =pantothenic acid, Vitamin  $B_6$ =pyridoxine, Vitamin  $B_7$ =biotin, Vitamin  $B_9$ =folic acid, Vitamin  $B_{12}$ ).

Consult with your doctor on the dosage that's best for you (i.e., if you're low in one kind of B vitamin, the doctor may recommend you supplement with just one kind of B vitamin rather than the full complex of B vitamins).

Consumer Labs has analyzed dozens of vitamin B supplements. Most of them passed with flying colors (e.g. GNC, Nutrilite, Vitamin World, Carlson's), but four of them did not. Pass on Thompson's Folic Acid, Kirkland Signature's B50 Formula with 100 percent Folic Acid, Lifetime Balanced B-100 Vitamin B Complex, and Thorne Research Basic B Complex. All of them didn't have as much vitamin B as their labeling claimed (in some cases, half of what was claimed!).

## Ginkgo Biloba

Ginkgo biloba is consistently among the top selling herbs in the country because of what it does for memory improvement. But it's also known as an effective treatment for tinnitus.

In 1998, researchers from Boston showed how supplementing with ginkgo improved symptoms related to cerebrovascular insufficiency. And one of the symptoms of this condition is tinnitus.

Other studies have not been as complimentary of gingko in its efficacy, but the participants of those studies were all taking low dosages of ginkgo. Where ginkgo has proven effective are in studies where the participants were dosing with at least 120 mg per day.

Any old gingko biloba supplement won't do, though. Seventy-seven percent of the gingko supplements Consumer Labs analyzed did not contain sufficient dosages that make ginkgo effective. Some of the lacking ingredients included terpene lactones and flavonol glycosides.

The supplements that did pass muster were Gingko Go! Ginkgo Biloba Extract and Vitamin Shoppe's Standardized Herbs Gingko Biloba Extract. These are the best ones to take because 1) they provide what they say they provide; 2) they contain the active ingredients that make Ginkgo Biloba work and 3) they contain the smallest amount necessary per capsule to help minimize the ringing (at least 120 mg per capsule).

#### Zinc

Similar to vitamin B, zinc is another mineral tinnitus sufferers are deficient in. The body needs zinc from foods and supplements to make protein, heal from wounds, even to see and smell. But it's important for hearing, too. Animal studies have shown this to be the case, and a 1987 study published in the Archives of Oto-Rhino-Laryngology reported that zinc supplements helped reduce tinnitus-like symptoms in people who were zinc-deficient (also known as hypozincemia).

Almost all of the zinc supplements Consumer Labs analyzed provided the amount of zinc that was stated on their bottles. The only one that didn't pass the sniff test was Ultimate Nutrition's Zinc.

Fifty milligrams of zinc per day is the best dose to take if you're deficient in zinc. While you can't die from zinc toxicity, too much of it can induce nausea, vomiting, diarrhea and abdominal cramping. So if you're supplementing with zinc, it's best to avoid foods that are high in zinc (e.g. oysters, crab meat, fortified cereals).

#### Can Tinnitus Be Prevented?

People at the most risk for developing tinnitus are those who are around loud environments regularly, but no one is immune from getting it.

That being said, there are things you can do to diminish the chances of developing it...whether you're around loud noises all the time or not.

#### **Antioxidants**

You're probably well aware of the important function antioxidants have in ridding the body of dangerous toxins—free radicals—that we naturally produce. Well it's these free radicals that can cause damage to the delicate hairs that line the inner ear. So a diet that's high in antioxidants is an easy, proactive approach to take in reducing your risk for tinnitus.

Generally speaking, a diet that's high in antioxidants is a diet that's colorful. The more color and the larger the variety of fresh fruits and vegetables you eat, the better.

# Sugar

Secondly, avoid refined sugars and alcoholic beverages as much as possible. Studies have shown that people who follow a low sugar diet improve their tinnitus symptoms.

One such study, a Brazilian study published in the *International Tinnitus Journal* in 2004, followed tinnitus sufferers for two years. They were given an extremely regimented diet program wherein they didn't consume any refined sugars, limited their consumption of

alcohol and caffeinated beverages, and ate about eight small meals per day. After 24 months, 76 percent of the participants reported moderate to significant improvements in the ringing. Researchers believe it was the slow and steady supply of blood sugar to the brain and auditory nerves that improved their conditions.

It's important to note, however, that it's not sugar that increases the risk for tinnitus. It's how *much* sugar. Dangerously low sugar levels increases the risk for tinnitus as much as high levels increase the risk. There must be a constant, steady flow of blood sugar for the brain and auditory system to function properly. Extreme spikes and extreme dips throw off that delicate balance.

#### Salt

As the American Tinnitus Association says, sporadic tinnitus can be caused by certain foods or substances that your body doesn't react well to. Salt may be one such substance. If you consume processed foods regularly or can't finish a meal without grabbing the salt shaker, then it's a pretty good bet that there's too much sodium in your diet. Like sugar, we all need some salt for various bodily functions, but too much of it causes fluid to build and build, causing back-up in parts of the body that retain fluid. Namely, the inner ears.

High sodium also diminishes the free flow of blood, which is crucial to the auditory system (as it is to every system).

## Turn the Volume Down

Finally, if at all possible, avoid loud environments! Loud environments, more than any one thing, increases the risk for tinnitus.

When you're around environments that emit sound in excess of 85 decibels, it can cause permanent hearing damage. Eighty-five decibels may sound like a lot, but it's not as loud as you think.

For example, a typical conversation between two people using their normal speaking voice is about 60 decibels. But if you're out walking along a busy city highway or freeway, you're in hearing damage territory.

Soldiers practically live in hearing damage territory. The high decibel level of exploding grenades, mortar shells and automatic weaponry is why tinnitus tops the charts in what veterans of the Iraq and Afghanistan wars suffer from the most. That's right: Tinnitus is the number one "service-related disability" since 2000 and over 390,000 veterans receive disability payments because of it. If the prevalence of tinnitus continues at this rate (an 18 percent rate increase year over year since 2000), it will cost the federal government \$1.1 billion in tinnitus disability payments alone.

Obviously, soldiers can't exactly coax their weaponry to not be so noisy, so former soldiers are acting on their behalf. The Veterans Independent Budget is currently in Congress. The budget details the extent to which tinnitus affects returning servicemen and asks Washington for additional funding so that this condition can be better treated and given its due attention. Additional funding provides researchers with the money they need to further investigate effective treatments.

But this for people that can't avoid high decibel dangers. You, on the other hand, can avoid them. And you can start by turning down the volume on your portable media player.

Headphones are everywhere and you can guarantee that their prevalence is contributing to their risk for tinnitus, let alone hearing loss. Use caution with earphones, particularly ear buds that go inside

the ear. How do you know if it's too loud? If you take your headphones out of your ears and can still make out what the person is saying, or singing, it's too loud. Turn it down.

As I said before, the degree to which tinnitus affects people varies from person to person. For some it's all pervasive, for others it's sporadic. For everyone, though, it's an extreme annoyance that can drive people to terrible ends, even suicide.

If these treatments don't work for you or for those you love that are affected by tinnitus, all is not lost. These are but a handful of the treatments that have worked for people. Remember, relief from tinnitus is most often accomplished through a process of elimination. Try what works, nix what doesn't. For more help, consult the American Tinnitus Association's web site, or get in touch with them directly.

Whatever you do, though, don't let the ringing be bringing you down. Never give up, never surrender. Surrendering to tinnitus means it's won. But determination wins in the end. Then, the only thing ringing will be glad voices, as they belt out songs of sweet success.

Frank Mangano

# **About Frank Mangano:**

Frank Mangano is a bestselling author, researcher, health advocate and entrepreneur in the field of alternative health. Mangano is the author of several books including *The 60 Day Prescription Free Cholesterol Cure*, *The Mind Killer Defense*, which he co-authored with Dr. Cynthia Foster, M.D. and Kim Wierman, and *The Blood Pressure Miracle*, which continues to be an Amazon.com bestselling book. Additionally, he has published numerous reports and a considerable amount of articles pertaining to natural health.