

Springfield Ear, Nose, Throat & Facial Plastic Surgery

3555 South Culpepper Circle

Springfield, Missouri 65804

(417) 887- 3855 / www.springfieldent.com

Tinnitus – A Very Frustrating Problem

Generally described as ringing in the ears, tinnitus may be defined as noise in the head that is not heard by other people. 90% has no identifiable cause (subjective tinnitus) while about 10% occur due to a true noise in the head and neck (objective tinnitus). This informational handout shall discuss the first and most common of these two types.

Objective Tinnitus – due to an actual noise in the head, neck, or elsewhere

- **Arterial noise** – this is usually a whooshing sound that occurs with heartbeats and is due to blood flow, often in a narrowed blood vessel. Atherosclerosis in the carotid artery may produce this.
- **Venous hum** – a continuous, soft, low – pitched sound due to blood flow through veins in the skull.
- **Muscular cause** – repeated, rapid contractions (40 – 200 times per minute) of muscles of the palate, eustachian tube, or in the ear.
- **Eustachian tube** – the tube connecting the throat to the middle ear. If excessively open, this can transmit breath sounds as well as abnormal loudness of the voice.

Subjective Tinnitus

- Frequently described as a continuous tone, buzzing, ringing, hissing, or cricket like sounds.
- Almost everyone has experienced tinnitus at some time or another. 40 – 60 million individuals have it continuously and about 12 million (4% of the US population) find it to be a troubling problem.
- It is unknown whether this sound comes from the ear, the auditory nerve, from within the brain, or a combination of these. It is known, however, that simply cutting the auditory nerve fails to provide relief of tinnitus.
- Frequently associated with hearing loss, 75% of tinnitus patient have a high frequency loss. This is one reason for the importance of hearing protection with tinnitus.
- On occasion, medical conditions can be associated with tinnitus: Meniere's disease, hyperthyroidism, syphilis, hyperlipidemia, head trauma, multiple sclerosis, tumors, or previous meningitis.
- Medications – aspirin, nonsteroidal anti-inflammatory medications (ibuprofen, naproxen, etc), some intravenous antibiotics, and certain anti-depressants may cause tinnitus. Of note, alprazolam (Xanax), amitriptyline, and nortriptyline are sometimes used for tinnitus but can occasionally cause it as well. Even low doses of aspirin and nonsteroidal anti-inflammatory medications can cause tinnitus though it usually occurs at higher doses.

Diagnosis of Tinnitus

Patients should have a thorough review of their health history and a complete examination of the head and neck. A hearing test is performed. If specifically indicated, certain laboratory tests and radiographic (X-ray) studies may be necessary.

Treatment of Subjective Tinnitus

- Hearing loss – as mentioned above, it is essential to prevent unnecessary further hearing loss. Avoidance of loud environments plus use of ear plugs and / or muffs around noise is essential.
- Natural course of tinnitus – about 25% of cases improve significantly, 50% show some improvement, and 25% stay the same. It is unusual for the tinnitus to worsen. This is probably due to central accommodation – the brain adjusting to the tinnitus.
- Tinnitus fluctuates and will be better at times and worse at times. It may be worsened by fatigue, other illness, feeling bad, or depression.

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- Avoidance of aggravating factors – aspirin, nonsteroidal anti-inflammatory medications, caffeine (coffee, tea, soda), chocolate, and salt. Smoking should also be avoided.
- Masking – tinnitus is most noticeable in a quiet environment and silence should be avoided. It can be covered up by even relatively quiet sound. Some creativity is required to find what sounds work best for each person.
 - Environmental masking – quiet music, running a fan, tuning a radio *between* stations (to generate “white noise”), air conditioner / dehumidifier, open window.
 - Bedside tinnitus maskers – generate “white noise” to help at night. Tinnitus pillows have built – in speakers for music or other masking sound.
 - Masking CD’s / cassettes – are available with masking sounds, white noise, environmental sounds (rainstorms, ocean), or relaxing music.
- Hearing Aids – These are helpful for patients with both tinnitus and hearing loss. They provide double benefit by improving hearing and by masking.
- Tinnitus Masker – provide low level sound to mask tinnitus. The frequency (pitch) of the tinnitus is identified and then the masking frequency tuned to match this.
- Tinnitus Instrument – for patients with hearing loss and tinnitus who do not receive relief from hearing aids. This is a combination tinnitus masker + hearing aid to amplify sound but create appropriate white noise.
- Depression – occurs in a significant number of tinnitus patients. Depression can aggravate tinnitus (like many other wellness issues) but persistent tinnitus can cause depression. It is not always clear which comes first, but depression should be treated if present.
- Surgery for tinnitus – usually not helpful except unless due to *conductive* hearing loss.
- Medication for tinnitus – these are not usually used and no medication has been found to be specifically helpful. In certain cases, anxiety and depression medication may provide help (though with tinnitus they are not being specifically used for anxiety / depression).
- Arches Tinnitus Relief Formula – contains ginkgo balboa and other herbal ingredients. It seems to help tinnitus in a significant number of people and is recommended by our office. Patients should take 1 twice daily for 4 months to see if there is benefit. It can be purchased at (281) 460-2483 or online at www.tinnitusearringing.com.
- Treatment of TMJ – Tinnitus patients seem to be more likely to have problems with the TMJ / jaw joint. Treatment of this can help in certain patients.
- Biofeedback – Occasionally used for tinnitus as it is for headache or relaxation.
- Tinnitus Retraining Therapy (TRT) – uses sound to treat tinnitus. See Emory University below or website www.tinnitus-pjj.com for list of TRT providers.
- Tinnitus masking CDs, pillows with speakers – (888-567-2175) or www.contactassist.com/tima.html.
- Further information on Tinnitus –
 - American Tinnitus Association – an organization of tinnitus patients with information on research and treatment. (800) 634-8978 or www.ata.org
 - American Academy of Otolaryngology – (703)-836-4444 www.aaohns.org; look under Health Info, then Hearing, the Tinnitus.
 - American Academy of Audiology – (800)-222-2336 or www.audiology.org; look under Consumer, then Tinnitus.
- Tinnitus Treatment Centers –
 - University of Virginia - (800) 251-3627 or www.healthsystem.virginia.edu/internet/otolaryngology/patient_tinnitus.cfm
 - Emory University (Atlanta) – (404)778-3381, email ent@emory.edu, or www.tinnitus-pjj.com
 - University of Maryland (Baltimore) – (410) 328-1279, www.umm.edu/tinnitus/index.html, or email tinnitus@smail.umaryland.edu