

Definition. Tinnitus is a ringing, buzzing, clicking, roaring or rushing sound in the ears that is often most noticeable in quiet. Individuals with noise-induced hearing loss often experience tinnitus that is a constant, high-pitched ringing in one or both ears.

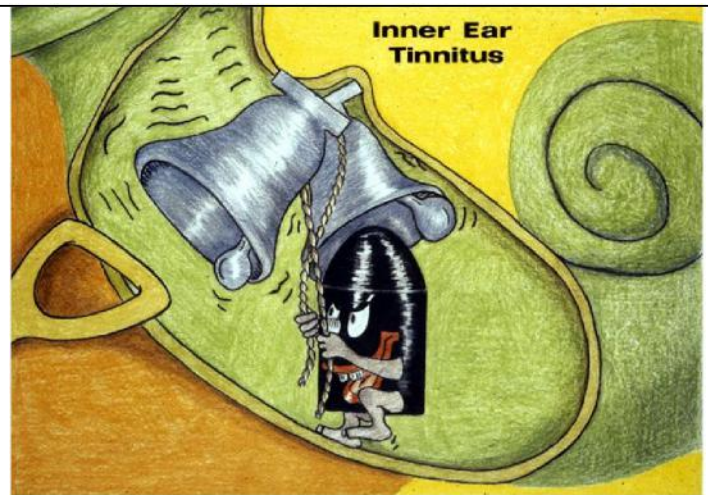
Tinnitus is not a disease. It is the result of some other condition such as:

- Noise exposure (work-related or recreational)
- Exposure to explosions or detonations
- Hearing loss from aging (presbycusis)
- Infections in the ear or sinuses
- Head or neck injury
- Heart or vascular diseases
- Certain medications
- Stress or fatigue

Prevalence. Most individuals experience brief tinnitus from time-to-time, but for an estimated 50 million Americans, tinnitus is a permanent condition. Over 16 million tinnitus-sufferers have sought medical attention for their tinnitus¹. Among military Veterans, tinnitus is the most common service-connected disability.

Impact. Despite many possible causes of tinnitus, for some individuals, there is no clear reason why it occurs. Individuals exhibit a range of reactions to their tinnitus. Until tinnitus is explained, some individuals believe it is the result of a serious condition, such as a brain tumor. Tinnitus can interfere with the ability to concentrate for short or long periods of time. Depression and insomnia have also been linked to tinnitus severity and loudness.^{2, 3} Tinnitus can be a source of severe mental stress for some individuals.^{4, 5}

We know that noise-induced hearing loss is one of the most common causes of tinnitus. Anything you do to limit your unprotected exposure to loud noise will help prevent tinnitus and keep it from getting worse. Move out of noise areas or use hearing protection and to turn down the volume to prevent noise-induced hearing loss.



Hearing Protectors. Individuals with tinnitus may notice an increased awareness of tinnitus when using hearing protectors in quiet surroundings. Hearing protectors, such as earplugs, earmuffs, or Tactical Communications and Protective Systems (TCAPS), do not make tinnitus worse. When external sound is blocked by an earplug, the sounds inside the ear may seem louder.



Photo Courtesy of U.S. Army. Credit: Stan Barney

Remember: Protect your hearing!

Health Education. The exact cause of tinnitus is unknown. In the case noise exposure, tinnitus is believed to be the result of damage or stress to the tiny “hair cells” or stereocilia in the inner ear.

If you experience tinnitus, contact your audiologist or physician to review your current hearing protection measures and to discuss your health history, medications, and current health status. Your healthcare provider may ask you a series of questions to evaluate how much your tinnitus bothers you and interferes with your daily activities.



Photo Courtesy of U.S. Army

Treatment. At this time, there is no known cure for tinnitus, but there are many treatments and treatment programs available that enable some individuals to manage and cope with their tinnitus^{6, 7}. Below is a brief description of what may be included in a tinnitus treatment program:

Counseling: Counseling programs can be individual or group and can help you manage your tinnitus by changing the way you react to your tinnitus. One of the goals of counseling is make the tinnitus less noticeable or bothersome.

Hearing aids can be used for individuals with tinnitus and hearing loss. Hearing aids allow you to hear speech and environmental sounds better, which may make the tinnitus less noticeable.

Sound generators can be used to help you relax or fall asleep. Sound generators produce gentle, repetitive, soothing sounds such as waterfalls or soft music. Some sound generators can be worn in the ear and resemble a hearing aid in appearance. These also produce a gentle sound, such as a “hissing” noise.

Additional treatment information, support and self-help groups can be found at:

Department of Veterans Affairs

<http://www.va.gov/health/NewsFeatures/20110524a.asp>

The National Institute for Communication Disorders and Deafness (NIDCD)

<http://www.nidcd.nih.gov>

The American Tinnitus

Association www.ata.org

The American Speech-Language Hearing Association

www.asha.org

American Academy of Audiology

www.audiology.org

References

¹ Center for Disease Control and Prevention (CDC). National Health and Nutrition Examination Survey (NHANES), 1999-2004 survey.

²Folmer, R.C., Griest S.E., Meikle M.B. and Martin W.H., "Tinnitus Severity, Loudness and Depression," Journal of Otolaryngology Head Neck Surgery, 1999, Jul, 121 (1): 48-51.

³Folmer, RL. and Griest SE., "Tinnitus and Insomnia," American Journal of Otolaryngology. 2000, Sep 21(5): 287-293.

⁴Pridmore S, Walter G, Friedland P. "Tinnitus and suicide: recent cases on the public record give cause for reconsideration", Otolaryngology Head Neck Surgery. 2012 Aug; 147(2):193-5

⁵Kreuzer PM, Landgrebe M, Schecklmann M, Staudinger S, Langguth B; TRI Database Study Group. "Trauma-associated tinnitus: audiological, demographic and clinical characteristics". PLoS One. 2012; 7(9):e45599

⁶Shi, Y. "Testing Tinnitus Treatments", Hearing Health Magazine, 2012, July: 23-27

⁷Henry, JA, Zaugg, TL, Myers, PJ, Kendall, CJ, Turbin, MB. "Principals and education used in progressive audiologic tinnitus management", Noise and Health, 2009, 11:42, 33-48