

TINNITUS

POSSIBLE CAUSES & SOLUTIONS

Tinnitus is the perception of sound without external acoustic stimuli. Many people experience brief periods of tinnitus, but chronic tinnitus can cause poor sleep, have a strong psychological impact, and result in a lower quality of life.

The pathophysiology of tinnitus is poorly understood in the literature, and this is likely because its etiology can vary significantly by individual. There is typically some level of oxidative damage. While an ear exam should be done to rule out excessive ear wax or other obstructions, some common contributors to consider include:

- **Age-related hearing loss**
- **Noise induced hearing loss** (e.g. loud concerts, listening to music too loud with headphones)
- **TMJ** (the temporomandibular joint is located in front of the ears and shares some ligaments and nerve connections with the inner ear)
- **Chronic ear or sinus infections** (and the associated congestion)
- **Osteosclerosis** (stiffening of the bones in the middle ear)
- **Thoracic outlet syndrome**
- **Meniere's disease**
- **Infections**, especially viral damage (an interesting look at exacerbation in 40% of COVID cases with pre-existing tinnitus)
- **Severe head or neck trauma, including concussions**
- **Prescription medication side effect** (see list here)
- **Anxiety and Depression**
- **Blood vessel disorders** (e.g. high blood pressure, atherosclerosis)
- **EMF sensitivity**
- **Mold toxicity**
- **Auditory tumors** (rare)

The exact reason why hearing loss is associated with tinnitus is still being investigated by researchers and is not well understood, but oxidative damage to delicate tissues may be involved. The loss of certain sound frequencies can lead to specific changes in how the brain processes sound, and tinnitus may also somehow be the brain's way of filling in those missing sound frequencies.

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Since oxidative stress overload is typically present, boosting antioxidant function should yield positive results (this is a good read on this topic as well). Supplements that have been shown to be helpful include:

1. Zinc levels tend to be low in patients with tinnitus. Zinc supplementation may have benefits, particularly in those with low zinc status and those with noise-induced hearing loss associated with tinnitus. Check RBC zinc and supplement as appropriate with zinc citrate or zinc picolinate.
2. CoQ10
3. Taurine plays a role in hearing and supplemental taurine has been shown in small animal studies to reverse tinnitus.
4. B12 tends to be low in people with tinnitus and B12 supplementation has been shown to be beneficial for tinnitus in that population. As an aside, we know that neuropathic effects are common in those with B12 deficiency; **consider if tinnitus is perhaps a type of oxidative "neuropathy" of the ear?**
5. Ginkgo biloba
6. Melatonin

Anything else you can do to **reduce oxidative stress**, such as a low-glycemic, anti-inflammatory diet with increased intake of berries, colorful vegetables, herbs and spices, wild salmon (and/or supplementation with algae or fish oil to ensure adequate omega-3 essential fat intake) should be helpful. Support for **optimal glutathione synthesis** is also a good strategy (e.g. B2/B9/B12 vitamins for methylation, B6 for transsulfuration, Glycine and NAC).

Finally, **complementary therapies** such as yoga and acupuncture may be helpful as well as addressing **underlying anatomical issues** such as TMJ or dental grinding.