

TINNITUS INFORMATION

At Dr. Katz, we are dedicated to providing our patients with information about tinnitus, upcoming events, such as local support groups, as well as providing our patients with new treatment options for tinnitus.

Tinnitus is common -- nearly 36 million Americans have constant tinnitus and more than half of the normal population has intermittent tinnitus. However, about six percent of the general population has what they consider to be "severe" tinnitus.

Tinnitus can come and go, or be continuous. It can sound like a low roar, or a high pitched ring. Tinnitus may be in both ears or just in one ear. Seven million Americans are so severely affected that they cannot lead normal lives. The most common types of tinnitus are ringing or hissing ringing, whistling (high pitched hissing) and roaring (low-pitched hissing). Some persons hear chirping, screeching, or even musical sounds.

The first step is to obtain a medical evaluation which would include:

How is Tinnitus Diagnosed?

Persons with tinnitus should be seen by a physician expert in ear disease, usually an otologist or a neurotologist.

General ear exam

There should be an examination of the ears with an otoscope. Wax should be removed, and the examiner should note whether the ear drum is intact, inflamed, scarred, or whether it is moving.

The TMJ joints of the jaw should be checked as about 28% of persons with TMJ syndrome experience tinnitus. TMJ is very common too.

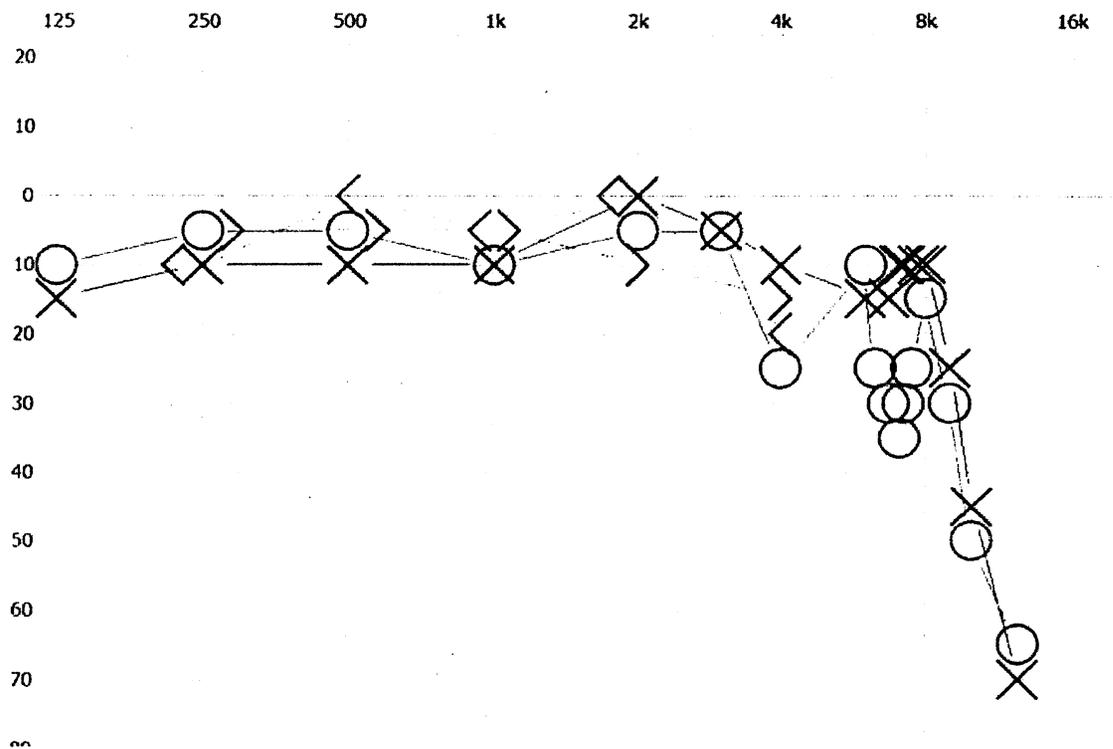
Recommended Laboratory testing for tinnitus:

Based on tests, tinnitus can be separated into categories of cochlear, retrocochlear, central, and tinnitus of unknown cause.

- High resolution audiometry with Tinnitus (pitch) Matching and tympanogram and testing for hyperacusis (sensitivity to loud sounds)
- High frequency DPOAEs

The audiogram sometimes shows a sensorineural deficit. This may be due to true loss of hearing, or due to masking from the tinnitus.

Tinnitus matching is helpful to identify the frequency and intensity of the tinnitus. This is a simple procedure in which the audiologist adjusts a sound until a patient indicates that it is the same as their tinnitus. In our practice, we evaluate tinnitus by "pitch matching" using an audiometer that can generate tones at very high resolution—from standard octaves to 1/6 octave, 1/12 octave, 1/24 octave, 1/48 octave going down to 1 Hz resolution (Madsen Astera). In the following case, we "pitch matched" the tinnitus to 7,100 Hz who developed unilateral tinnitus in her right ear. Note that she has a threshold of 35 dBHL at 7,100 Hz in her right ear and 10 dBHL in her left ear. When utilizing standard frequencies, thresholds are at normal levels at 6,000 and 8,000 Hz for both ears. This loss would have gone undetected using other audiometers. This high resolution audiometry enables us to pin-point the frequency of a patient's tinnitus.



Treatment Options:

Because Dr. Katz integrates physician and audiology management, we can offer a full spectrum of treatments for tinnitus. We offer standard treatment options to our patients. These would include sound management systems that include soothing, background and interesting sound therapy. This would encompass "non-tinnitus" devices such as sound generating type devices, like the Sound Spa, tinnitus relief CD's, soothing music CDs, talk radio, audio books, fan noise, air purifiers, and table top water fountains. We also offer "tinnitus" devices that are FDA approved for treating tinnitus. This would include the Neuromonics, in the ear sound generators and hearing aid/tinnitus

combination devices such as the Widex Mind with the Zen feature. We offer Progressive Tinnitus Management and Tinnitus Retraining for patients with severe and/or debilitating tinnitus. We offer medication management for underlying ear disorders and psychological consequences, such as anxiety and depression.

In addition to standard treatment, we offer our patients a new treatment option, which is only available in our practice. By being able to pin-point the tinnitus, we offer a treatment plan that utilizes this information by creating customized tinnitus CD's. The "tinnitus" is embedded in a music CD. The music can be either chosen by the patient prior to the appointment or use the music in our library. This music is often the soothing and relaxing music. This engages the limbic system (the emotion piece of tinnitus). The "tinnitus" and music are combined to create this customized CD. The initial CD is \$275. This includes matching the 100 Hz bandwidth of your tinnitus and mixing the "tinnitus sound" with the music. We want the right mix of music so that it is prevalent while the "tinnitus sound" is in the background. This usually takes about 45 minutes. If the patient wants some additional music CDs, the cost is \$50. I will use the "tinnitus sound" that was used for the initial CD to mix with the music. The patient is instructed to use the CD at least 1 to 3 hours a day. There are several follow up visits. By hearing the tinnitus in the music CD, the brain is learning to inhibit the tinnitus signal. Patients have reported that the tinnitus is often diminished. **The CDs are not covered by insurance.**