For individuals with hearing loss, there are hearing aids with maskers and sound generators built in. These can be set to provide amplification to treat the hearing loss and offer relief from the tinnitus.

• What can Widex hearing aids offer for those who are bothered by tinnitus?

The Zen program, available is available in widex hearing aids, an optional listening program that generates a choice of melodic tones or broadband noise, proven to aid in relaxation, increase concentration, and provide relief from tinnitus. The Zen tones are based on fractal technology which ensures the music is 'predictable but non-repeating'. The Zen Noise is a broadband noise option. Zen tones and Zen Noise are created by the various fractal generators inside the hearing aid. For individuals with a hearing loss and tinnitus, these devices can be used as a combination hearing aid and a sound generator. The Widex Zen program generally includes amplification of your surroundings through the hearing aid microphone. It may also be used without amplification in quiet environments if the wearer chooses not to hear surrounding sounds. For those with normal hearing who are bothered by tinnitus, the hearing aids can be used as a sound generator alone. The Widex Zen program may provide a distraction from, and/or fully or partially mask the tinnitus to provide relief.



Contact your hearing healthcare professional today to learn more about how to manage your tinnitus.



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TINNITUS: FREQUENTLY ASKED QUESTIONS



You're not alone

Over 40 million people in North America experience tinnitus. Current research suggests that the condition can be successfully treated with proper diagnosis and a management strategy that includes education and counselling. In some cases, the use of a hearing aid or a sound generator, as part of a 'sound therapy' approach, may offer relief. This brochure is designed to answer some general questions about tinnitus, its causes, and options for management.

What is tinnitus?

Tinnitus comes from the Latin word 'tiniere', which means 'to ring'. It can refer to a ringing, buzzing, roaring, ticking, or any sort of sound heard by the individual, but with no external source. Neuroscientists have described it as a 'phantom auditory perception' that can be managed.



Who is affected by tinnitus?

Everyone, regardless of their age or hearing status, has experienced tinnitus at some point. 70%-80% of people with hearing loss will experience some degree of tinnitus, but may not be bothered by it. From this group, about 10% will experience tinnitus to such a severe degree it affects their quality of life.

What causes tinnitus?

Any condition that can affect our ears, hearing, or sense of balance can also cause tinnitus. Noise exposure is the leading cause of tinnitus. Over 90% of those with tinnitus have some degree of noise-induced hearing loss. Whether it is the outer, middle, or inner ear, all areas can be thoroughly examined to ensure there is no medically treatable approach to eliminate or reduce the tinnitus.

Some known causes of tinnitus include:

- Exposure to extreme noise levels
- High blood pressure
- Over production of ear wax
- Ear infections
- Acoustic tumors
- Underactive thyroid
- Cardiovascular disease
- Allergies
- Degeneration of the bones in the middle ear
- Age-related changes in the inner ear
- Certain prescription drugs or other medications
- Head/neck disorders due to trauma

Can tinnitus be treated?

Depending on the cause, it may be possible that tinnitus can be diminished or eliminated. For example, if the tinnitus is caused by an excess amount of earwax in the ear, then removal of the wax will generally lead to the elimination of the tinnitus. If a medical condition, such as an autoimmune ear disorder or metabolic disorder is the cause, then treatment with medication may offer relief. If it is a result of permanent hearing loss and there are no underlying medically treatable conditions, the solution will involve managing the tinnitus. There are various ways to manage tinnitus, such as changes in lifestyle, behavioral therapy techniques, education and counselling. These approaches produce varied results among individuals. In some cases, use of a hearing aid may offer relief. In other cases, the use of sound therapy, either through a table-top device or an ear-level device, has been shown to provide relief.

What is sound therapy?

Generally, it is recommended that tinnitus sufferers avoid silence because the difference between the silence and perceived tinnitus is most pronounced in quiet, which exacerbates the tinnitus. To avoid this effect, sound therapy is a technique that may help diminish (manage) the tinnitus. Through the use of sounds (tones, music or

nature sounds), produced through a table-top or an earlevel sound generator, silence can be avoided. The sound generator gives the ears a neutral stimulus to listen to, which may help relieve the annoying effects of tinnitus. In some cases, a "masker" can be used; in other cases, a sound generator may be used.



• What is the difference between a masker and a sound generator?

- Masker: A masker is designed to cover up the tinnitus, making it difficult to hear by using a specific type of noise to mask the tinnitus. The stimulus used in a masker can be either a narrowband or a broadband noise, which sounds like static. In order to mask the tinnitus, the sound of the masking noise is set to a loudness level so the tinnitus is no longer perceived. In some cases, the volume needed to mask the tinnitus may actually interfere with conversation.
- Sound Generator: A sound generator (table top or earlevel worn), generally provides a greater variety of sounds compared to a masker. The sounds can be broadband noise, narrowband noise, music, specialized tones or nature sounds. It provides you with sounds that will help take your mind off the tinnitus, but generally is not designed to 'cover up' the tinnitus. The overall volume of the sounds can be adjusted based on your loudness preferences.