When suddenly tinnitus calls the tune...

Our world is alive with sound. Laughter, unforgettable melodies, waves breaking on the shore – all these sounds enrich our lives and are literally music to our ears, lifting our mood. However, what happens when one sound suddenly takes control?

Tinnitus is noise that originates from within the ear rather than from the outside environment. This may affect one or both ears. A tinnitus diagnosis catches many people unawares. Unfortunately, some patients often learn from their doctors that their complaint is incurable. This kind of information makes patients feel isolated and bereft of support, convinced that no-one can understand what they are going through. Because tinnitus has many causes, so far we have no specific medication or patent cure for all types of tinnitus. Despite of that, even for chronic tinnitus, there are ways to find relief and take control of the noise in your ears. This brochure aims to help patients and their loved ones come to terms with a tinnitus diagnosis, and to inform them of the individual possibilities that are available to actively address the problem. It is about learning how to live with tinnitus and how to control it, instead of letting it control you.


The prevalence of tinnitus is correlated with degree of hearing loss; however, all levels of hearing loss can experience tinnitus.1)

10% to 15% of the population suffer from chronic tinnitus (over six months).1)

Over 90% of people with tinnitus are also affected by hearing impairment.6)

About 20% of patients with tinnitus find the symptoms difficult to bear.6)

Tinnitus is a common disorder with many possible causes.6)

About 20% of patients with tinnitus find the symptoms difficult to bear.6)

Tinnitus mechanisms are often related to spontaneous activity of nerve fibers.6)
The terms tinnitus comes from the Latin verb “tinnire”, which means “to ring”. The noise differs from one person to the next in nature, pitch and volume. Many describe the noise as a whistling, hissing, roaring or ringing in the ear.

If this type of noise occurs only temporarily and soon disappears again, for instance after a loud concert, it is called acute tinnitus. For millions of people, though, the noises are permanent (more than six months), thus developing into chronic tinnitus. The large majority of these individuals perceive the noises as a source of only minor irritation or no irritation at all. Around one in five, on the other hand, describes the experience as unpleasant to unbearable. A significant number of people are so affected by tinnitus that it impairs their quality of life. In 90% of cases, tinnitus is accompanied by a hearing impairment.

Subjective and objective tinnitus

Tinnitus can be classified into two categories: subjective and objective.

- The more rarely encountered objective tinnitus is also perceptible to another person, and can be directly measured by a Hearing Care Professional. Generally, it can be treated medically.

- Subjective tinnitus, on the other hand, is only audible to the sufferer. The tinnitus is internalized – with no direct external noise source. Although this type of tinnitus cannot be measured, it is by no means a figment of the imagination. It is a very real affliction for people strongly affected by tinnitus. However, there are ways of coping with this condition and alleviating the impact of subjective tinnitus.

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Tinnitus comes in many forms.
What causes tinnitus, and how can it be identified?

Tinnitus can occur within the auditory system or externally. In most cases, tinnitus is caused by a combination of different factors. One of the most common causes of tinnitus is hearing loss. This may be due to a blast injury or exposure to exceptionally loud music. But tinnitus also frequently occurs alongside sudden hearing loss. It’s worth noting that tinnitus does not trigger sudden hearing loss. Aside from damage to the auditory system, tinnitus can also be caused by jaw joint dysfunction (e.g. teeth grinding) and chronic neck muscle strain. Stress is the single most commonly quoted cause of tinnitus. However, so far there is no scientific basis for assuming a connection between stress and tinnitus. But tinnitus can cause stress. Noises – even those in the head – are perceived more acutely when the person is tense than when in a relaxed state of mind. Some medications – like, for instance, painkillers, or medicines that treat rheumatism and malaria – can set off tinnitus. Once medication is stopped, the noises usually disappear again, too. Chemotherapy medication used for treating cancer and, in rare cases, antibiotics, may however irreparably damage the inner ear, resulting in permanent tinnitus.

Tinnitus diagnosis

Tinnitus is very individually perceived by sufferers. So before proposing a certain therapy, an exact diagnosis is essential. It must first be established whether the case can be medically treated or not. To do this, your doctors may conduct ENT, dental, orthodontic and orthopedic examinations. A hearing test can reveal whether hearing impairment is also involved. The pitch and volume of the tinnitus can also be established by special diagnostic tests. Recently developed imaging processes show that tinnitus is not exclusively related to the ear, but that certain areas of the brain may also be involved in the perception of tinnitus.

The proper person to consult is your ENT doctor who may refer you to further specialists if necessary.

7) Jane L. Weissman, MD Barry E. Hirsch, MD: Imaging of Tinnitus. A Review From the Department of Radiology and Otolaryngology, Oregon Health Sciences University, 3181 SW Sam Jackson Park Rd, Mail Code CR-135, Portland, OR 97201-3098 (J.L.W.), and the Department of Otolaryngology, University of Pittsburgh Medical Center, Pa (B.E.H.). 2000
Keeping the symptom under control.

Why can’t you get used to tinnitus?
The pernicious thing about tinnitus is that you listen for it against your will. When tinnitus occurs for the first time, it is quickly perceived as a nuisance, the unusual noise draws attention to itself. The ‘enemy in your ear’ is an apt description – because it is truly the beginning of a vicious circle. Initially, you might try to rest and in doing so, shun social contact. However, this withdrawal also means that different auditory experiences, social contacts and other forms of distraction are reduced, with the result that the tinnitus attracts more of the person’s attention, and gradually takes over. In turn, a growing feeling of despair at being unable to do anything about the noise, coupled with the fear that it might get worse, ensures that the brain focuses awareness on the tinnitus. And this is the vicious circle that needs to be stopped. You have to push tinnitus out of the limelight – and win back control over it.

The extent to which tinnitus affects a person’s life depends on various factors: on the volume, frequency, duration of the noise, and on the person’s individual perception of it. Tinnitus itself is not regarded as an illness but as a symptom, similar to pain. In contrast to an illness where the goal is to cure the cause, one can often only treat tinnitus as a condition. It’s mainly a question of controlling the noise in the ear. Even if tinnitus isn’t an illness in itself, it can assume the proportions of an illness. When excessive, the strain caused by tinnitus may cause sleeping problems, fear and depression.

FAQs – patients’ frequently asked questions

Do I have to worry about sudden hearing loss if I’m affected by tinnitus?
Tinnitus is not the cause of sudden hearing loss. Although tinnitus may occur after sudden hearing loss, it can never cause it.

Can tinnitus cause deafness?
Tinnitus often accompanies impaired hearing, but does not cause it. People who hear well otherwise can also suffer from tinnitus.

Do I have to assume that my tinnitus will get worse over time?
That depends on how you manage tinnitus. Although tinnitus has a physical (e.g. neurophysiological) cause, the extent to which you suffer from it greatly depends on how your brain deals with the experience. A person’s perception often depends on their frame of mind.

Exhaustion  --- Tinnitus  --- Fear

Tinnitus  --- Tension, strain

Depression  --- Isolation  --- Withdrawal

 hypersensitivity
Learning to cope with tinnitus...

Even if no specific cause is determined, tinnitus can be treated. There are many possibilities to help patients find ways to cope with their condition. This means changing habits and attitudes so that tinnitus no longer controls your everyday life. The term tinnitus management covers various ways of adopting a new approach to tinnitus.

So-called cognitive-behavioral tinnitus training, for instance, is very promising. Your personal mindset and feelings play a decisive role in this method. Training sessions with varied content promote self-help. Training focuses on targeted information, an analysis of the person’s behavior, practical exercises and positive experiences. Cognitive-behavioral tinnitus training focuses on the following aspects:

Learning more
- Detailed explanation of the tinnitus symptom: fact and fiction
- Why is it so important not to listen to tinnitus; what role is played by our emotions and inner feelings?
- What role does stress play concerning tinnitus?

Changing habits
- Learning relaxation methods
- Practicing imaginary journeys to elicit positive emotions
- Transforming negative thoughts and attitudes into a helpful (“I can beat tinnitus”) mindset
- Weaning off habits that encourage tinnitus, e.g. withdrawing from your circle of friends, avoiding activities
- What to do if tinnitus should come to the forefront again (accustomizing techniques)

Relearning hearing
- Acoustic stimulation and training for use of hearing instruments, noisers, combined devices or other audio sources to deflect attention away from tinnitus
Modern technology can help subdue tinnitus. The main principle is acoustic stimulation. This means allowing your brain to hear and, therefore, focus on external sound rather than tinnitus.

Noisers
Noisers are for people without hearing loss. They look like hearing instruments but do not amplify the sounds in the environment. They generate a soft murmur that is mixed in with the tinnitus to distract the patient from the tinnitus. Noisers generally offer considerable relief from tinnitus.

Hearing instruments
In most cases, wearing hearing instruments both improves hearing and alleviates tinnitus. The reason being that if you can hear better, you can also ignore tinnitus better. Hearing instruments pick up ambient sound over a microphone and amplify it before passing it onto the ear. This enables wearers to better focus on the noises, sounds and tones around them. The rustle of leaves in the forest, friendly conversation, or beautiful music restore the emphasis on pleasant hearing impressions and narrow the scope for tinnitus. In many cases, users scarcely or don’t hear the tinnitus at all as soon as the hearing instrument is switched on.

Tinnitus combined devices
Some hearing instruments also feature a noiser function. What is the benefit of this combination? As hearing instruments can only amplify noises actually present around us, they are of little use as tinnitus therapy tools in very quiet hearing environments. This is when the noiser function can be helpful. In these situations, the noiser can generate a soft noise to distract the patient from the tinnitus. In modern hearing instruments, like those from Siemens, various hearing programs can be selected at the touch of a button: purely hearing instrument function, purely noiser function, or a combination of the two. Your Hearing Care Professional will be happy to tell you more.

Siemens hearing instruments with tinnitus function.

The tinnitus function in detail:
- Separate noiser signal generator
- Four pre-programmed therapy signals: white noise, pink noise, speech noise and high tone noise
- Individual fine-tuning of noise program for up to 20 bands
- Three operating modes: microphone signal only, tinnitus noiser function only, mixed mode

Suitable for mild to moderate hearing impairments
Suitable for mild to moderately severe hearing impairments
Suitable for mild to profound hearing impairments
Tips for living with tinnitus.

So take heart – you can beat tinnitus. A positive attitude is very helpful. Relaxation techniques, an active social life, sports and hobbies can assist you in taking control of your life – even with tinnitus. On the following page, we’ve summarized a few practical tips, recently developed by Siemens together with ENT doctors, psychologists and acousticians.

Relearning how you hear
Listen consciously to the world around you. Enjoy your favorite music or simply the sound of birds in the trees. Everything that provides your ears with varied sound impressions deflects attention away from tinnitus.

Tips for recuperative sleep
The more active you are during the day, the easier it is to sleep at night. Avoid black tea, coffee or heavy meals in the evening. Neither alcohol nor sleeping pills guarantee restful sleep – a warm bath before you go to bed is a better option.

Get active, stay on the move
Relish life with family and friends, and organize your private life to include plenty of activity and variety. Keep an open mind. Everything that increases your personal sense of well-being and enjoyment of life decreases tinnitus’ hold over it.

Avoid silence
Give yourself a break now and again. However, avoid complete silence, which is an open invitation for tinnitus to take hold. Opt for enjoyable sources of sound stimulus, an audio book or relaxing music.

Promote your physical fitness
People who participate in sports are healthier and this also applies to people with tinnitus. Everything you enjoy doing and that tests your physical fitness is good for you. Even if your tinnitus seems louder when doing sports, it is no cause for concern.

Learn to relax effectively
Precisely because tinnitus causes tension, it is important to learn relaxation methods and use them regularly. Some recommended relaxation methods are Feldenkrais, yoga, tai chi, and qi gong.