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IN SUPPORT AND ADVICE

Sound therapy (enrichment)

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This information has been written to help you understand what sound therapy or sound enrichment is, and how it may help you manage your tinnitus.

What is sound therapy?

Sound therapy devices (enrichment) were initially introduced on the principle of distraction. As early as 1903, a physician called Spaulding used a piano to match the frequency of tinnitus in his patients and played the frequency until it became inaudible to his patients.

In 1993, Jastreboff and McKinney introduced the theory of 'habituation of the disordered auditory system' using low level sounds (sound enrichment) to regulate a person's tinnitus. This continues to be part of the 'toolbag' of tinnitus management strategies, often in combination with positive understanding and education about tinnitus and

management of the emotional reaction and stress associated with it.

People who have tinnitus often notice that it is more noticeable and bothersome in a quiet environment, for example at night, and that listening to other sounds can make it less intrusive. Deliberate use of any sound to reduce tinnitus awareness or reduce the distress associated with it can be classed as *sound enrichment*. Sound enrichment is often used in the treatment of hyperacusis (over- sensitivity to noise) as well as tinnitus.

How does sound therapy work?

Some people feel sound enrichment brings about actual physiological changes in sensitivity in the hearing parts of the brain, while others think it acts as a psychological distraction or an aid to relaxation. It may be a combination of these things. What is clear is that most people with tinnitus use it in some form or other.

Sound enrichment can be used as a self-help

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technique or as a component of a broader tinnitus management programme delivered with the support of a hospital or clinic.

Research studies have found it plays a less important part than counselling in bringing about improvements in people's tinnitus, so it is perhaps best to regard it as one tool amongst several you might use, rather than a solution in itself. That said, using sound therapy is one of the easiest practical things you can do for yourself if you don't need professional help or are unable to access it.

Types of sound enrichment

Sound enrichment can be provided by:

- environmental sound (such as having a window open)
- a CD or mp3 download or the radio
- a smartphone App
- bedside/table-top sound generators
- a wearable sound generator

The last four can all provide natural sounds, 'white noise' or gentle music. There are also hearing aids with supplementary tones and sounds delivered with the amplification. These are available on the NHS in some areas.

The type of sound enrichment suitable for you depends on your personal circumstances and your preferences. Most people get on best with a sound that doesn't demand too much attention and is not unpleasant to listen to.

Environmental sound

Many people find that some background sounds, for example distant traffic, the hubbub of a busy office, wind in the trees, or waves breaking on the seashore make tinnitus less noticeable. At times, just opening a window may provide all the sound enrichment you need. Other alternatives could be a fan in the bedroom or a ticking clock.

CDs and downloads

There are a number of CDs of relaxing music and

nature sounds available from various sources. Many local libraries have some available for loan, so you can try a few out. The BTA sells a number of good quality natural sound recordings and neutral noise CDs which can be ordered online or by phone.

A wide range of nature sounds can also be downloaded from various websites to be played on mp3 players or other portable devices and mobile phones and many of these are free. For example, the website www.freesfx.co.uk/soundeffects/nature has sounds available to download for free for personal use.

Bedside/table-top sound generators

These portable machines sit on the bedside/table-top and provide a choice of soothing sounds at the touch of a button. You can adjust the volume to suit your hearing. There is also a timer on them to switch off once you are asleep. Most can be run from either the mains or battery power. The BTA provide a selection in their online shop or mail order catalogue.

At night

Having a pleasant, relaxing sound to listen to can help at night if you are having difficulty getting to sleep. If left on at a low volume all night, sound enrichment also provides a soothing distraction from tinnitus if you wake up in the early hours, when your surroundings are otherwise quiet or if your tinnitus is noticeable first thing in the morning.

Some sound generators and most CD players and mp3 players can be plugged into a pillow speaker or sound pillow, making the sound less audible to partners. However, many people without tinnitus also enjoy listening to soothing sounds at night!

Wearable sound generators

Wearable sound generators are also known as white noise generators and used to be known as maskers.

Wearable sound generators produce a constant white noise, which is a gentle rushing sound similar to a radio tuned off-station (static).

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Wearable sound generators are an optional part of tinnitus therapy, and should always be fitted by a tinnitus specialist as part of a tinnitus management programme. They look like small hearing aids, and can be worn in the ear, or behind the ear. The behind the ear sound generators are generally preferred, as they do not block the ear. It is very important that when you wear them you do not feel that the sound generator fitting blocks your hearing.

Hearing aids

If you have hearing loss - even a very mild one - and you strain to hear, hearing aids are likely to help you. They provide a form of sound enrichment through giving you easier access to everyday environmental sound. Most people find they hear their tinnitus less when their hearing aids are switched on.

Hearing aids can be used in conjunction with sound therapy provided by CDs, audio docking stations or bedside/table-top sound generators.

How to use sound enrichment

The aim of tinnitus therapy is to enable people to *habituate* to their tinnitus, so that it is 'filtered out' most of the time by the brain, even though it may still be present.

Habituation is probably best achieved if you use sound enrichment at a level that is a little quieter than your tinnitus most of the time. Some people have used masking (loud noise which drowns out the tinnitus) to give themselves a bit of relief, but this approach does nothing to encourage long term habituation, and sometimes the tinnitus appears louder when the masking is switched off.

Will I need to use sound enrichment forever?

Most people find that sound enrichment is useful whilst their tinnitus is intrusive, but becomes less necessary as they habituate to their tinnitus. People who use wearable sound generators usually use them only until they feel they can manage their

tinnitus better, and bedside sound generators may no longer be necessary once a better sleeping pattern has been established.

How do I get sound enrichment?

There are many ways in which you can find products which provide sound enrichment. Be creative in your search to find something you feel comfortable and relaxed with, exploring free or cheaper options first. The BTA also has a carefully selected range of suitable products.

Wearable sound generators and bedside sound generators may be provided by your Audiology or ENT Clinic as part of an individualised tinnitus programme. However, provision of equipment within the NHS varies from clinic to clinic and they may direct you to organisations such as the BTA or other private providers.

Tinnitus management is also available in the private sector, in which case sound generators can be purchased via the audiologist.

References

Hobson J, Chisholm E, El Refaie A. *Sound Therapy (Masking) in the Management of Tinnitus in Adults* (review) The Cochrane Collaboration (2010)

The original version of this leaflet was co-written by Catherine McKinney and Ross Coles and revised by Lucy Handscomb. My personal thanks to them for the basis of this document.

Alternative formats

This publication is also available in large print.

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For further information

Our helpline staff can answer your questions on this and other tinnitus related topics on 0800 018 0527.

BTA publications

Our information leaflets are written by leading tinnitus professionals and provide accurate, reliable and authoritative information which is updated regularly. Please contact us if you would like to receive a copy of any of our information leaflets listed here, or they can be downloaded from our website.

- All about tinnitus
- Balance and tinnitus
- Complementary therapy for tinnitus: an opinion
- Drugs and tinnitus
- Ear wax removal and tinnitus
- Flying and the ear
- Food, drink and tinnitus
- Hearing aids and tinnitus
- Hyperacusis
- Information for musicians
- Musical hallucination (musical tinnitus)
- Noise and the ear
- Otosclerosis
- Pulsatile tinnitus
- Relaxation
- Self help for tinnitus
- Sound therapy

- Sources of mutual support for tinnitus
- Supporting someone with tinnitus
- Taming tinnitus
- Tinnitus and disorders of the temporomandibular joint (TMJ) and neck
- Tinnitus and sleep disturbance
- Tinnitus and stress
- Tinnitus services

Leaflets for children:

- Ellie, Leila and Jack have tinnitus (for under 8s)
- Tinnitus (for 8-11 year olds)
- Tinnitus (for 11-16 year olds)

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