

( T )

**British Tinnitus  
Association**



**Version 1.7a**

Issued December 2011. Updated November 2016.

To be reviewed December 2016

© British Tinnitus Association

# HEARING AIDS AND TINNITUS

**Peter Byrom BSc (Audiology)  
Adult Services Lead, Rotherham Community Health Centre**

**This leaflet has been written to help you understand more about hearing aids, what to expect from one and how they may help your tinnitus if you have a hearing loss.**

## Introduction

Hearing aids are often prescribed by audiologists for patients who have a hearing loss with associated tinnitus. In this leaflet we will explore the evidence to suggest how hearing aids might help and explain how to get a hearing aid and what to expect from it. When used for relieving tinnitus, hearing aids may be effective when used alone, or they may be used as a part of a larger package of care.

## Hearing loss and tinnitus

Hearing loss is a common factor underlying tinnitus, although some people with normal hearing may also experience tinnitus. Loss of hearing is often an

unnoticeable and gradual process and many people are surprised when they are told that they have a hearing loss. It is quite common for people to assume incorrectly that it is their tinnitus rather than their hearing loss that is causing hearing difficulties.

## Hearing aids and tinnitus

For many people, tinnitus may be related to sound deprivation, for example hearing loss. The aim of fitting hearing aids is to correct any such hearing loss with the possibility that this may help reduce the tinnitus. Hearing aids should be worn throughout your waking hours to gain maximum benefit.

### **Is there a positive effect on tinnitus by using hearing aids?**

Some studies have looked at the effect of hearing aids on every-day life for the tinnitus patient e.g. how a hearing aid may help reduce tinnitus and improve quality of life. Other studies have more strongly suggested that for a significant number of people, hearing aids do reduce the effect of tinnitus. Bilateral hearing aids (one on each ear) have been shown to be

**Whilst the BTA makes every attempt to ensure the accuracy and reliability of this information, it is not a substitute for medical advice. You should always see your GP/medical professional.**

more beneficial than using only one aid.

Since the introduction of digital hearing aids there can be more accurate tailoring of hearing aids to an individual and this has brought about an increase in the beneficial effect of hearing aids for tinnitus.

## Open-fit hearing aids

Unlike the traditional ear mould, open-fit hearing aids use a very fine tube or a speaker placed in the ear canal to deliver sound. This allows amplification without blocking out desired external sound or causing any occlusion effect. In occlusion, resonance is created in the blocked ear canal which often results in a “head in a barrel” sensation when speaking or amplified sounds from chewing food. Previously, large ventilation holes in ear moulds were recommended for tinnitus patients, but they could not fully overcome occlusion and loss of desired external sound in the way that open fit technology has.

Although some people feel that their hearing loss is acceptable for their age, any hearing loss that causes problems should be treated. Some audiology departments will fit a hearing aid where there is a slight hearing loss, usually with an open-fit hearing aid, as there is some evidence to suggest it might be helpful.

## Combination devices

Some manufacturers produce a hearing aid combined with a sound generator. This, in addition to amplifying sounds, provides extra low level sounds in order to try to help the habituation process (getting used to the tinnitus sound). There has been some research on this with a small number of patients, but further work is required to single out the benefit from that given purely by amplification. The study concluded, “For most, amplification alone provided a reduction in tinnitus annoyance”. There is at present no proven advantage to using these devices rather than simple hearing aids.

## How can you obtain a hearing aid?

Currently, digital hearing aids are available free on

the NHS. Your GP can refer you to a local audiology service for a hearing test and the fitting of a hearing aid. Alternatively, some audiology services may accept a self-referral. NHS hearing aids provide a good sound quality to the user. On-going rehabilitation, servicing of the hearing aid, and replacement batteries are free on the NHS.

Hearing aids are also prescribed and sold by private hearing aid dispensers. It can be said that there may be some benefit to buying hearing aids privately as doing so gives access to the latest technology with wireless communication accessories and miniaturisation. The costs of buying a private hearing aid can be high and there may be no guarantee of an improved response in comparison with an NHS aid. There may be on-going costs with servicing, maintenance and batteries.

Whichever approach is taken, it is important that the aid is fitted correctly by verifying the amount of sound being delivered to the ear by the hearing aid, particularly if you have tinnitus. If you feel that your hearing aid settings aren't right for you, it is important to go back to your hearing aid supplier to check settings and make adjustments.

If you do purchase a hearing aid, make sure that it is covered by your insurance for loss or damage, both inside and outside your home.

## Problems with hearing aids

Many hearing aids are susceptible to wax and moisture although some manufacturers coat their aids in an invisible waterproof membrane which provides a good level of protection. Even so, the aids do require regular maintenance to ensure correct function. If a hearing aid has not been fitted correctly and is either over amplifying or under amplifying, this can cause problems for those with tinnitus. Hearing aid moulds, and also the ageing process, may lead to the build-up of wax; users should regularly have their ears checked for a build-up of wax and have any excess removed. This is often carried out by a practice nurse, although some audiologists do perform wax removal. Cotton buds, hair grips, pens and many other implements

**Whilst the BTA makes every attempt to ensure the accuracy and reliability of this information, it is not a substitute for medical advice. You should always see your GP/medical professional.**

which people use are not designed for wax removal and can cause lasting damage to the ear. If you think you may have some wax, see a professional such as your GP.

A change in sound quality can also be caused through a build-up of wax on (or in) the aid, or from damage to the aid. If you think your hearing aid may have a fault, contact the service who supplied the aid.

## Long term use of hearing aids

It usually takes just a few weeks to adapt to hearing aids and to get re-accustomed to normal levels of sound. Once this period of adjustment is over, wearing hearing aids becomes very natural. Many people become less aware of their tinnitus once their hearing loss is addressed and they become more aware of the sounds around them.

It is recommended that once a hearing loss has been identified that a hearing test should be performed every three years.

## References

Bennett, CD. Hearing aid use with minimal high-frequency hearing loss, *Otolaryngol Head Neck Surgery*, 1989. **100(2)**: pp 154-7.

Brooks, DN and Bulmer, D. Survey of binaural hearing aid users, *Ear Hear*, 1981. **2(5)**: pp 220-4.

Byrne, D and Dillon, H. The National Acoustic Laboratories' (NAL) new procedure for selecting the gain and frequency response of a hearing aid, *Ear and Hearing*, 1986. **7(4)**: pp 257-65.

Lutman, M. Conflicts between diagnosis and the law, in *Industrial Deafness 2008* (Conference) Hilton Hotel, Sheffield, South Yorkshire, UK.

Melin, L et al. Hearing aids and tinnitus-an experimental group study, *British Journal of Audiology*, 1987. **21(2)**: pp 91-7.

Moffat, G et al. Effects of hearing aid fitting on the perceptual characteristics of tinnitus, *Hearing Research*, 2009. **254(1-2)**: pp 82-91.

Saltzman M and Ersner, MS. A hearing aid for the relief of Tinnitus Aurium, *Laryngoscope*, 1947. **57**: pp 358-366.

Searchfield, G. Hearing Aids and Tinnitus, in Tyler, R (ed.) *Tinnitus Treatment Clinical Protocols*, Thieme: New York, 2005, pp 161-175.

Sheldrake JB and Jastreboff MM. Role of hearing aids in management of tinnitus in Snow JB (ed.) *Tinnitus: Theory and Management*, PMPH-USA, 2004, pp 310-4

Stacey, JS. Apparent total control of severe bilateral tinnitus by masking, using hearing aids, *British Journal of Audiology*, 1980. **14(2)**: pp 59-60.

Surr, RK, Montgomery, AA and Mueller, HG. Effect of amplification on tinnitus among new hearing aid users, *Ear Hear*, 1985. **6(2)**: pp 71-5.

Sweetow, R. Evidence supporting the use of Zen as a tool for tinnitus and relaxation, *WidexPress*, 2011. **28**: pp 1-7.

Trotter, MI and Donaldson, I. Hearing aids and tinnitus therapy: a 25-year experience, *Journal of Laryngology & Otology*, 2008. **122(10)**: pp 1052-6.

Vernon, J. Attempts to relieve tinnitus, *Journal of the American Audiology Society*, 1977. **2(4)**: pp 124-31.

## Alternative formats

This publication is available in large print on request.

## For further information

Our helpline staff can answer your questions on any tinnitus related topics on **0800 018 0527**. You may also find our website **takeontinnitus.co.uk** helpful.

## 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 below, or they can be downloaded from our website.

**Whilst the BTA makes every attempt to ensure the accuracy and reliability of this information, it is not a substitute for medical advice. You should always see your GP/medical professional.**

\*available in Easy Read

- 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
- Ideas for relaxation without sound
- 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 a child with tinnitus in the classroom
- Supporting someone with tinnitus
- Taming tinnitus
- Tinnitus and disorders of the temporo-mandibular 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)
- Ellie, Leila and Jack have tinnitus activity book
- Tinnitus activity book (for 8-11 year olds)
- Tinnitus activity book (for 11-16 year olds)

We are a registered charity and currently receive no government funds to support our work. The production and distribution of this leaflet is subsidised by kind donations from our supporters.

If you would like to help us to support others with tinnitus please consider making a donation online at [justgiving.com/bta](https://www.justgiving.com/bta) or by sending a cheque/postal order to the address at the foot of this leaflet. Thank you on behalf of the UK tinnitus community.

( T )

**British Tinnitus  
Association**

#### **British Tinnitus Association**

Ground Floor, Unit 5, Acorn Business Park, Woodseats Close, Sheffield S8 0TB

Email: [info@tinnitus.org.uk](mailto:info@tinnitus.org.uk)

Helpline: **0800 018 0527**

Website: [tinnitus.org.uk](https://www.tinnitus.org.uk)

The British Tinnitus Association. Registered charity no: 1011145 Company limited by guarantee no: 2709302. Registered in England. This information has been produced by the BTA and conforms to the Principles and Requirements of the Information Standard.

**Whilst the BTA makes every attempt to ensure the accuracy and reliability of this information, it is not a substitute for medical advice. You should always see your GP/medical professional.**