HEARING AIDS AND TINNITUS

Peter Byrom BHSc (Audiology), MSc, Registered Hearing Aid Dispenser
Dr Magdalena Sereda, Senior Research Fellow, NIHR Nottingham Biomedical Research 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.

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.
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?

The number of studies looking at using hearing aids for tinnitus is limited. However, the majority of studies in a recent review support the use of hearing aids for tinnitus management. The majority of clinicians would recommend fitting bilateral hearing aids (one on each ear) for people with tinnitus.

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.

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.
Combination devices

The majority of manufacturers produce a hearing aid combined with a sound generator and these combination aids are now available in most NHS audiology departments. 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), reducing the perception of tinnitus, aiding relaxation or providing distraction from tinnitus.

Combination devices are able to offer a range of sound options. In addition to broadband (white) noise, they can offer noises shaped according to your audiogram, noise centred either on or away from your tinnitus frequency, or nature sounds. Wireless streaming options offer endless possibilities when it comes to choosing the best sound for tinnitus therapy, including music, environmental sounds or even individually modified sounds.

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 and combination devices 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. Most NHS hearing aids have wireless accessories available, although these need to be purchased independently. These accessories can stream sound from your smartphone or television directly to your hearing aid, for example. Your clinician will be able to make recommendations as to which may be useful.

Hearing aids and accessories are also prescribed and sold by private hearing aid dispensers. 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.

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.
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 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.

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

References


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


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.


### Alternative formats

This publication is available in standard print on request.

### For further information

Our helpline staff can answer your questions on any tinnitus related topics on **0800 018 0527** (Monday-Friday, 9am-5pm). You may also find our website [www.tinnitus.org.uk](http://www.tinnitus.org.uk) helpful. We also offer a free tinnitus management e-learning programme at [www.takeontinnitus.co.uk](http://www.takeontinnitus.co.uk).

### BTA publications

Our information leaflets are written by leading tinnitus professionals and provide

> 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.
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.
*available in Easy Read

<table>
<thead>
<tr>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>All about tinnitus*</td>
</tr>
<tr>
<td>Complementary therapy for tinnitus: an opinion</td>
</tr>
<tr>
<td>Drugs and tinnitus</td>
</tr>
<tr>
<td>Ear wax removal and tinnitus</td>
</tr>
<tr>
<td>Flying and the ear</td>
</tr>
<tr>
<td>Food, drink and tinnitus</td>
</tr>
<tr>
<td>Hearing aids and tinnitus*</td>
</tr>
<tr>
<td>Hyperacusis</td>
</tr>
<tr>
<td>Ideas for relaxation without sound</td>
</tr>
<tr>
<td>Information for musicians</td>
</tr>
<tr>
<td>Mindfulness for tinnitus</td>
</tr>
<tr>
<td>Musical hallucination (musical tinnitus)</td>
</tr>
<tr>
<td>Noise and the ear</td>
</tr>
<tr>
<td>Otosclerosis</td>
</tr>
<tr>
<td>Pulsatile tinnitus</td>
</tr>
<tr>
<td>Relaxation</td>
</tr>
<tr>
<td>Self help for tinnitus*</td>
</tr>
<tr>
<td>Sound therapy</td>
</tr>
<tr>
<td>Sources of mutual support for tinnitus</td>
</tr>
<tr>
<td>Supporting someone with tinnitus</td>
</tr>
<tr>
<td>Taming tinnitus</td>
</tr>
<tr>
<td>Tinnitus: a parent’s guide</td>
</tr>
<tr>
<td>Tinnitus: a teacher’s guide</td>
</tr>
<tr>
<td>Tinnitus and disorders of the temporo-mandibular joint (TMJ) and neck</td>
</tr>
<tr>
<td>Tinnitus and sleep disturbance</td>
</tr>
</tbody>
</table>

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.
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 (for under 8s)

Tinnitus activity book (for 8-11 year olds)

Tinnitus activity book (for 11-16 year olds)