

TINNITUS AND COCHLEAR IMPLANTS

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This information has been written to help you understand more about tinnitus if you have a cochlear implant, or are being assessed for one.

What is tinnitus?

Tinnitus is the term used to describe the perception of sound in the absence of a corresponding external sound.

Tinnitus is common and is reported in all age groups, even young children. 10-15% of adults experience tinnitus at some point in their lives.

It is more common in people who have hearing loss or other ear problems, although some people with normal hearing also experience tinnitus. It is estimated that 80% of people with severe-profound hearing loss experience tinnitus.

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What is a cochlear implant?

A cochlear implant is a small electronic device that can improve the hearing of people with severe-profound hearing loss who do not get enough benefit from hearing aids.

The implant system consists of two parts; the sound processor, which is worn externally like a hearing aid, and the cochlear implant itself which is surgically implanted in the inner ear (cochlea).

There are currently about twenty thousand people in the UK with a cochlear implant.

More information about cochlear implants is available from your local audiologist and the British Cochlear Implant Group (BCIG) website bcig.org.uk

Can a cochlear implant improve tinnitus?

The improvements in hearing and quality of life from a cochlear implant are well documented and many studies also show an improvement in tinnitus following cochlear implantation. However, approximately 5% of people report their tinnitus becomes worse or they develop new tinnitus.

Whilst many people do find that a cochlear implant improves their tinnitus, this cannot be guaranteed. If you are concerned about tinnitus you should talk to your implant team.

Tinnitus before implant surgery

During the implant assessment you will be asked about your tinnitus. If it is particularly bothersome your implant team may arrange an appointment with a tinnitus specialist.

For some people, anxiety about the implant operation can cause their tinnitus to seem worse. It can help to talk to someone using a cochlear implant who has already been through the experience.

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Adult with a cochlear implant.

(Image: British Cochlear Implant Group)

Tinnitus between implant surgery and 'switch on'

After the surgery you may not notice any change in your tinnitus; the sound may become less noticeable; it may seem more noticeable; the type of sound may change. All of these are normal.

During the operation the surgeon slowly pushes the electrode array into the cochlea, which may bruise or damage some of the delicate structures of the inner ear. This can cause your hearing to get worse but will not affect the final outcomes with the cochlear implant.

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After the surgery it is recommended that you **do not** wear a hearing aid in the ear which has been operated on. As a result, you may be more aware of your tinnitus because of a reduction in external sound. Damaged cells may also send 'false' signals to the brain which you may hear as tinnitus.

If tinnitus starts or increases after the implant operation it is helpful to know that this usually settles with time after the implant is 'switched on' and adjusted.

Tinnitus after 'switch on'

After a cochlear implant is 'switched on' you will have several appointments to adjust the settings. This process is called 'tuning', 'mapping' or 'programming'.

It will take time for your brain to get used to receiving the new signals every time a change is made to your settings. This can sometimes cause changes in tinnitus. Most people find their tinnitus settles once the settings of their cochlear implant have been finalised. If there is a sudden change in your tinnitus, please contact your implant team.

With the implant you will hear lots of new sounds that you may not have been able to hear with hearing aids. At the beginning it can be hard to tell the difference between environmental sounds and tinnitus. If you take the sound processor off and the sound is still there, this is likely to be tinnitus. If the sound disappears when you take the sound processor off it is probably an environmental sound which you are hearing through your cochlear implant.

Managing tinnitus

There is currently no known cure for tinnitus however there are lots of management strategies that can help.

There are several resources available from the British Tinnitus Association (BTA) website [tinnitus.org.uk](https://www.tinnitus.org.uk) which may help you, in particular a leaflet for those with severe-profound hearing loss.

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Talk to someone

If you are worried about tinnitus at any stage of your cochlear implant journey speak to a member of your implant team – this could be a surgeon, nurse, audiologist or speech and language therapist.

Finding out more about tinnitus, understanding all the factors that can increase your awareness of it and learning coping strategies can help you to manage the tinnitus.

In some implant centres you may be offered an appointment with a tinnitus specialist who works as part of the implant team. Other centres may refer you to a local Audiology department to see a tinnitus specialist.

Check your equipment

Most people find they hear their tinnitus less when their cochlear implant is switched on. If your implant is not helping with your tinnitus it is important to speak to your audiologist as they may need to review your settings.

All cochlear implants have parts that need replacing regularly such as microphone filters and cables.

Tinnitus and sleep

Sleep disturbance affects most of us at some stage of our lives. There are various techniques to help when you have tinnitus and sleep disturbance.

When you take your sound processor off at night you may struggle to hear. Feeling anxious about not hearing at night can increase awareness of tinnitus. If you are anxious about missing sounds such as hearing a child there are various alerting systems available which may help.

You may notice your tinnitus more at night when it is quieter because of the shift from a relatively noisy daytime environment to the quietness of the bedroom. Having some background sound (known as sound enrichment) may help make your tinnitus less intrusive and allow you to sleep better.

Some people wear their sound processor at night to help their tinnitus but this should

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only be done after talking to your audiologist.

Tinnitus and stress

Stress is often linked to tinnitus. By relaxing more you may feel less stressed and so notice your tinnitus less. Relaxing your body (even if you do not feel tense) often helps with sleep and tension caused by the tinnitus.

There are lots of relaxation activities that can be done with and without sound. For further advice read the BTA leaflets on stress, ideas for relaxation, and relaxation without sound.

If you have significant anxiety, depression, or other mental health problems alongside the tinnitus, or are extremely troubled by the tinnitus you may benefit from further support in the form of psychology or counselling. The implant team may be able to refer you directly, your GP can refer you, or you can self-refer via your local Wellbeing Service.

Key things to remember:

Tinnitus is common in people with severe-profound hearing loss.

A cochlear implant's primary goal is to improve hearing.

Cochlear implants can improve tinnitus in some people, however there are also people whose tinnitus does not get better after cochlear implantation.

Changes in tinnitus after surgery are common and are often short-lived.

It takes time to get used to the implant – you may hear familiar sounds differently or you may hear sounds when you would normally expect it to be quiet.

It is normal to feel tired or overwhelmed in the early stages of your implant journey, do not be hard on yourself. Speak to a member of your implant team or GP if you feel unable to manage.

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Alternative formats

This publication is available in standard print on request.

For further information

The BTA Tinnitus Support Team can answer your questions on any tinnitus related topics:

Telephone: **0800 018 0527**

Web chat: **tinnitus.org.uk**

Email: **helpline@tinnitus.org.uk**

Text/SMS: **07537 416841**

You may also find the website **takeontinnitus.co.uk** helpful.

You can find out more about cochlear implants from the BCIG website **bcig.org.uk**.

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.

*available in Easy Read

All about 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*

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Hyperacusis

Ideas for relaxation without sound

Information for musicians

Mindfulness for tinnitus

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: a parent's guide

Tinnitus: a teacher's guide

Tinnitus and cochlear implants

Tinnitus and disorders of the temporo-mandibular joint (TMJ) and neck

Tinnitus and severe-profound hearing loss

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)

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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)

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British Cochlear Implant Group

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Website: bcig.org.uk

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British Tinnitus Association

British Tinnitus Association

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

Email: helpline@tinnitus.org.uk

Helpline: **0800 018 0527**

Website: tinnitus.org.uk

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