

hearing brain, or several different layers of connection which are not connected randomly but in networks.

Many people with significant deafness have tinnitus. Researchers looked into this and found that the severity of tinnitus in the profoundly deaf is generally moderate but a small number are very troubled indeed by their tinnitus. They are often anxious, depressed, isolated and not sleeping.

What does a cochlear implant do for tinnitus? In the vast majority of people cochlear implants improve tinnitus. Cochlear implant users usually cast tinnitus as a mild problem. Maybe this is because they are less anxious and have a better quality of life. However there is some residual tinnitus handicap and 20% of cochlear implant users, including some children, have a problem.

Some recent research from Cambridge suggests that tinnitus in cochlear implant users is a hidden problem. When a group of 250 users were asked to say which of these problems – tinnitus, speech in noise, music, the naturalness of speech and of environmental sound – one in five said tinnitus was their worst problem. Nearly half the group said that tinnitus was either their first or second problem so it is probably under-reported.

What can implant users do to help themselves? They could use what is called 'progressive muscle relaxation'. This is a very simple technique – you lie down, breath properly, tense your muscles and relax your muscles in a very structured way from your forehead to your toes. It resets your agitation.

You could use sound – an iPod with a little bit of background sound, either rain or the

ocean or a little bit of gentle music. Rain and the ocean would sound terrible through an implant which is looking for speech. There is some research going on in Cambridge looking at what rain and the ocean sounds like for a person with normal hearing and designing an implant to produce this so your implant could have a tinnitus setting.

'Sleep hygiene' is another technique that may help with troublesome tinnitus. No reading in bed, no fiddling around with your iPhone, or your iPad. Minimal coffee and tea in the evening and, importantly, getting up at the same time every day. Psychologists say that helps to reset your sleep system. There are also other techniques such as saying over and over again a nonsense syllable under your breath such as 'ama, ama, ama' which will help to dislodge the tinnitus. If you are really in severe trouble with your tinnitus there is cognitive therapy which works on changing what we believe. I have published a little self help book entitled 'Living with Tinnitus and Hyperacusis' about these techniques for relieving tinnitus.

More work is going with drug trials and also magnetic stimulation of the brain to help alleviate tinnitus. A major European grant has recently been made to enable a group of scientists from various disciplines work together to acquire an understanding of the complexity of tinnitus. Psychologists are also working on the problem. A Cambridge student is researching the application of a powerful psychological tool – cognitive behaviour therapy – to tinnitus relief, delivered via the internet. It looks at building up resilience to tinnitus in those who suffer from it. Tinnitus research is a vibrant field and I am cautiously optimistic it will yield results.

EQUITY AND PERSON-CENTEREDNESS IN PROVISION OF TINNITUS SERVICES IN UK NATIONAL HEALTH SERVICE AUDIOLOGY DEPARTMENTS

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This recently published article gives an overview of tinnitus provision across the UK. Chronic tinnitus is broadly managed using individualised sound-based intervention, individualised or group education, counselling or cognitive therapies. It is shown that the provision of services varies widely across the four countries of the UK. Training in and the provision of support for tinnitus sufferers by audiologists is of particular concern in Scotland and Northern Ireland. The need for research in paediatric tinnitus, combination devices, non-ear level sound devices and audiologist-delivered psychological therapy, are noted.

The paper can be accessed here; <http://ubplj.org/index.php/ejpch/article/view/984>