

Why classical music can provide relief for tinnitus

Recent research has postulated a connection between delta brain waves and tinnitus.

Will Sedley and colleagues at Newcastle University in 2015 recorded brain waves in a tinnitus patient in order to examine how the various brainwaves, alpha, beta and delta may be linked to the perception of tinnitus. In their paper, "Intracranial mapping of cortical tinnitus system using residual inhibition", the authors suggest a link between delta brain waves and tinnitus. It also suggests relationship between delta and the whole brain wave spectrum i.e. alpha, beta, gamma and theta waves. A patient with focal seizures underwent 'intra-cranial' recording. They stuck electrodes on his brain and recorded everything.

The authors postulate a sub-network of auditory control with 3 parts:

- 1: delta waves and thalamic activity
- 2: alpha waves, para-hippocampus and parietal cortex. Dubbed the 'tinnitus memory network'
- 3: beta and gamma waves, fairly widespread across the brain, relates to someone's conscious perception of the tinnitus sound

This could explain in part why there is long term success record of using filtered classical music to treat tinnitus. Remapping of certain brain functions has been achieved for decades through a program of passive listening to progressively filtered classical music, called Sound Therapy.

Since tinnitus pioneer, Pawell Jastreboff, in 1993 developed the neurophysiological model of tinnitus, we have known that tinnitus occurs in the brain. Although tinnitus now affects up to 60 % of the population, (Australian Hearing, 2008) tinnitus patients are still routinely told that no treatment is available and they must learn to live with the condition. Jastreboff said it is not uncommon for a tinnitus sufferer to seek advice from up to 20 clinicians in attempting to find a cure.

New research on the neurophysiology of tinnitus and the plasticity of the cortex, indicates that tinnitus can be relieved by remapping auditory pathways in the brain.

Rafaele Joudry, founder of Sound Therapy International, and her colleagues, have been achieving significant relief for a portion of tinnitus sufferers with classical music that stimulates the auditory cortex, calms brainwaves and remaps the pathways associated with tinnitus.

"We know it has an impact on the brain" says Joudry, "because of the tangible impacts on things like stress, sleep and concentration." A university of Sydney double blind pilot study by Warhurst and Kemp in 2012 indicated how the impact of music stimulated the middle ear muscles and the vagus nerve to produce beneficial changes in the nervous system.

"These changes tie in" says Joudry "to the overall benefits we see for tinnitus patients, where brain activity is calmed and auditory pathways can stop being over reactive, as in tinnitus."

Thousands of Sound Therapy listeners attest to the lasting relief for tinnitus and related stress conditions and other ear dysfunctions such as sound sensitivity, Joudry says.

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