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Magnets stop the nightmare of tinnitus, researchers say

By [Daily Mail Reporter](#)

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Brain stimulation is being used to ease symptoms of tinnitus.

A study has found that all patients given the treatment experienced some improvement; a year afterwards, some patients were still tinnitus-free in one or both ears.

Tinnitus is the sensation of a sound in the ear, usually a ringing noise, though it can be a high-pitched whistling or buzzing or hissing.

It can be triggered by underlying problems, including diminished hearing, earwax, high blood pressure and anxiety, but in many cases the cause is unknown.

The Royal National Institute for Deaf People says up to a third of adults report some tinnitus at some time. And for a number of sufferers their quality of life is severely affected.

Although there have been many treatments over the years, including devices to mask the noise, distracters, anti-depressants and behaviour therapy, no cure has been found.

The new treatment, known as repetitive transcranial magnetic stimulation (rTMS), uses an electromagnet to generate pulses which stimulate part of the brain.

This is based on the theory that people with tinnitus are thought to have overactivity in the temporoparietal cortex involved in processing sounds. The rTMS is thought to reduce this, and hence the perception of tinnitus.

Another theory is that the stimulation interferes with the tinnitus signals travelling along pathways in the auditory part of the brain.

In the new study, researchers looked at the long-term response of four groups of patients - 66 men and women in total - who had a daily session for two weeks, during which electrodes were placed on the scalp above the temporoparietal cortex.

Patients then received pulses at three different frequencies. Patients in the placebo group had rTMS over an area of the brain not implicated in the auditory system. The researchers from the National Hospital for Neurology and Neurosurgery, London, and Assiut University Hospital in Egypt, found that all three frequencies of rTMS improved tinnitus.

'rTMS is certainly interesting as a tinnitus treatment, and it does highlight the fact that modern theories of tinnitus are more concerned about what is going on in the brain - the central auditory pathway - than the ear,' says Dr Don McFerran, chairman of the British Tinnitus Association's professional advisory committee.



Brain stimulation improved tinnitus symptoms in everyone tested