

An extinction training for tinnitus

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The objective of the study is to establish an extinction training for tinnitus that makes use of the fact that the provision of auditory signals can lead to residual inhibition and thus cessation of the tinnitus sound for variable times. We will determine the optimal auditory signal that affects tinnitus and train 28 chronic tinnitus sufferers to increase and extend the suppression of tinnitus over a training period of two months. In half of the patients pregabalin, a drug known to reduce neural hyperactivity will be added to enhance the training effects, in the other half placebo will be given in a double-blind randomised fashion. Some of the subjects will begin training immediately after assessment, the others will begin training after waiting periods of up to two months to make use of a multiple baseline design that controls for time effects. The effects on tinnitus will be assessed by a diary, questionnaire data on tinnitus effects, and an assessment of tinnitus loudness pre, post and 3 months after the training. To determine physiological indicators of the extinction training the N100 component of the electroencephalogram to a sound close to or on the tinnitus frequency as well as a standard 1000 Hz tone will be assessed as well as the change in skin conductance response as an indicator of autonomic reactivity. The long-term goal of the project is to develop a miniaturized training device for tinnitus sufferers. This training would have a direct effect on the presence of the ear sounds rather than focusing on the effects of tinnitus on the tinnitus sufferer.

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