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## Critical Review: What are the effects of long-term sound therapy on the perception of tinnitus loudness?

Quelch, R.W.

papers were also identified from references in the published literature using the process of snowballing.

## Selection Criteria

Studies included in this review investigated the effect of long-term sound therapy on subjective ratings of tinnitus loudness. Studies employing a treatment protocol that included a counseling component beyond providing basic information about tinnitus were excluded from this review. The search was limited to articles published between 1995 and 2010.

## **Data Collection**

The literature search identified four studies that met the above selection criteria: one single subject repeated-measures, two mixed measures nonrandomized clinical trials and one mixed measures randomized clinical trial demonstrating levels of evidence of one-plus for two articles (Goldstein et al., 2005; Okamoto et al., 2009) and two-plus for two articles (Folmer et al., 2006; Schaette et al., 2010) based on the level of evidence hierarchy as presented in Cox et al. (2005).

## Results

Goldstein, Lenhardt and Shulman (2005) investigated the long-term efficacy of high-frequency bone-conducted (HFBC) music on levels of tinnitus

cochleas in primary auditory cortex. *Journal of Comparative Neurology*, 338, 17-49.

Schaette, R., Konig, O., Hornig, D., Gross, M., & Kempter, R. (2010). Acoustic stimulation treatments against tinnitus could be most effective when tinnitus pitch is within the stimulated frequency range. *Hearing Research*, *269*, 95-101.