Medical PEMF Studies

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F I B R O M Y A L G I A

Exposure to a specific pulsed low-frequency magnetic field: a double-blind placebo-controlled study of effects on pain ratings in rheumatoid arthritis and fibromyalgia patients.

1. Pain Res Manag. 2006 Summer;11(2):85-90.

Medical PEMF Studies

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BACKGROUND: Specific pulsed electromagnetic fields (PEMFs) have been shown to induce analgesia (antinociception) in snails, rodents and healthy human volunteers.

OBJECTIVE: The effect of specific PEMF exposure on pain and anxiety ratings was investigated in two patient populations.

DESIGN: A double-blind, randomized, placebo-controlled parallel design was used.

METHOD: The present study investigated the effects of an acute 30 min magnetic field exposure (less than or equal to 400 microTpk; less than 3 kHz) on pain (McGill Pain Questionnaire [MPQ], visual analogue scale [VAS]) and anxiety (VAS) ratings in female rheumatoid arthritis (RA) (n=13; mean age 52 years) and fibromyalgia (FM) patients (n=18; mean age 51 years) who received either the PEMF or sham exposure treatment.

RESULTS: A repeated measures analysis revealed a significant pre-post-testing by condition interaction for the MPQ Pain Rating Index total for the RA patients, $F(1,11)=5.09$, $P<0.05$, estimate of effect size = 0.32, power = 0.54. A significant pre-post-effect for the same variable was present for the FM patients, $F(1,15)=16.2$, $P<0.01$, estimate of effect size = 0.52, power =0.96. Similar findings were found for MPQ subcomponents and the VAS (pain). There was no significant reduction in VAS anxiety ratings pre- to post-exposure for either the RA or FM patients.

CONCLUSION: These findings provide some initial support for the use of PEMF exposure in reducing pain in chronic pain populations and warrants continued investigation into the use of PEMF exposure for short-term pain relief.

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