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## **Pulsed electromagnetic field therapy in the treatment of pain and other symptoms in fibromyalgia: A randomized controlled study**

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### **Abstract**

Low-energy pulsed electromagnetic field (PEMF) therapy has been suggested as a promising therapy to increase microcirculation, which is of great concern in patients with fibromyalgia. This study evaluated the effectiveness of PEMF therapy on the treatment of fibromyalgia. A group of 108 women with fibromyalgia were allocated to a 12-week treatment period with an active Bio-Electro-Magnetic-Energy-Regulation (BEMER) device and a similar treatment period with an inactive device. Each patient received active and sham treatments in a random order. Pain and stiffness were assessed on a visual analog scale (VAS, scale 0-100 mm), and functional status was assessed by the Fibromyalgia Impact Questionnaire (FIQ). Mean VAS pain scores before the active and sham treatment periods were 66 (SD 22) and 63 (SD 22), respectively. After treatment periods, mean VAS pain scores had decreased significantly in active treatment, -12, 95% CI [-18, -6], and in sham treatment, -11, 95% CI [-17, -5].

Similarly, the decrease in stiffness and FIQ index after both treatments was statistically significant. However, per-protocol analysis showed no differences between active and sham treatments at any of the outcomes. This study demonstrated that low-energy PEMF therapy was not efficient in reducing pain and stiffness or in improving functioning in women with fibromyalgia. *Bioelectromagnetics*. 39:405-413, 2018. © 2018 Wiley Periodicals, Inc.

**Keywords:** chronic pain; fibromyalgia; magnetotherapy; microcirculation; pulsed electromagnetic field; sham treatment.

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