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Title: The effect of local magnetic therapy on clinical symptoms of peripheral neuropathy in  
patients with diabetes type 2

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Title: The effect of local magnetic therapy on neuropathic pain of patients with diabetes type 2:  
randomized clinical trials

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Authors: Ali Mohammadpour, Armin Nazeri, Mojtaba Kianmehr, Mohammad-Hadi Saeed  
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Title: Effect of static magnetic field therapy on diabetic neuropathy and quality of life: a double-  
blind, randomized trial

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## **Abstract**

### **Background**

Diabetic peripheral neuropathy (DPN) is a common complication of diabetes mellitus (DM) that can cause annoying symptoms. To address this condition, several treatment approaches have been proposed, including static magnetic field (SMF) therapy, which has shown promise in treating neurological conditions. Therefore, this study aimed to investigate the effects of SMF therapy on symptomatic DPN and the quality of life (QoL) in patients with type 2 diabetes.

### **Methods**

A double-blind, randomized, placebo-controlled trial was conducted from April to October 2021. Sixty-four DPN patients (20 males, 44 females) were recruited for the study via invitation. The participants were divided into two groups: the magnet group, which used magnetic ankle bracelets (155 mT) for 12 weeks, and the sham group, which used non-magnetic ankle bracelets for the same duration. Neuropathy Symptom Score (NSS), Neuropathic Disability Score (NDS), and Visual Analogue Scale (VAS) were used to assess neuropathy symptoms and pain. In addition, the Neuropathy Specific Quality of Life Questionnaire (Neuro-QoL) tool was used to measure the patients' quality of life.

### **Results**

Before treatment, there were no significant differences between the magnet and sham groups in terms of the NSS scores ( $P = 0.50$ ), NDS scores ( $P = 0.74$ ), VAS scores ( $P = 0.17$ ), and Neuro-QoL scores ( $P = 0.82$ ). However, after 12 weeks of treatment, the SMF exposure group showed a significant reduction in NSS scores ( $P < 0.001$ ), NDS scores ( $P < 0.001$ ), VAS scores ( $P < 0.001$ ), and Neuro-QoL scores ( $P < 0.001$ ) compared to the baseline. The changes in the sham group, on the other hand, were not significant.

### **Conclusion**

According to obtained data, SMF therapy is recommended as an easy-to-use and drug-free method for reducing DPN symptoms and improving QoL in diabetic type-2 patients.