



## The effect of neuromuscular electrical stimulation on arthritis knee pain in older adults with osteoarthritis of the knee.

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### OBJECTIVE:

The objective of this study was to examine the short- and long-term effects of a home-based, 12-week neuromuscular electrical stimulation (NMES) of the quadriceps femoris to decrease arthritis knee pain in older adults with osteoarthritis of the knee.

### STUDY DESIGN:

The study sample (N = 38) was randomly assigned to the NMES treatment plus education group or the arthritis education-only group. Pain was measured in both groups with the McGill Pain Questionnaire (MPQ) at baseline, during the intervention at weeks 4, 8, 12, and at follow-up and with the Arthritis Impact Measurement Scale 2-Pain Subscale (AIMS2-PS) at baseline and week 12. The NMES Pain Diary (PD) was completed 15 minutes before and after each stimulation session.

### RESULTS:

There was a significant 22% decline in pain 15 minutes after as compared with immediately before each NMES treatment ( $p < .001$ ), as measured by the PD. No significant group differences were found between the 2 groups over the course of the intervention and follow-up. These findings indicate that a home-based NMES intervention reduced arthritis knee pain 15 minutes after a NMES treatment.

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