

National Center for Complementary and Alternative Medicine Acupuncture Relieves Pain and Improves Function in Knee Osteoarthritis

Acupuncture provides pain relief and improves function for people with osteoarthritis of the knee and serves as an effective complement to standard medical care.

Lead Agency:

National Center for Complementary and Alternative Medicine (NCCAM)/
National Institutes of Health (NIH)

Agency Mission:

- Explore complementary and alternative healing practices in the context of rigorous science.
- Train complementary and alternative medicine researchers.
- Disseminate authoritative information to the public and professionals.

Principal Investigator:

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General Description:

Acupuncture Relieves Pain and Improves Function in Knee Osteoarthritis

The multi-site study team, including rheumatologists and licensed acupuncturists, enrolled 570 patients, aged 50 or older with osteoarthritis of the knee. Participants were randomly assigned to receive one of three treatments: acupuncture; sham acupuncture; or participation in a control group that followed the Arthritis Foundation's self-help course for managing osteoarthritis. Patients continued to receive standard medical care from their primary physicians, including anti-inflammatory medications, such as COX-2 selective inhibitors, non-steroidal anti-inflammatory drugs, and opioid pain relievers.

After enrolling in the study, patients' pain and knee function were assessed using standard arthritis research survey instruments and measurement tools, such as the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC). Patients' progress was assessed at 4, 8, 14, and 26 weeks. By week 8, participants receiving acupuncture were showing a significant increase in function and, by week 14, a significant decrease in pain, compared with the sham and control groups. These results, shown by declining scores on the WOMAC index, sustained through week 26. Overall, those who received acupuncture had a 40 percent decrease in pain and a nearly 40 percent improvement in function compared to baseline assessments.

Excellence: What makes this project exceptional?

This study is a well-designed phase 3 clinical trial that demonstrated the safety and efficacy of Traditional Chinese Acupuncture as a complementary treatment for osteoarthritis of the knee.

Significance: How is this research relevant to older persons, populations and/or an aging society?

More than 20 million Americans have osteoarthritis, which is one of the most frequent causes of physical disability among adults. Acupuncture provides a non-pharmacologic, complementary treatment for osteoarthritis of the knee.

Effectiveness: What is the impact and/or application of this research to older persons?

These results demonstrate that acupuncture is an effective non-pharmacologic complementary treatment for osteoarthritis of the knee, potentially resulting in a higher-quality of life and functioning for individuals with osteoarthritis.

Innovativeness: Why is this research exciting or newsworthy?

A survey conducted by the Centers for Disease Control and Prevention showed that, in 2002, acupuncture was used by an estimated 2.1 million U.S. adults. This trial provides evidence that acupuncture is an effective non-pharmacologic complement to conventional treatment for osteoarthritis, and can be utilized successfully as a part of an integrated approach to treating the symptoms of osteoarthritis.