

Acupuncture Found To Be of Benefit in Knee Osteoarthritis

On December 21, 2004, the *Annals of Internal Medicine* published the results of an NCCAM-funded study of acupuncture for osteoarthritis of the knee. The study team was led by Brian M. Berman, M.D., Director of the Center for Integrative Medicine and Professor of Family Medicine at the University of Maryland School of Medicine in Baltimore.

Acupuncture is one of the oldest, most commonly used medical procedures, having originated in China more than 2,000 years ago. The term acupuncture describes a family of procedures involving stimulation of anatomical points on the body by a variety of techniques. American practices of acupuncture incorporate medical traditions from China, Japan, Korea, and other countries. The acupuncture technique that has been most studied scientifically involves penetrating the skin with thin, solid, metallic needles that are manipulated by the hands or by electrical stimulation.

The randomized clinical trial at the University of Maryland followed 570 participants for 6 months, making it the longest and largest study of acupuncture to date. In the study, 190 of the participants received acupuncture treatment and 191 received a "sham" acupuncture procedure that the team had developed and tested in earlier research. A third group (189) attended an educational program developed by the Arthritis Foundation. All participants could continue to use some conventional care for osteoarthritis, such as certain anti-inflammatory medicines, if they so chose.

By week 8, the acupuncture group had better function than either the sham or the education group. By the 14th week, the acupuncture group also reported significantly less pain than the two other groups.

CAM at the NIH spoke to Dr. Berman about this study.

NCCAM: *Why did you choose to study acupuncture for knee osteoarthritis?*

Dr. Berman: Arthritis costs about \$86 billion each year in direct and indirect costs in the United States. Osteoarthritis is the most common form of arthritis, affecting 20 million Americans a year. The knee is a common site. Osteoarthritis is also a problem for which we don't have all the answers in conventional medicine. And the available drugs have side effects, particularly in the elderly. We wanted to see if acupuncture could make a difference.

NCCAM: *How do your findings add to our knowledge about the use of acupuncture for osteoarthritis?*

Dr. Berman: In this study, we developed a model of a progression for acupuncture trials [from phase I to phase II and III studies]. Also, the outcomes are important. We found that traditional Chinese acupuncture is effective for reducing pain and improving physical function in patients with symptomatic knee osteoarthritis who were having moderate pain despite conventional medical therapy. The patients receiving true acupuncture had a 40 percent decrease in pain from baseline and a 40 percent increase in function--which was significantly better than those receiving the sham procedure. We also found that the acupuncture was well tolerated. Our conclusion is that acupuncture

may have an important role as adjunctive [i.e., added] therapy in a multidisciplinary, integrative approach to patients with osteoarthritis of the knee.

NCCAM: *How common is the use of acupuncture for different types of arthritis? Have you seen any trends in its use?*

Dr. Berman: Surveys say 2.1 million Americans use acupuncture, accounting for around 5 million visits a year to practitioners, and most visits are for pain and musculoskeletal problems. When we started our center in 1991, acupuncture was very much outside the realm of conventional medicine. Now we're seeing pain clinics, primary care doctors, orthopedic surgeons, and rheumatologists making more referrals for this type of procedure. In an article we published in the journal *Pain* in 2000, we surveyed pain specialists to see what they thought of different nonpharmacological therapies. Acupuncture had more acceptance than we realized.

There is no cure for arthritis; the goals of the American College of Rheumatology's treatment guidelines are to improve function and to decrease pain. Now acupuncture is one of the methods that can be used for first-line treatment for osteoarthritis along with some of the nondrug treatments. Also, acupuncture doesn't have a lot of side effects.

NCCAM: *Do you have any advice for people who may have arthritis and wonder whether acupuncture could help them?*

Dr. Berman: I think they ought to talk to their physicians. It's worth giving acupuncture consideration as part of a multidisciplinary approach--not necessarily to forgo other treatments that have been recommended, but as part of a whole approach to osteoarthritis. Also, in acupuncture treatment, it's important to find a good, licensed practitioner.