

# Twice-Weekly Tai Chi Eased Fibromyalgia

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Twice-weekly tai chi exercises led to a statistically significant decrease in fibromyalgia symptoms, compared with wellness education and stretching.

The finding, published online in the New England Journal of Medicine, is consistent with other studies that have shown the benefits of tai chi for fibromyalgia as well as pain, depression, and overall quality of life (N. Engl. J. Med. 2010;363:743-54).

tion on pain management strategies and nutrition, plus a portion devoted to stretching. Patients also were encouraged to stretch at home each day for 20-minute periods.

Both groups were predominantly female (greater than 85%) and had mean ages of 50 years and 51 years for the tai chi group and the control group, respectively.

The mean baseline FIQ score in the tai chi group was 62.9, compared with 68.0 in the control group; the rate of attendance was 77% and 70% for the active treatment and control group, respectively.

According to Dr. Wang and her asso-

among controls (95% CI, -16.4 to -4.0).

Similar to findings at the 12-week mark, that amounted to a between-group difference of more than 18 points, *P* less than .001.

Dr. Wang and her associates also looked at any improvement in sleep, as measured on the Pittsburgh Sleep Quality Index, graded on a scale from 0 to 21, with higher score indicating poorer sleep.

At 12 weeks, the tai chi patients had reduced their score by 3.6 points from baseline, compared with 0.7 points for the control group (*P* less than .001); at 24 weeks, the tai chi practitioners had dropped their score by 4.2 points, compared with 1.2 among controls (*P* less than .007).

The researchers also saw significant improvement among the tai chi patients on the physician global assessment score, the patient global assessment score, the 6-minute walk test, and both of the physical and mental components of the Medical Outcomes Study 36-Item Short Form Health Survey.

Only tai chi patients' body mass index and their scores on the Chronic Pain Self Efficacy Scale, which measures patients' confidence in their ability to perform a particular task, did not change

significantly in the course of the study, compared with controls.

Dr. Wang and her associates pointed out some limitations, including their inability to conduct a double-blind study, since it "would have required the use of

sham tai chi, for which no validated approach currently exists," though they recommended that one be developed in the future.

Moreover, the investigators stated that the patients' preexisting knowledge and attitudes about tai chi may have resulted in a placebo effect.

To minimize this, they "informed participants only that the study was designed to test the effects of two different types of exercise training programs," thereby deemphasizing the role of tai chi in order to "lessen participants' expectations."



The participants also were encouraged to practice at home for 20 minutes per day on their own.

## VITALS

**Major Finding:** After 12 weeks of twice-weekly, 60-minute classes, the tai chi group had a significantly greater decrease in the total Fibromyalgia Impact Questionnaire (-27.8 points, 95% confidence interval -33.8 to -21.8) compared with controls who underwent education about pain management, plus stretching (-9.4 points, 95% CI, -15.5 to -3.4), *P* less than .001.

**Data Source:** A single-blind, randomized trial of tai chi compared with wellness education and stretching in fibromyalgia management.

**Disclosures:** Dr. Wang reported having no financial conflicts of interest. A coauthor reported financial relationships with Pfizer, Lilly, and Forest; several authors reported having received grants from the National Institutes of Health and the National Center for Complementary and Alternative Medicine, which cosponsored the study with the American College of Rheumatology and the Boston Claude D. Pepper Older Americans Independence Center.

Dr. Chenchen Wang, who is with the division of rheumatology at Tufts Medical Center in Boston, and her colleagues looked at patients seen at Dr. Wang's facility between July 2007 and May 2009.

All patients were at least 21 years old and met American College of Rheumatology (ACR) 1990 diagnostic criteria for fibromyalgia, including "history of widespread musculoskeletal pain on the right and left sides of the body as well as above and below the waist, with a minimum duration of 3 months, and tenderness on pressure at 11 or more of 18 specific sites," Dr. Wang and her associates said.

Patients were excluded from the study if they had any tai chi training or serious comorbidities such as rheumatoid arthritis or other conditions that might limit their mobility; if they were pregnant or planning on becoming pregnant; or if they scored less than 24 out of 30 points on the Mini Mental State Examination.

The primary end point was improvement on the Fibromyalgia Impact Questionnaire (FIQ), which scores symptoms on a scale of 1-100, with 100 being the worst.

Thirty patients completed a 12-week, twice-weekly, 60-minute tai chi program, plus a 24-week evaluation. Participants also were encouraged to practice at home for 20 minutes per day on their own, and "to maintain their tai chi practice, using an instructional DVD, up until the follow-up visit at 24 weeks," the investigators wrote.

Meanwhile, 29 control patients completed a twice-weekly, 60-minute wellness education and stretching program, plus the 24-week follow-up.

The program included a didactic por-

ciates, after 12 weeks the patients in the tai chi group had a significantly greater decrease in their total FIQ score, to 35.1 (-27.8 points, 95% confidence interval -33.8 to -21.8) compared with controls, who fell to 58.6 (-9.4 points, 95% CI, -15.5 to -3.4), for a between-group difference of slightly more than 18 points (*P* less than .001).

The improvement in symptoms held up at the 24-week mark, with a change from baseline among the tai chi group of -28.6 points from baseline (95% CI, -34.8 to -22.4), compared with -10.2

## Despite Its Promise, Tai Chi Needs More Study

### MY TAKE

The findings from the research by Dr. Wang and associates showing that tai chi lessened the severity of fibromyalgia symptoms are provocative and in line with findings from small studies of tai chi in other patient populations.

However, there are other studies that have shown mixed results.

For example, although an 8-week, randomized, controlled study of mindfulness meditation and tai chi-like movements, known as qigong, in 128 patients with fibromyalgia showed significant reductions in pain, disability, and depression, these improvements were no better than those that were seen in the control group, which received educational support (J. Rheumatol. 2003;30:2257-62).

Considering this background, the positive results across all of the out-

come measures that were reported by Dr. Wang and her associates are striking.

Nevertheless, questions remain: How much of the benefit of tai chi is due to a placebo effect? What is an appropriate control for tai chi? And what do these findings mean for clinical practice?

Going forward, replications of this study on a larger scale over longer periods of time are needed, with different practitioners and different styles at multiple sites, as well as determination of the optimal "dose" of tai chi.

Additionally, research should focus on comparisons with similar therapies such as yoga, plus an assessment of cost-effectiveness.

Even so, the potential efficacy and lack of adverse effects now make it reasonable for physicians to support patients' interest in exploring these



types of exercises, even if it is too early to take out a prescription pad and write "tai chi."

Dr. Yeh's remarks are paraphrased from her editorial, which accompanied the research report by Dr. Wang and associates (N. Engl. J. Med. 2010;363:783-4).

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