



# Tai Chi and Qi Gong



© Matthew Lester

---

## What's the Bottom Line?

### How much do we know about tai chi and qi gong?

Several clinical trials have evaluated the effects of tai chi and qi gong in people with various health conditions.

### What do we know about the effectiveness of tai chi and qi gong?

Practicing tai chi may help to improve balance and stability in older people and in those with Parkinson's disease, reduce back pain and pain from **knee osteoarthritis**, and improve quality of life in people with **heart disease, cancer, and other chronic illnesses**. Tai chi and qi gong may ease **fibromyalgia** pain and promote general quality of life. Qi gong may reduce chronic neck pain, but study results are mixed. Tai chi also may improve reasoning ability in older people.

### What do we know about the safety of tai chi and qi gong?

Tai chi and qi gong appear to be safe practices, but it's a good idea to talk with your health care providers before beginning any exercise program.

---

## What Are Tai Chi and Qi Gong?

Tai chi and qi gong are centuries-old, related mind and body practices. They involve certain postures and gentle movements with mental focus, breathing, and relaxation. The movements can be adapted or practiced while walking, standing, or sitting. In contrast to qi gong, tai chi movements, if practiced quickly, can be a form of combat or self-defense.

## What the Science Says About the Effectiveness of Tai Chi and Qi Gong

Research findings suggest that practicing tai chi may improve balance and stability in older people and those with Parkinson's, reduce pain from knee osteoarthritis, help people cope with fibromyalgia and back pain, and promote quality of life and mood in people with heart failure and cancer. There has been less research on the effects of qi gong, but some studies suggest it may reduce chronic neck pain (although

## Tai Chi and Qi Gong

results are mixed) and pain from fibromyalgia. Qi gong also may help to improve general quality of life.

Both also may offer psychological benefits, such as reducing **anxiety**. However, differences in how the research on anxiety was conducted make it difficult to draw firm conclusions about this.

### Falling and Balance

Exercise programs, including tai chi, may reduce falling and the fear of falling in older people. Tai chi also may be more effective than other forms of exercise for improving balance and stability in people with Parkinson's disease.

- A 2012 review determined that tai chi, as well as other group- and home-based activity programs (which often include balance and strength-training exercises) effectively reduced falling in older people, and tai chi significantly reduced the risk of falling. But the reviewers also found that tai chi was less effective in older people who were at higher risk of falling.
- Fear of falling can have a serious impact on an older person's health and life. In a 2014 review, researchers suggested that various types of exercise, including tai chi, may reduce the fear of falling among older people.
- Findings from a 2012 clinical trial with 195 people showed that practicing tai chi improved balance and stability better than resistance training or stretching in people with mild-to-moderate Parkinson's disease. A 2014 followup analysis showed that people who practiced tai chi were more likely to continue exercising during the 3 months following the study compared with those who participated in resistance training or stretching.

### For Pain

There's some evidence that practicing tai chi may help people manage pain associated with knee osteoarthritis (a breakdown of cartilage in the knee that allows leg bones to rub together), fibromyalgia (a disorder that causes muscle pain and fatigue), and back pain. Qi gong may offer some benefit for chronic neck pain, but results are mixed.

### ***Knee Osteoarthritis***

- Results of a small NCCIH-funded clinical trial involving 40 participants with knee osteoarthritis suggested that practicing tai chi reduced pain and improved function better than an education and stretching program.
- An analysis of seven small and moderately-sized clinical studies concluded that a 12-week course of tai chi reduced pain and improved function in people with this condition.

### ***Fibromyalgia***

- Results from a small 2010 NCCIH-supported clinical trial suggested that practicing tai chi was more effective than wellness education and stretching in helping people with fibromyalgia sleep better and cope with pain, fatigue, and depression. After 12 weeks, those who practiced tai chi also had better scores on a survey designed to measure a person's ability to carry out certain daily activities such as walking, housecleaning, shopping, and preparing a meal. The benefits of tai chi also appeared to last longer.
- A small 2012 NCCIH-supported trial suggested that combining tai chi movements with mindfulness allowed people with fibromyalgia to work through the discomfort

## Tai Chi and Qi Gong

they may feel during exercise, allowing them to take advantage of the benefits of physical activity.

- Results of a 2012 randomized clinical trial with 100 participants suggested that practicing qi gong reduced pain and improved sleep, the ability to do daily activities, and mental function. The researchers also observed that most improvements were still apparent after 6 months.

### **Chronic Neck Pain**

- Research results on the effectiveness of qi gong for chronic neck pain are mixed, but the populations that were studied and the study protocols were quite different.
- A 2009 clinical study by German researchers showed no benefit for qi gong or exercise compared with no therapy in 117 elderly adults (mostly women) with an average 20-year history of chronic neck pain. Study participants had 24 exercise or qi gong sessions over 3 months.
- In a 2011 study, some of the same researchers observed that qi gong was just as effective as exercise therapy (and both were more effective than no therapy) in relieving neck pain in the target population—123 middle-aged adults (mostly women) who had chronic neck pain for an average of 3 years. Exercise therapy included throwing and catching a ball, rowing and climbing movements, arm swinging, and stretching, among other activities. People in the study had 18 exercise or qi gong sessions over 6 months.

### **Back Pain**

- In people who had low-back pain for at least 3 months, a program of tai chi exercises was more effective in reducing pain and improving function than whatever the individuals had been doing previously to manage their pain.

### **For Mental Health and Cognitive Function**

While a range of research has suggested a beneficial relationship between exercise and depression and exercise and anxiety symptoms, the role of tai chi and qi gong—for these and other mental health factors is less clear. However, there is evidence that tai chi may boost brain function and reasoning ability in older people.

- NCCIH-supported research suggests that practicing tai chi may help reduce stress, anxiety, and depression, and also improve mood and self-esteem. However, in their 2010 systematic review and meta-analysis, which included 40 studies and more than 3,800 participants, the researchers noted that they could not develop firm conclusions because of differences in study designs.
- In a 2010 NCCIH-supported literature review, researchers found that the results from 29 studies with more than 2,500 participants did not offer clear evidence about the effectiveness of tai chi and qi gong on such psychological factors as anxiety, depression, stress, mood, and self-esteem. But the researchers noted that most of these studies did not look at psychological distress as the primary goal and did not intentionally recruit participants with mental health issues.
- Results from another NCCIH-supported review published in 2014 suggested that practicing tai chi may enhance the ability to reason, plan, remember, and solve problems in older people without significant cognitive impairment.. The data also indicated that tai chi boosted cognitive ability in people who showed signs of mild cognitive impairment to dementia, but to a lesser degree than in those with no signs of cognitive impairment.

## Tai Chi and Qi Gong

### For Quality of Life

Much research suggests that physical activity enhances quality of life. Health providers who treat people with cancer often recommend exercise to reduce illness-related fatigue and improve quality of life. Some studies also suggest that physical activity helps people with heart disease and other chronic illnesses.

### **Cancer**

- Research results indicate that practicing qi gong may improve quality of life, mood, fatigue, and inflammation in adults diagnosed with different types of cancer compared with those receiving usual care. However, the researchers suggested that the attention received by the qi gong participants may have contributed to the positive study findings.

### **Heart Disease**

- Regular practice of tai chi may improve quality of life and mood in people with chronic heart failure, according to a 2011 clinical trial funded by NCCIH.
- Results from a small study suggest that practicing tai chi improves the ability to exercise and may be an option as cardiac rehabilitation for people who have experienced a heart attack.

### **Other**

- A 2010 NCCIH-supported review of the literature examined the effects of tai chi and qi gong on quality of life in studies involving adults who were healthy, elderly, were breast cancer or stroke survivors, or had a chronic disease. The analysis suggested that practicing tai chi or qi gong may improve quality of life in healthy and chronically ill people.

## What the Science Says About Safety of Tai Chi and Qi Gong

Tai chi and qi gong appear to be safe practices. One NCCIH-supported review noted that tai chi is unlikely to result in serious injury but it may be associated with minor aches and pains. Women who are pregnant should talk with their health care providers before beginning tai chi, qi gong, or any other exercise program.

## Training, Licensing, and Certification

Tai chi instructors don't have to be licensed, and the practice is not regulated by the Federal Government or individual states. There's no national standard for qi gong certification. Various tai chi and qi gong organizations offer training and certification programs—with differing criteria and levels of certification for instructors.

## NCCIH-Funded Research

NCCIH is supporting studies of tai chi's effects on:

- Symptoms of anxiety and sleep quality in young adults
- Fibromyalgia
- Knee osteoarthritis.

NCCIH currently is not funding research on qi gong.

## Tai Chi and Qi Gong

### More To Consider

- Learning tai chi or qi gong from a video or book does not ensure that you're doing the movements correctly or safely.
- If you have a health condition, talk with your health care provider before starting tai chi or qi gong.
- Ask a trusted source (such as your health care provider or a nearby hospital) to recommend a tai chi or qi gong instructor. Find out about the training and experience of any instructor you are considering.
- Tell all your health care providers about any complementary or integrative health approaches you use. Give them a full picture of what you do to manage your health. This will help ensure coordinated and safe care.

### For More Information

#### NCCIH Clearinghouse

The NCCIH Clearinghouse provides information on NCCIH and complementary and integrative health approaches, including publications and searches of Federal databases of scientific and medical literature. The Clearinghouse does not provide medical advice, treatment recommendations, or referrals to practitioners.

Toll-free in the U.S.: 1-888-644-6226

TTY (for deaf and hard-of-hearing callers): 1-866-464-3615

Web site: [nccih.nih.gov](http://nccih.nih.gov)

E-mail: [info@nccih.nih.gov](mailto:info@nccih.nih.gov)

#### NIHSeniorHealth

A service of the National Institute on Aging and the National Library of Medicine (NLM), NIHSeniorHealth provides health and wellness information, including complementary health approaches, for older adults.

Web site: [nihseniorhealth.gov](http://nihseniorhealth.gov)

#### PubMed®

A service of NLM, PubMed contains publication information and (in most cases) brief summaries of articles from scientific and medical journals.

Web site: [www.ncbi.nlm.nih.gov/sites/pubmed](http://www.ncbi.nlm.nih.gov/sites/pubmed)

#### NIH Clinical Research Trials and You

The National Institutes of Health (NIH) has created a Web site, NIH Clinical Research Trials and You, to help people learn about clinical trials, why they matter, and how to participate. The site includes questions and answers about clinical trials, guidance on how to find clinical trials through [ClinicalTrials.gov](http://ClinicalTrials.gov) and other resources, and stories about the personal experiences of clinical trial participants. Clinical trials are necessary to find better ways to prevent, diagnose, and treat diseases.

Web site: [www.nih.gov/health/clinicaltrials](http://www.nih.gov/health/clinicaltrials)

## Tai Chi and Qi Gong

### Research Portfolio Online Reporting Tools Expenditures & Results (RePORTER)

RePORTER is a database of information on federally funded scientific and medical research projects being conducted at research institutions.

Web site: [projectreporter.nih.gov/reporter.cfm](http://projectreporter.nih.gov/reporter.cfm)

### Key References

- Gillespie LD, Robertson MC, Gillespie WJ, et al. Interventions for preventing falls in older people living in the community. *Cochrane Database of Systemic Reviews*. 2012;(9):CD007146 [edited 2015]. Accessed at <http://www.cochranelibrary.com> on July 29, 2015.
- Hall AM, Maher CG, Lam P, et al. Tai chi exercise for treatment of pain and disability in people with persistent low back pain: a randomized controlled trial. *Arthritis Care & Research*. 2011;63(11):1576-1583.
- Jahnke R, Larkey L, Rogers C, et al. A comprehensive review of health benefits of qigong and tai chi. *American Journal of Health Promotion*. 2010;24(6):e1-e25.
- Jones KD, Sherman CA, Mist SD, et al. A randomized controlled trial of 8-form tai chi improves symptoms and functional mobility in fibromyalgia patients. *Clinical Rheumatology*. 2012;31(8):1205-1214.
- Kendrick D, Kumar A, Carpenter H, et al. Exercise for reducing fear of falling in older people living in the community. *Cochrane Database of Systemic Reviews*. 2014;(11):CD009848. Accessed at <http://www.cochranelibrary.com> on July 29, 2015.
- Li F, Harmer P, Fitzgerald K, et al. Tai chi and postural stability in patients with Parkinson's disease. *New England Journal of Medicine*. 2012;366(6):511-519.
- Li F, Harmer P, Liu Y, et al. A randomized controlled trial of patient-reported outcomes with tai chi exercise in Parkinson's disease. *Movement Disorders*. 2014;29(4):539-545.
- Lynch M, Sawynok J, Hiew C, et al. A randomized controlled trial of qigong for fibromyalgia. *Arthritis Research & Therapy*. 2012;14(4):R178.
- Nery RM, Zanini M, de Lima JB, et al. Tai chi chuan improves functional capacity after myocardial infarction: a randomized clinical trial. *American Heart Journal*. 2015;169(6):854-860.
- Oh B, Butow P, Mullan B, et al. Impact of medical qigong on quality of life, fatigue, mood and inflammation in cancer patients: a randomized controlled trial. *Annals of Oncology*. 2010;21(3):608-614.
- Rendant D, Pach D, Lütke R, et al. Qigong versus exercise versus no therapy for patients with chronic neck pain: a randomized controlled trial. *Spine*. 2011;36(6):419-427.
- von Trott P, Wiedemann AM, Lütke R, et al. Qigong and exercise therapy for elderly patients with chronic neck pain (QIBANE): a randomized controlled study. *Journal of Pain*. 2009;10(5):501-508.
- Wang C. Tai chi and rheumatic diseases. *Rheumatic Diseases Clinics of North America*. 2011;37(1):19-32.
- Wang C, Bannuru R, Ramel J, et al. Tai chi on psychological well-being: systematic review and meta-analysis. *BMC Complementary and Alternative Medicine*. 2010;10:23.
- Wang C, Schmid CH, Hibberd PL, et al. Tai chi is effective in treating knee osteoarthritis: a randomized controlled trial. *Arthritis and Rheumatism*. 2009;61(11):1545-1553.
- Wang C, Schmid CH, Rones R, et al. A randomized trial of tai chi for fibromyalgia. *New England Journal of Medicine*. 2010;363(8):743-754.
- Wayne PM, Berkowitz DL, Litrownik DE, et al. What do we really know about the safety of tai chi? A systematic review of adverse event reports in randomized trials. *Archives of Physical Medicine and Rehabilitation*. 2014;95(12):2470-2483.
- Wayne PM, Walsh JN, Taylor-Piliae RE, et al. The impact of tai chi on cognitive performance in older adults: a systematic review and meta-analysis. *Journal of the American Geriatrics Society*. 2014;62(1):25-39.
- Yan J-H, Gu W-J, Sun J, et al. Efficacy of tai chi on pain, stiffness and function in patients with osteoarthritis: a meta-analysis. *PLoS One*. 2013;8(4):e61672.
- Yeh GY, McCarthy EP, Wayne PM, et al. Tai chi exercise in patients with chronic heart failure: a randomized clinical trial. *Archives of Internal Medicine*. 2011;171(8):750-757.

## Tai Chi and Qi Gong

### Acknowledgments

NCCIH thanks the following people for their technical expertise and review of the content update of this publication: Kim D. Jones, R.N.C., Ph.D., Oregon Health & Science University; Chenchen Wang, M.D., M.Sc., Tufts-New England Medical Center; Peter M. Wayne, Ph.D., Harvard Medical School; Partap S. Khalsa, D.C., Ph.D., NCCIH; and David Shurtleff, Ph.D., NCCIH.

## Tai Chi and Qi Gong

*This publication is not copyrighted and is in the public domain.*

*Duplication is encouraged.*

---

**NCCIH has provided this material for your information. It is not intended to substitute for the medical expertise and advice of your primary health care provider. We encourage you to discuss any decisions about treatment or care with your health care provider. The mention of any product, service, or therapy is not an endorsement by NCCIH.**

---

U.S. Department of Health & Human Services • National Institutes of Health • National Center for Complementary and Integrative Health

[nccih.nih.gov](http://nccih.nih.gov)