**Tai Chi for Heart Health ~ Articles and Studies**

1. **The Effects of Tai Chi Training in Patients with Heart Failure A Systematic Review and Meta-Analysis**

Front Physiol. 2017; 8: 989. Published online 2017 Dec 7. doi: 10.3389/fphys.2017.00989

PMCID: PMC5770613 PMID: 29375390

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[**https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5770613/**](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5770613/)

´… the outcome in our article suggested that TC is sufficient not only to improve functional exercise capacity by focusing on regulating body movement or posture in patients with HF, but also to evaluate the NYHA functional class.

“Our findings further demonstrated that TC greatly decreased BNP levels and increased LVEF.”

“In conclusion, our results suggested that TC may improve 6-MWD, Qol, LVEF in patients with HF and could be associated with significant reductions in BNP and HR. “

1. **Tai Chi training for patients with coronary heart disease.**

Med Sport Sci. 2008;52:182-94. doi: 10.1159/000134299.

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**Abstract**

Coronary heart disease (CHD) is the leading cause of death in the developed countries and many developing countries. Exercise training is the cornerstone of cardiac rehabilitation program for patients with CHD, and exercise intensities in the 50-70% heart rate reserve have been shown to improve functional capacity.

However, recent studies found exercise with lower intensity also displayed benefits to CHD patients, and increased the acceptance of exercise program, particularly unfit and elderly patients. Tai Chi Chuan (TC) is a traditional conditioning exercise in the Chinese community, and recently it has become more popular in the Western societies. The exercise intensity of TC is low to moderate, depending on the training style, posture and duration. Participants can choose to perform a complete set of TC or selected movements according to their needs.

Previous research substantiates that TC enhances aerobic capacity, muscular strength, endothelial function and psychological wellbeing. In addition, TC reduces some cardiovascular risk factors, such as hypertension and dyslipidemia.

Recent studies have also proved that TC is safe and effective for patients with myocardial infarction, coronary bypass surgery and heart failure. Therefore, TC may be prescribed as an alternative exercise program for selected patients with cardiovascular diseases. In conclusion, TC has potential benefits for patients with CHD, and is appropriate for implementation in the community.

PMID: 18487898 DOI: 10.1159/000134299 [https://www.karger.com/Article/Abstract/134299#](https://www.karger.com/Article/Abstract/134299)

1. Tai Chi Boosts Quality of Life in Patients with Heart Disease

Oct 25, 2017

Tai chi shows promise for people with heart disease who decline traditional rehab programs.

[](https://www.cardiosmart.org/News-and-Events/2017/10/Tai-Chi-Boosts-Quality-of-Life-in-Patients-with-Heart-Disease#37AECC91560346AC93849893DB4D6EF2)

Tai chi is a promising alternative for patients who don’t want to attend cardiac rehabilitation after a heart attack, based on a recent study that links a 6-month tai chi program to weight loss and improved quality of life

Published in the *Journal of the American Heart Association*, this study tested whether tai chi may be useful for patients who decline going to cardiac rehab.

Cardiac rehab is a comprehensive program that helps patients build up their strength after a heart attack, adopt heart-healthy behaviors and take control of any risk factors that put them at increased risk for future heart events. While cardiac rehab is strongly recommended for all patients after heart attack, an estimated 60% of patients decline participation. Experts wonder if a less intensive program like tai chi may be useful and appealing for patients who are unwilling to participate in a complete cardiac rehab program.

To learn more, researchers tested a tai chi program in 29 patients with heart disease who were generally inactive. Tai chi is a traditional Chinese martial art that involves gentle body movements accompanied by relaxation and breathing exercises.

One group of participants participated in a “lite” program which included two tai chi sessions a week for three months. The second group participated in three sessions a week for three months, followed by maintenance classes for three additional months. The goal was to see whether tai chi is safe, enjoyable, and has any impact on participants’ health and quality of life.

After following participants for nine months, researchers found that tai chi shows promise for patients with existing heart disease. Participants in the intensive tai chi program were significantly more active, lost more weight and reported a higher quality of life compared to those in the less intensive group. There were also no safety issues reported and roughly 90% of participants completed the program, suggesting that tai chi is both safe and well-accepted by patients.

While cardiac rehab is still the best option for patients with heart disease, experts are encouraged by findings. Tai chi may be a useful form of exercise for cardiac rehab programs, as it’s safe for high-risk patients. Findings also suggest that tai chi alone may be beneficial for patients who are unwilling to participate in a rehab program.

The next step, according to authors, is to study whether tai chi actually improves outcomes, such as reducing risk for heart events and increasing survival.

<https://www.cardiosmart.org/News-and-Events/2017/10/Tai-Chi-Boosts-Quality-of-Life-in-Patients-with-Heart-Disease>

1. **Tai Chi Is a Promising Exercise Option for Patients With Coronary Heart Disease Declining Cardiac Rehabilitation**

Elena Salmoirago-Blotcher, MD, PhD; Peter M. Wayne, PhD; Shira Dunsiger, PhD; Julie Krol, MS; Christopher Breault, BS; Beth C. Bock, PhD; Wen-Chih Wu, MD, MPH; Gloria Y. Yeh, MD, MPH

**Conclusions** - In this community sample of patients with coronary heart disease declining enrollment in cardiac rehabilitation, a 6-month tai chi program was safe and improved PA, weight, and quality of life compared with a 3-month intervention. Tai chi could be an effective option to improve PA in this high-risk population.

<https://www.ahajournals.org/doi/pdf/10.1161/JAHA.117.006603>

1. **Abstract 17099: Selective Improvement of Quality of Life and Perceived Exercise Capacity Compared to Measured Exercise Capacity After Tai Chi Training: A Randomized Controlled Trial in Chronic Stable Heart Failure**

CORE 5. MYOCARDIUM: FUNCTION AND FAILURE

SESSION TITLE: HEART FAILURE: PROGNOSTIC AND THERAPEUTIC OPTIONS

Gloria Yeh , Ellen McCarthy , Peter Wayne , Lynne Stevenson , Malissa Wood , Daniel Forman , Roger Davis , and Russell Phillips

Originally published23 Nov 2010Circulation. 2010;122:A17099

<https://www.ahajournals.org/doi/10.1161/circ.122.suppl_21.A17099>

**Abstract**

Objective: To investigate whether a tailored 12-week tai chi exercise program as an adjunct to standard care improves health related quality of life and functional capacity in patients with chronic heart failure (HF).

**Subjects And Methods:** We randomized 100 patients with chronic systolic HF (New York Heart Association Class 1–3, left ventricular ejection fraction ≤ 40%) to a 12-week group tai chi exercise program (n=50), or to a time-matched HF education control (n=50). Baseline impairment was moderate (mean peak VO2 13.5 ml/kg/min). Our primary outcomes were quality of life (Minnesota Living with HF questionnaire-MLHF) and exercise capacity (peak oxygen uptake on cardiopulmonary exercise stress test and six-minute-walk). Secondary outcomes explored the effect of tai chi exercise on psychosocial and physiological indices including exercise self-efficacy (Cardiac Exercise Self-Efficacy Scale- CESE, range 1–5) and mood (Profile of Mood States- POMS).

**Results:** The mean age (±SD) of study patients was 67±11 years, mean baseline EF was 29±8%, median NYHA class 2. At the end of 12 weeks, patients randomized to tai chi reported improvements in MLHF quality of life scores compared to the control group (change±SD of -13.7±16.3 vs -5.9 ±18.2, p=0.02, adjusted for baseline MLHF). Similarly, there were meaningful improvements in both exercise self-efficacy (+0.3±0.5 vs. -0.1 ±0.6, p<0.001) and mood (POMS Total Mood Disturbance -9±12 vs. 0±18, p=0.01) in the tai chi group. However, both groups had equal improvements in six-minute walk distance and peak oxygen uptake (+29 ±71vs. +27±59 meters, p=0.9 and +0.4±2.7 vs. 0.3 ±2.2 ml/kg/min, p=0.9, adjusted for baseline values).

**Conclusion:** A 12-week group tai chi mind-body exercise program improved disease-specific quality of life, perceived exercise self-efficacy, and mood in patients with chronic HF even in the absence of differential improvement in measured exercise capacity compared to patients receiving only group attention and education.

1. **Tai chi: A kinder, gentler approach to cardiac rehab?**

This easy, stress-relieving exercise may help heal your heart.

Published: February, 2018

***Harvard Health Publishing: Harvard Medical School***

<https://www.health.harvard.edu/heart-health/tai-chi-a-kinder-gentler-approach-to-cardiac-rehab>

If you have a heart attack or undergo stenting, improving your cardiovascular health should be a top priority. A great way to move toward that goal is to enroll in cardiac rehabilitation, a multiweek program of structured exercise paired with lifestyle and nutrition education.

Unfortunately, not all doctors refer their patients to such a program, which is recommended for a number of conditions, including most heart surgeries. Also, for a range of reasons, more than 60% of eligible people choose not to attend cardiac rehab. Sometimes travel and cost issues are barriers. But others worry that the exercise component of the program will be too difficult or tiring. For them, the ancient Chinese practice of tai chi may be a good alternative, according to a small study in the Oct. 11, 2017, *Journal of the American Heart Association*.

"Tai chi is not as physically demanding as many other forms of exercise and may also help reduce stress," says Dr. Krishna Aragam, a cardiology fellow at Harvard-affiliated Massachusetts General Hospital, co-author of an editorial that accompanied the report. Sometimes described as "meditation in motion," tai chi is a gentle exercise that involves a series of flowing movements and breath awareness (see "Trying out tai chi: What to expect").

Trying out tai chi: What to expect

If you're up for trying tai chi, look for a beginner's class at a senior or community center, health club, or hospital. Many of the 58 academic health centers throughout the United States with integrative health programs offer tai chi classes. Some cardiac rehabilitation programs, including those affiliated with several Harvard teaching hospitals, incorporate tai chi in their programs. Also, many assisted living facilities offer tai chi classes free for their residents.

Hour-long classes typically cost around $15, and some centers allow you to pay by the week, month, or several months. Wear loose, comfortable clothing, and supportive shoes like sneakers (or no shoes, if you prefer). During the class, the instructor will demonstrate graceful, slow arm and leg movements, often done with a slight bend in the knees. The sequence of poses can be done standing or while seated in a chair.

Some of the movements have evocative descriptions, such as "wave hands like clouds" or "white crane spreads its wings," which encourage people to stay centered and focused, yet relaxed.

As an alternative to starting out with a class, you might want to check out the Harvard Medical School Special Health Report, An Introduction to Tai Chi(www.health.harvard.edu/tai). The electronic version includes links to videos demonstrating the moves.

**Safe, feasible, and popular**

For the study, researchers recruited people who declined to participate in traditional cardiac rehab and offered them tai chi classes as an alternative. Twenty-nine people signed up and were assigned to a "lite" group (classes twice a week for three months) or a "plus" group (classes three times a week for six months).

Aside from some reports of mild muscle strain at the beginning of the program, tai chi proved to be safe and feasible. And people liked the program — 95% gave it a favorable rating, and all said they'd recommend it to a friend. Over all, they attended about two-thirds of the classes. Those in the "plus" group boosted the amount of moderate physical activity they did at three and six months, as measured by a wearable device.

**A range of benefits**

Earlier research has shown that practicing tai chi may help to modestly lower blood pressure. It's also proved helpful for people with heart failure, who tend to be tired and weak as a result of the heart's diminished pumping ability. The slow movements involve both the upper and lower body, which safely strengthens the heart and major muscle groups without undue strain.

Tai chi's main benefit may be to encourage people who are reluctant to exercise to move more. The practice also emphasizes breathing, focused attention, and visualization. All of those factors seem to help lower stress — something doctors increasingly realize plays a key role in preventing heart disease. Still, as Dr. Aragam points out, people recovering from a heart attack would likely also benefit from other components of cardiac rehab, such as diet coaching and medication management (and for some, help with quitting smoking). In the future, says Dr. Aragam, doctors may be able to tailor cardiac rehab to meet each person's specific needs and preferences — especially for people who are reluctant to participate in a comprehensive program.

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