

How to Prescribe Tai Chi Therapy

Jennifer Allen, BSN, BS, RN¹,
and Jan Meires, EdD, FNP, BC¹

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Abstract

Exercise has been shown to positively influence quality of life for people with a wide variety of medical illnesses. Tai chi, a slow and graceful form of exercise and meditation, has been offered as the ideal exercise for diverse conditions such as chronic heart failure and for breast cancer survivors. In one recent study, tai chi was found to improve exercise capacity, sleep stability, and quality of life in heart failure patients. Another study focusing on breast cancer survivors revealed tai chi to be superior to psychosocial support in increasing aerobic capacity, muscular strength, flexibility, and quality of life. Primary care providers can play a vital role in encouraging their patients with chronic illnesses to participate in safe forms of exercise such as tai chi in order to improve their healing experience, physical function, and overall quality of life.

Keywords

holistic health, transcultural health, tai chi, Chinese

Exercise has been shown to positively influence quality of life for those with a wide variety of medical illnesses, including multiple forms of cancer, hypertension, and chronic pain (Lee, Pittler, & Ernst, 2007a; Mishra et al., 2009; Taylor-Piliae & Haskell, 2007). Tai chi, a slow and graceful form of exercise and meditation, originated from bird and animal watching more than a half century ago in China (Taylor-Piliae, Haskell, Waters, & Froelicher, 2006). Based on the philosophy of yin and yang, tai chi consists of posture-enhancing, center-of-gravity, slow movements supported with deep breathing and meditation.

Tai chi exercises promote balance, coordination, and relaxation (Taylor-Piliae & Haskell, 2007). Participants are instructed to plant their feet into the floor, use their waist as the center of gravity, and turn the whole body in slow, flowing movements, all the while maintaining a calm, inner sense of peace. The symbol for tai chi (see Figure 1) represents harmony between yin and yang, with yin representing shade and tranquility and yang representing sun and aggressiveness. The ancients likened the balancing nature of tai chi to the sun moving over the sky, with yin and yang exchanging positions with one another, illuminating what was previously hidden and covering what was previously known (Osgood & Richards, 1973).

Tai chi classes are becoming more prevalent in a variety of settings in the United States, including hospitals such as the Mayo Clinic and YMCA facilities (see Table 1). Videotapes, cable programs, and DVDs are also widely available for beginner and advanced tai chi instruction. These formats of learning facilitate successful adherence to a consistent exercise regimen.

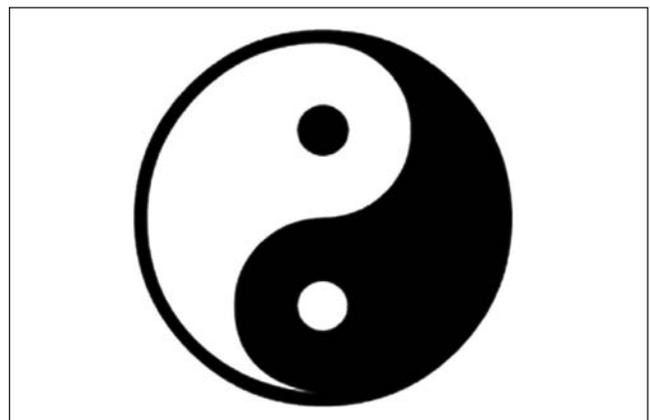


Figure 1. Tai chi symbol

Several literature reviews on tai chi therapy have been written recently, focusing on clinical conditions, including fatigue, pain, and quality of life, and diseases such as stroke, rheumatoid arthritis, and cancer (Lee, Pittler, & Ernst, 2007a, 2007b; Taylor-Piliae & Haskell, 2007). Table 2 presents the findings from these quantitative studies.

¹University of North Florida, Jacksonville, FL, USA

Corresponding Author:

Jennifer Allen, University of North Florida, Jacksonville, FL, USA
Email: spiremusic@yahoo.com

Table 1. Fact Sheet

What is tai chi? Balance and coordination-promoting exercises that emphasize deep breathing and meditation.

Who is it for? Anyone who wishes to improve their physical and mental functioning. Specifically, it has been illustrated to be beneficial for breast cancer, chronic heart failure, and rheumatoid arthritis patients.

Are there any side effects? Studies reveal tai chi is a safe alternative form of exercise and has not shown any untoward effects for its participants.

Where are tai chi classes offered? Many local hospitals provide classes, such as the Mayo Clinic (free), as well as the YMCAs (membership fee based on income) and senior citizen community centers. See the following links for more information.

http://www.jacksonville.com/tu-online/stories/053007/nes_173380255.shtml

<http://www.mayoclinic.org/patienteducation-rst/taichi.html>

<http://jax.shands.org/patients/support.asp>

Table 2. Study Results

Author, Year	Study Design	Medical Condition/Focus and Intervention	Outcomes
Lee, Pittler, and Ernst (2007a)	Review of 3 RCTs and 1 CCT	<i>Breast cancer</i> , tai chi 6-12 weeks, 1-3 times weekly	2 RCTs showed improved health-related quality of life, self-esteem, muscle strength, 6-minute walking test, and flexibility; 1 RCT showed NS benefit; CCT showed improved range of motion, psychosocial function, and quality of life
Lee, Pittler, and Ernst (2007b)	Review of 2 RCTs and 3 CCTs	<i>Rheumatoid arthritis</i> , tai chi 6-12 weeks, 1-2 times weekly	<i>Pain</i> : 2 RCTs showed NS change, 1 CCT showed significant improvement <i>Fatigue</i> : 1 RCT showed NS change; 1 CCT showed significant improvement <i>Range of motion/joint function</i> : 2 CCTs showed NS change <i>Depression/mood</i> : 2 RCTs showed significant improvement <i>Functional index</i> : 1 RCT showed significant improvement; 1 CCT showed NS change <i>Quality of life</i> : 1 RCT showed significant improvement
Mustian, Palesh, and Flecksteiner (2008)	RCT	<i>Breast cancer</i> , tai chi for 12 weeks, 3 times weekly	The tai chi group showed significant improvement in aerobic capacity, handgrip strength, flexibility, and quality of life
Taylor-Piliae and Haskell (2007)	Review of 12 RCTs, 17 CCTs, and 11 cross-sectional studies	<i>Balance</i> , tai chi 6-48 weeks, 1-3 times weekly <i>Blood pressure</i> , tai chi 8-52 weeks, 1-3 times weekly <i>Mood</i> , tai chi 8-16 weeks, 3 times weekly	<i>Balance</i> : Even though the studies had various design limitations, tai chi showed significant improvement <i>Blood pressure</i> : Most of the studies showed a reduction in blood pressure within the tai chi group. Only one study, however, revealed a significant difference in systolic blood pressure decreases between the tai chi group and the control group, with a greater reduction seen the tai chi group <i>Mood</i> : Significant improvements were noted to have occurred in mood and depression for tai chi participants
Yeh, Wood, and Lorell et al. (2008)	RCT	<i>Chronic heart failure</i> , tai chi for 12 weeks, 2 times weekly	The tai chi group showed significant improvement in quality of life, 6-minute walk distance, and serum B-type natriuretic peptide levels. Trend toward improvement in peak oxygen uptake. NS change in catecholamine levels

Note: NS = not significant; RCT = randomized controlled trial; CCT = controlled clinical trial.

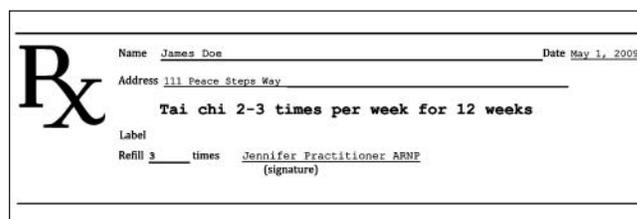
Tai chi specifically has been offered as the ideal exercise for chronic heart failure patients (Yeh, Wayne, & Phillips, 2008). These patients frequently experience fatigue, which contributes

to their becoming sedentary and physically deconditioned. Yeh et al. (2008) investigated tai chi's effectiveness in improving exercise capacity, sleep stability, and quality of life.

Thirty chronic heart failure patients were randomly assigned to either receive tai chi therapy plus their usual care or receive only their usual care (i.e., medication, diet, and exercise counseling per American Heart Association recommendations). The tai chi group received 1-hour classes twice per week for a duration of 12 weeks. Exercise capacity, which was measured using the 6-minute walk test, was shown to be significantly improved in the tai chi participants. Quality of life, as measured by the Minnesota Living With Heart Failure Questionnaire, was also significantly improved in the tai chi group. Sleep stability, as measured by retrospective sleep spectrogram analysis, was also seen to be positively influenced by the tai chi therapy. The patients in the tai chi classes reported a high level of satisfaction in participating in the therapy, and nearly all the patients intended to continue engaging in tai chi after completion of the study.

Cancer patients, particularly breast cancer patients, frequently experience debilitating side effects from the various modalities of treatment, including surgery, chemotherapy, and radiation therapy. Mustian, Palesh, and Flecksteiner (2008) investigated tai chi exercise and its effectiveness for breast cancer survivors. The authors noted that other studies had been carried out on breast cancer patients using conventional forms of exercise, such as cycling or walking, but that successful adherence to the program diminished over time. Mustian et al. (2008) compared the effectiveness of tai chi versus psychosocial support for breast cancer survivors. Baseline measurements were obtained in the areas of aerobic capacity, muscular strength, flexibility, and quality of life. The interventional group received 12 weeks of tai chi classes, and the control group received psychosocial support, which emphasized coping skills and social interaction. At 6 and 12 weeks, the outcomes of interest were measured in both groups. The tai chi group achieved significant improvements in aerobic capacity, handgrip strength, flexibility, and quality of life, with greater improvements achieved over time. The psychosocial support group revealed increases in only abduction under the flexibility measurements, with declines illustrated in aerobic capacity, handgrip strength, other measurements of flexibility, and quality of life. The authors surmised that tai chi may benefit breast cancer survivors in ways that are not addressed by psychosocial supportive care. They suggested that further research be carried out to illustrate exactly which components of tai chi, that is, the physical part or the mental part, contribute most to the positive outcomes. Perhaps a combination of the two is the key to its effectiveness and may be superior to exercise or social support as single therapy modalities.

Qualitative information was gathered by Yau (2008) to gain an understanding of tai chi's meaning to those who practice it on a regular basis. Yau put together four focus groups of Hong Kong residents aged 55 years and older who participated in tai chi exercise. A total of 18 people comprised the



Rx	Name <u>James Doe</u>	Date <u>May 1, 2009</u>
	Address <u>111 Peace Steps Way</u>	
Tai chi 2-3 times per week for 12 weeks		
Label		
Refill <u>3</u> times	<u>Jennifer Practitioner ARNP</u> (signature)	

Figure 2. Prescription pad example

focus groups, and most of them practiced tai chi on a daily basis for 1 hour for an average of 8.5 years. Yau used recordings from the focus groups, which were later transcribed and coded by independent researchers. Yau discovered two key thoughts from the recordings: Practicing tai chi clarifies life's significance and sense, and it gives way to a feeling of overall well-being and stamina. The participants tended to plan their daily schedules around tai chi. They elucidated how tai chi served as an "anchor" and "set the tone of the day" (p. 162). In addition, the participants placed a high importance on the social experience of group practice, which gave them a supportive network of friends who shared in their lives. When the participants were asked if they thought their tai chi exercise improved quality of life, they initially could not relate to the concept. However, after the researchers provided examples and further information, the participants understood what they were being asked. They explained that the psychosocial and way-of-life aspects of tai chi practice led to better quality of life than the physical aspect. They proclaimed that tai chi helped them have better memory, better marriages, and better overall stress relief. Yau acknowledged that since the participants were all loyal followers of tai chi, the information gained from the focus groups could be biased.

Primary care providers can play a vital role in encouraging their patients with chronic illnesses to participate in safe forms of exercise such as tai chi to improve their healing experience, physical function, and overall quality of life. Clinicians practicing in acute and chronic care settings have the opportunity to educate their clients on the health benefits of tai chi and refer them to local centers where classes are offered. Perhaps clinicians could hand out a schedule of tai chi classes offered at a local facility to help motivate their clients to take action. Most of the studies that illustrated positive benefits from tai chi therapy were for a duration of 12 weeks, 2 to 3 times weekly. As a low-cost and low-impact exercise, a prescription for tai chi serves as an effective alternative for individuals in need of an exercise program (see Figure 2).

In summary, tai chi therapy has the advantage of improving the physical and mental well-being for those with a variety of diseases and disorders. Tai chi may be practiced in any environment without any special equipment. Classes are becoming increasingly prevalent in community and health care facilities, and practicing tai chi at home is an option as

well with the availability of tai chi DVDs and television programs. Future studies are needed to confirm tai chi's effectiveness and long-term compliance in patients to ideally discover ways in which health care providers may help their patients achieve and maintain wellness through this alternative form of exercise.

Declaration of Conflicting Interests

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