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*Geriatr Gerontol Int.* 2013 Jan;13(1):3-12. doi: 10.1111/j.1447-0594.2012.00882.x. Epub 2012 Jun 10.

## Tai chi and reduction of depressive symptoms for older adults: A meta-analysis of randomized trials.

Chi I, Jordan-Marsh M, Guo M, Xie B, Bai Z.

School of Social Work, University of Southern California, Los Angeles, California School of Social Work, University of Iowa, Iowa City, Iowa School of Community and Global Health, Claremont Graduate University, Claremont, California, USA Evidence-Based Medicine Center of Lanzhou University, Lanzhou University, Lanzhou, Gansu, China.

### Abstract

The aim of the present article was to systematically review the effectiveness of tai chi for reducing depressive symptoms among older adults. Electronic databases were searched through January 2011. Reference lists of systematic reviews and identified studies from the search strategy were also screened. Randomized controlled trials of tai chi compared with waiting list controls in older adults with depressive symptoms measured by a self-report depression rating scale were included. Two authors independently identified eligible studies, extracted data and assessed the included studies for risk of bias. Estimates of depressive symptoms reduction used a random effects model, and the I(2) statistic was applied to examine heterogeneity. Four trials with a total of 253 participants met the inclusion criteria. Two studies were assessed as being of high quality; the remaining two studies were rated as moderate quality. All four studies compared tai chi with a waiting list control group. The pooled standard mean difference for these studies was -0.27 (95% CI -0.52 to -0.02,  $P = 0.03$ ). Tai chi appeared to have a significant impact on reducing depressive symptoms compared with the waiting list control groups. Further research is recommended with larger sample sizes, more clarity on trial design and the intervention, longer-term follow up, and concomitant economic evaluations. *Geriatr Gerontol Int* 2013; 13: 3-12.

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PMID: 22680972 [PubMed - in process]

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[Evid Based Complement Alternat Med.](#) 2012;2012:923925. doi: 10.1155/2012/923925. Epub 2012 Nov 24.

## Tai-chi for residential patients with schizophrenia on movement coordination, negative symptoms, and functioning: a pilot randomized controlled trial.

Ho RT, Au Yeung FS, Lo PH, Law KY, Wong KO, Cheung IK, Ng SM.

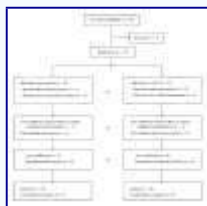
Department of Social Work and Social Administration, The University of Hong Kong, Hong Kong ; Centre on Behavioral Health, The University of Hong Kong, Hong Kong.

### Abstract

**Objective.** Patients with schizophrenia residing at institutions often suffer from negative symptoms, motor, and functional impairments more severe than their noninstitutionalized counterparts. **Tai-chi** emphasizes body relaxation, alertness, and movement coordination with benefits to balance, focus, and stress relief. This pilot study explored the efficacy of **Tai-chi** on movement coordination, negative symptoms, and functioning disabilities towards schizophrenia. **Methods.** A randomized waitlist control design was adopted, where participants were randomized to receive either the 6-week **Tai-chi** program and standard residential care or only the latter. 30 Chinese patients with schizophrenia were recruited from a rehabilitation residency. All were assessed on movement coordination, negative symptoms, and functional disabilities at baseline, following intervention and 6 weeks after intervention. **Results.** **Tai-chi** buffered from deteriorations in movement coordination and interpersonal functioning, the latter with sustained effectiveness 6 weeks after the class was ended. Controls showed marked deteriorations in those areas. The **Tai-chi** group also experienced fewer disruptions to life activities at the 6-week maintenance. There was no significant improvement in negative symptoms after **Tai-chi**. **Conclusions.** This study demonstrated encouraging benefits of **Tai-chi** in preventing deteriorations in movement coordination and interpersonal functioning for residential patients with schizophrenia. The ease of implementation facilitates promotion at institutional psychiatric services.

PMID: 23304224 [PubMed - in process] PMCID: PMC3524789 [Free PMC Article](#)

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Disabil Rehabil. 2012 Nov 20. [Epub ahead of print]

## **Efficacy of supervised Tai Chi exercises versus conventional physical therapy exercises in fall prevention for frail older adults: a randomized controlled trial.**

Tousignant M, Corriveau H, Roy PM, Desrosiers J, Dubuc N, Hébert R.

Research Centre on Aging, University Institute of Geriatrics of Sherbrooke, Faculty of Medicine and Health Sciences, Université de Sherbrooke, Sherbrooke, Québec, Canada.

### **Abstract**

**Purpose:** To compare the effectiveness of supervised **Tai Chi** exercises versus the conventional physical therapy exercises in a personalized rehabilitation program in terms of the incidence and severity of falls in a frail older population. **Method:** The participants were frail older adults living in the community, admitted to the day hospital program in Sherbrooke, Quebec, Canada (n = 152). They were randomized to receive a 15-week intervention, either by supervised **Tai Chi** exercises (n = 76) or conventional physical therapy (n = 76). Fall incidence and severity were assessed using both the calendar technique and phone interviews once a month during 12 months following the end of the intervention. Other variables were collected at baseline to compare the two groups: age, comorbidity, balance, sensory interaction on balance, and self-rated health. **Results:** Both interventions demonstrated a protective effect on falls but **Tai Chi** showed a greater one (RR = 0.74; 95% CI = 0.56-0.98) as compared to conventional physical therapy exercises. **Conclusions:** Supervised **Tai Chi** exercises as part of a rehabilitation program seem to be a more effective alternative to the conventional physical therapy exercises for this specific population. [Box: see text].

PMID: 23167499 [PubMed - as supplied by publisher]

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[Qual Life Res.](#) 2012 Nov 10. [Epub ahead of print]

## The effect of Tai Chi on health-related quality of life in people with elevated blood glucose or diabetes: a randomized controlled trial.

[Liu X](#), [Miller YD](#), [Burton NW](#), [Chang JH](#), [Brown WJ](#).

School of Human Movement Studies, The University of Queensland, Brisbane, QLD, 4076, Australia, [xin.liu@uqconnect.edu.au](mailto:xin.liu@uqconnect.edu.au).

### Abstract

**PURPOSE:** The aim was to assess the effects of a **Tai Chi**-based program on health-related quality of life (HR-QOL) in people with elevated blood glucose or diabetes who were not on medication for glucose control.

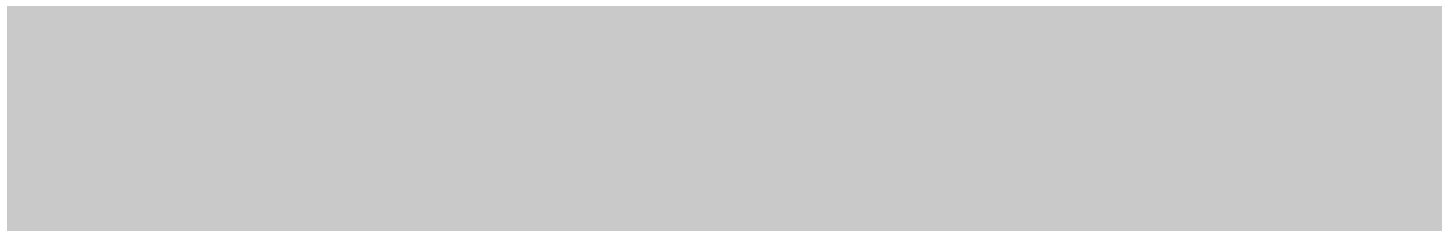
**METHOD:** 41 participants were randomly allocated to either a **Tai Chi** intervention group (N = 20) or a usual medical-care control group (N = 21). The **Tai Chi** group involved 3 × 1.5 h supervised and group-based training sessions per week for 12 weeks. Indicators of HR-QOL were assessed by self-report survey immediately prior to and after the intervention.

**RESULTS:** There were significant improvements in favor of the **Tai Chi** group for the SF36 subscales of physical functioning (mean difference = 5.46, 95 % CI = 1.35-9.57, P < 0.05), role physical (mean difference = 18.60, 95 % CI = 2.16-35.05, P < 0.05), bodily pain (mean difference = 9.88, 95 % CI = 2.06-17.69, P < 0.05) and vitality (mean difference = 9.96, 95 % CI = 0.77-19.15, P < 0.05).

**CONCLUSIONS:** The findings show that this **Tai Chi** program improved indicators of HR-QOL including physical functioning, role physical, bodily pain and vitality in people with elevated blood glucose or diabetes who were not on diabetes medication.

PMID: 23143590 [PubMed - as supplied by publisher]

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*J Pain Symptom Manage.* 2012 Sep 24. pii: S0885-3924(12)00375-2. doi: 10.1016/j.jpainsymman.2012.04.009. [Epub ahead of print]

## **A Pilot Cluster-Randomized Trial of a 20-Week Tai Chi Program in Elders With Cognitive Impairment and Osteoarthritic Knee: Effects on Pain and Other Health Outcomes.**

Tsai PF, Chang JY, Beck C, Kuo YF, Keefe FJ.

College of Nursing, University of Arkansas for Medical Sciences, Little Rock, Arkansas. Electronic address: tsaipaofeng@uams.edu.

### **Abstract**

**CONTEXT:** Because **Tai Chi** (TC) is beneficial to elders without cognitive impairment (CI), it also may benefit elders with CI. But elders with CI have generally been excluded from TC studies because many measurement tools require verbal reports and some elders with CI are unable to provide.

**OBJECTIVES:** To test the efficacy of a TC program in improving pain and other health outcomes in community-dwelling elders with knee osteoarthritis (OA) and CI.

**METHODS:** This pilot cluster-randomized trial was conducted between January 2008 and June 2010 (ClinicalTrials.gov Identifier: NCT01528566). The TC group attended Sun style TC classes, three sessions a week for 20 weeks; the control group attended classes providing health and cultural information for the same length of time. Measures included the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) pain, physical function and stiffness subscales; the Get Up and Go test; the Sit-to-Stand test; and the Mini-Mental State Examination (MMSE), administered at baseline, every four weeks during the intervention and at the end of the study (posttest).

**RESULTS:** Eight sites participated in either the TC group (four sites, 28 participants) or control group (four sites, 27 participants). The WOMAC pain ( $P=0.006$ ) and stiffness scores ( $P=0.010$ ) differed significantly between the two groups at posttest, whereas differences between the two groups in the WOMAC physical function score ( $P=0.071$ ) and the MMSE ( $P=0.096$ ) showed borderline significance at the posttest. WOMAC pain ( $P=0.001$ ), physical function ( $P=0.021$ ), and stiffness ( $P\leq 0.001$ ) scores improved significantly more over time in the TC group than in controls. No adverse events were found in either group.

**CONCLUSION:** Practicing TC can be efficacious in reducing pain and stiffness in elders with knee OA and CI.

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Cancer Nurs. 2012 Oct 9. [Epub ahead of print]

## Regular Tai Chi Exercise Decreases the Percentage of Type 2 Cytokine-Producing Cells in Postsurgical Non-Small Cell Lung Cancer Survivors.

Wang R, Liu J, Chen P, Yu D.

Author Affiliations: School of Kinesiology, Shanghai University of Sport, China.

### Abstract

**BACKGROUND::** **Tai Chi** combines aspects of meditation and aerobic exercise. Its effect on the balance between cellular and humoral immunity, which potentiates human immunity against tumors, remains to be determined. **OBJECTIVE::** The objective was to investigate the effect of a 16-week **Tai Chi** exercise intervention on the recovery of postsurgical non-small cell lung cancer survivors.

**INTERVENTIONS/METHODS::** A controlled study was performed in 32 lung cancer survivors who practiced **Tai Chi** during a 16-week period. The percentages of interferon  $\gamma$ -producing CD3 T lymphocyte cells (T1) and interleukin 4-producing CD3 T lymphocyte cells (T2) and CD3 T lymphocyte subsets (T helper cell type 1 [TH1], TH2; cytotoxic T cell type 1 [Tc1], Tc2) were determined as well as levels of hormones  $\beta$ -endorphin, general catecholamines, and cortisol. **RESULTS::** Whereas the T1/T2 and Tc1/Tc2 ratios in the control group decreased in the natural course of postsurgical non-small cell lung cancer recovery (both  $P < .01$ ), no changes were observed in the **Tai Chi** group. The differences in changes in the T1/T2 and Tc1/Tc2 ratios (both  $P < .01$ ) and in T2 and Tc2 levels ( $P < .01$ ) between the 2 groups were significant. The cortisol level increased in the control group ( $P < .05$ ) but not in **Tai Chi** group. **CONCLUSIONS::** A 16-week **Tai Chi** exercise significantly diminished the magnitude of the decreased T1/T2 ratio in the natural course of recovery in a population of postsurgical non-small cell lung cancer survivors. **IMPLICATIONS FOR PRACTICE::** **Tai Chi** may have a role in ameliorating the imbalance between humoral and cellular immunity, potentiating human immunity against tumors.

PMID: 23051870 [PubMed - as supplied by publisher]

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Cochrane Database Syst Rev. 2012 Sep 12;9:CD007146. doi: 10.1002/14651858.CD007146.pub3.

## Interventions for preventing falls in older people living in the community.

Gillespie LD, Robertson MC, Gillespie WJ, Sherrington C, Gates S, Clemson LM, Lamb SE.

Department of Medicine, Dunedin School of Medicine, University of Otago, Dunedin, New Zealand.  
lesley.gillespie@otago.ac.nz.

### Abstract

**BACKGROUND:** Approximately 30% of people over 65 years of age living in the community fall each year. This is an update of a Cochrane review first published in 2009.

**OBJECTIVES:** To assess the effects of interventions designed to reduce the incidence of falls in older people living in the community.

**SEARCH METHODS:** We searched the Cochrane Bone, Joint and Muscle Trauma Group Specialised Register (February 2012), CENTRAL (The Cochrane Library 2012, Issue 3), MEDLINE (1946 to March 2012), EMBASE (1947 to March 2012), CINAHL (1982 to February 2012), and online trial registers.

**SELECTION CRITERIA:** Randomised trials of interventions to reduce falls in community-dwelling older people.

**DATA COLLECTION AND ANALYSIS:** Two review authors independently assessed risk of bias and extracted data. We used a rate ratio (RaR) and 95% confidence interval (CI) to compare the rate of falls (e.g. falls per person year) between intervention and control groups. For risk of falling, we used a risk ratio (RR) and 95% CI based on the number of people falling (fallers) in each group. We pooled data where appropriate.

**MAIN RESULTS:** We included 159 trials with 79,193 participants. Most trials compared a fall prevention intervention with no intervention or an intervention not expected to reduce falls. The most common interventions tested were exercise as a single intervention (59 trials) and multifactorial programmes (40 trials). Sixty-two per cent (99/159) of trials were at low risk of bias for sequence generation, 60% for attrition bias for falls (66/110), 73% for attrition bias for fallers (96/131), and only 38% (60/159) for allocation concealment. Multiple-component group exercise significantly reduced rate of falls (RaR 0.71, 95% CI 0.63 to 0.82; 16 trials; 3622 participants) and risk of falling (RR 0.85, 95% CI 0.76 to 0.96; 22 trials; 5333 participants), as did multiple-component home-based exercise (RaR 0.68, 95% CI 0.58 to 0.80; seven trials; 951 participants and RR 0.78, 95% CI 0.64 to 0.94; six trials; 714 participants). For **Tai Chi**, the reduction in rate of falls bordered on statistical significance (RaR 0.72, 95% CI 0.52 to 1.00; five trials; 1563 participants) but **Tai Chi** did significantly reduce risk of falling (RR 0.71, 95% CI 0.57 to 0.87; six trials; 1625 participants). Multifactorial interventions, which include individual risk assessment,

reduced rate of falls (RaR 0.76, 95% CI 0.67 to 0.86; 19 trials; 9503 participants), but not risk of falling (RR 0.93, 95% CI 0.86 to 1.02; 34 trials; 13,617 participants). Overall, vitamin D did not reduce rate of falls (RaR 1.00, 95% CI 0.90 to 1.11; seven trials; 9324 participants) or risk of falling (RR 0.96, 95% CI 0.89 to 1.03; 13 trials; 26,747 participants), but may do so in people with lower vitamin D levels before treatment. Home safety assessment and modification interventions were effective in reducing rate of falls (RR 0.81, 95% CI 0.68 to 0.97; six trials; 4208 participants) and risk of falling (RR 0.88, 95% CI 0.80 to 0.96; seven trials; 4051 participants). These interventions were more effective in people at higher risk of falling, including those with severe visual impairment. Home safety interventions appear to be more effective when delivered by an occupational therapist. An intervention to treat vision problems (616 participants) resulted in a significant increase in the rate of falls (RaR 1.57, 95% CI 1.19 to 2.06) and risk of falling (RR 1.54, 95% CI 1.24 to 1.91). When regular wearers of multifocal glasses (597 participants) were given single lens glasses, all falls and outside falls were significantly reduced in the subgroup that regularly took part in outside activities. Conversely, there was a significant increase in outside falls in intervention group participants who took part in little outside activity. Pacemakers reduced rate of falls in people with carotid sinus hypersensitivity (RaR 0.73, 95% CI 0.57 to 0.93; three trials; 349 participants) but not risk of falling. First eye cataract surgery in women reduced rate of falls (RaR 0.66, 95% CI 0.45 to 0.95; one trial; 306 participants), but second eye cataract surgery did not. Gradual withdrawal of psychotropic medication reduced rate of falls (RaR 0.34, 95% CI 0.16 to 0.73; one trial; 93 participants), but not risk of falling. A prescribing modification programme for primary care physicians significantly reduced risk of falling (RR 0.61, 95% CI 0.41 to 0.91; one trial; 659 participants). An anti-slip shoe device reduced rate of falls in icy conditions (RaR 0.42, 95% CI 0.22 to 0.78; one trial; 109 participants). One trial (305 participants) comparing multifaceted podiatry including foot and ankle exercises with standard podiatry in people with disabling foot pain significantly reduced the rate of falls (RaR 0.64, 95% CI 0.45 to 0.91) but not the risk of falling. There is no evidence of effect for cognitive behavioural interventions on rate of falls (RaR 1.00, 95% CI 0.37 to 2.72; one trial; 120 participants) or risk of falling (RR 1.11, 95% CI 0.80 to 1.54; two trials; 350 participants). Trials testing interventions to increase knowledge/educate about fall prevention alone did not significantly reduce the rate of falls (RaR 0.33, 95% CI 0.09 to 1.20; one trial; 45 participants) or risk of falling (RR 0.88, 95% CI 0.75 to 1.03; four trials; 2555 participants). No conclusions can be drawn from the 47 trials reporting fall-related fractures. Thirteen trials provided a comprehensive economic evaluation. Three of these indicated cost savings for their interventions during the trial period: home-based exercise in over 80-year-olds, home safety assessment and modification in those with a previous fall, and one multifactorial programme targeting eight specific risk factors.

**AUTHORS' CONCLUSIONS:** Group and home-based exercise programmes, and home safety interventions reduce rate of falls and risk of falling. Multifactorial assessment and intervention programmes reduce rate of falls but not risk of falling; **Tai Chi** reduces risk of falling. Overall, vitamin D supplementation does not appear to reduce falls but may be effective in people who have lower vitamin D levels before treatment.

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[Heart Lung](#). 2012 Sep-Oct;41(5):469-83. doi: 10.1016/j.hrtlng.2012.06.002.

## Effects of interventions on depression in heart failure: a systematic review.

[Woltz PC](#), [Chapa DW](#), [Friedmann E](#), [Son H](#), [Akintade B](#), [Thomas SA](#).

University of Maryland Medical Center, Baltimore, Maryland, USA.

### Abstract

**OBJECTIVE:** We sought to conduct a systematic review to evaluate the effects of interventions on depression in adults with heart failure (HF).

**METHODS:** Published, peer-reviewed, English-language, prospective interventional studies were identified in a search of Medline, CINAHL, PsychINFO, and the Cochrane Libraries of Systematic Reviews and Clinical Trials from 1996 through August 2011 and relevant bibliographies. Eligible studies included patients with New York Heart Association functional class II and III HF with experimental or quasiexperimental designs and preintervention and postintervention measures of depression. Ineligible studies were nonpharmacologic with a sample size <50, and drug studies without a comparison group.

**RESULTS:** Twenty-three experimental and quasiexperimental studies that enrolled a total of 3564 persons with HF contributed evidence about 6 types of interventions: selective serotonin reuptake inhibitors (SSRIs), an erythropoiesis-stimulating agent, exercise, disease management programs, complementary and alternative medicine (CAM), and a multimodal intervention of cognitive behavioral therapy and exercise. Studies with SSRIs examined effects of sertraline, paroxetine, and citalopram. The CAM interventions included **tai chi**, progressive muscle relaxation therapy, and mindfulness-based stress reduction.

**CONCLUSIONS:** Evidence is strong that pharmacology and CAM may improve depression. Moderate evidence supports the use of exercise. A strong body of evidence indicates that disease management programs do not improve depression. This review does not support the development of guidelines for treatment of depression in persons with HF because evidence is insufficient and, at times, contradictory.

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PMID: 22938627 [PubMed - in process]

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[Eur Respir J](#). 2012 Aug 9. [Epub ahead of print]

## Short-form Sun-style Tai Chi as an exercise training modality in people with COPD.

[Leung RW](#), [McKeough ZJ](#), [Peters MJ](#), [Alison JA](#).

Concord Repatriation General Hospital, Sydney Australia.

### Abstract

The aims of the study were to determine the effect of short-form Sun-style **Tai Chi** (SSTC) (Part A) and investigate exercise intensity of SSTC (Part B) in people with COPD. Part A: After confirmation of eligibility, participants were randomly allocated to either the **Tai Chi** Group (TCG) or Control Group (CG) (usual medical care). Participants in the TCG trained twice weekly for 12 weeks. Part B: Participants who had completed training in the TCG performed a peak exercise test (incremental shuttle walk test) and SSTC while oxygen consumption (VO<sub>2</sub>) was measured. Exercise intensity of SSTC was determined by the percent of VO<sub>2</sub> reserve. Of 42 participants (mean (SD) FEV<sub>1</sub> 59 (16) % predicted), 38 completed Part A and 15 completed Part B. Compared to control, SSTC significantly increased endurance shuttle walk time (mean difference, 95%CI) (384 seconds, 186 to 510); reduced medial-lateral body sway in semi-tandem stand (-12.4 millimetres, -21 to -3); and increased total score on the Chronic Respiratory Disease Questionnaire (11 points, 4 to 18). The exercise intensity of SSTC was 53 (18) % of VO<sub>2</sub> reserve. SSTC was an effective training modality in people with COPD achieving a moderate exercise intensity which meets the training recommendations.

PMID: 22878879 [PubMed - as supplied by publisher]

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Altern Ther Health Med. 2012 May-Jun;18(3):16-22.

## Tai chi exercise for patients with heart disease: a systematic review of controlled clinical trials.

Ng SM, Wang CW, Ho RT, Ziea TC, He J, Wong VC, Chan CL.

Centre on Behavioral Health and Department of Social Work and Social Administration, University of Hong Kong.

### Erratum in

Altern Ther Health Med. 2012 Nov-Dec;18(6):79. Tin-Hung Ho, Rainbow [corrected to Ho, Rainbow Tin-Hung]; Tat-**Chi** Ziea, Eric [corrected to Ziea, Tat-**Chi**]; He, J [removed]; **Chi**-Woon Taam Wong, Vivian [corrected to Wong, Vivian **Chi**-Woon]; Lai-Wan Chan, Cecilia [corrected to Chan, Cecilia Lai-Wan].

### Abstract

**CONTEXT:** To summarize and evaluate the available evidence from controlled clinical trials of **tai chi** (TC) exercise for patients with heart disease.

**SEARCH METHODS:** Fourteen databases were searched up to November 2010 with the terms **tai chi**, taichi, **tai ji**, taiji, taijichuan, cardiac, heart, coronary, myocardial, and atrial fibrillation in the title, abstract, or key words. No language restrictions were imposed. The quality and validity of randomized clinical trials (RCTs) were evaluated using the Jadad Scale. The strength of the evidence for all included studies was evaluated using the Oxford Centre for Evidence-based Medicine Levels of Evidence.

**RESULTS:** Nine studies including 5 RCTs and 4 nonrandomized controlled clinical trials met the inclusion criteria. Three studies examined the effectiveness of TC exercise for patients with chronic heart failure (CHF), and 6 studies examined the effectiveness of TC exercise among patients with coronary heart disease (CHD). Overall, these studies demonstrated favorable effects of TC exercise for the patients with heart disease.

**CONCLUSIONS:** The existing evidence suggests that TC exercise is a good option for heart patients with very limited exercise tolerance and can be an adjunct to rehabilitation programs for patients with CHD or CHF.

PMID: 22875558 [PubMed - indexed for MEDLINE]

[+](#) **Publication Types, MeSH Terms**

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Aust N Z J Public Health. 2012 Jun;36(3):241-8. doi: 10.1111/j.1753-6405.2011.00811.x. Epub 2012 Jan 2.

## The cost-effectiveness of falls prevention interventions for older community-dwelling Australians.

Church J, Goodall S, Norman R, Haas M.

Centre for Health Economics Research and Evaluation, University of Technology, New South Wales.

### Abstract

**OBJECTIVE:** To evaluate the cost-effectiveness of strategies designed to prevent falls among older people.

**METHODS:** A decision analytic Markov model of interventions designed to prevent falls was developed. Incremental cost-effectiveness ratios (ICERs) using quality adjusted life year (QALYs) as the measure, were calculated for those interventions aimed at the general population (home exercise, group exercise, **tai chi**, multiple and multi-factorial interventions); high-risk populations (group exercise, home hazard assessment/modification and multi-factorial interventions); and specific populations (cardiac pacing, expedited cataract surgery and psychotropic medication withdrawal). Uncertainty was explored using univariate and probabilistic sensitivity analysis.

**CONCLUSION:** In the general population, compared with no intervention the ICERs were **tai chi** (\$44,205), group-based exercise (\$70,834), multiple interventions (\$72,306), home exercise (\$93,432), multifactorial interventions with only referral (\$125,868) and multifactorial interventions with an active component (\$165,841). The interventions were ranked by cost in order to exclude dominated interventions (more costly, less effective) and extendedly dominated interventions (where an intervention is more costly and less effective than a combination of two other interventions). **Tai chi** remained the only cost-effective intervention for the general population.

**IMPLICATIONS:** Interventions designed to prevent falls in older adults living in the community can be cost-effective. However, there is uncertainty around some of the model parameters which require further investigation.

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PMID: 22672030 [PubMed - indexed for MEDLINE]

[+](#) Publication Types, MeSH Terms

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Evid Based Complement Alternat Med. 2012;2012:614196. doi: 10.1155/2012/614196. Epub 2012 May 9.

## Effectiveness of a tai-chi training and detraining on functional capacity, symptomatology and psychological outcomes in women with fibromyalgia.

Romero-Zurita A, Carbonell-Baeza A, Aparicio VA, Ruiz JR, Tercedor P, Delgado-Fernández M.

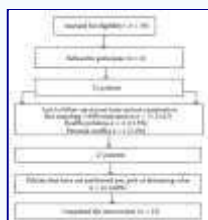
Department of Physical Education and Sports, School of Sports Sciences, University of Granada, 18011 Granada, Spain.

### Abstract

**Background.** The purpose was to analyze the effects of **Tai-Chi** training in women with fibromyalgia (FM). **Methods.** Thirty-two women with FM (mean age,  $51.4 \pm 6.8$  years) attended to **Tai-Chi** intervention 3 sessions weekly for 28 weeks. The outcome measures were: tenderness, body composition, functional capacity and psychological outcomes (Fibromyalgia impact questionnaire (FIQ), Short Form Health Survey 36 (SF-36)). **Results.** Patients showed improvements on pain threshold, total number of tender points and algometer score (all  $P < 0.001$ ). The intervention was effective on 6-min walk ( $P = 0.006$ ), back scratch ( $P = 0.002$ ), handgrip strength ( $P = 0.006$ ), chair stand, chair sit & reach, 8 feet up & go and blind flamingo tests (all  $P < 0.001$ ). **Tai-Chi** group improved the FIQ total score ( $P < 0.001$ ) and six subscales: stiffness ( $P = 0.005$ ), pain, fatigue, morning tiredness, anxiety, and depression (all  $P < 0.001$ ). The intervention was also effective in six SF-36 subscales: bodily pain ( $P = 0.003$ ), vitality ( $P = 0.018$ ), physical functioning, physical role, general health, and mental health (all  $P < 0.001$ ). **Conclusions.** A 28-week **Tai-Chi** intervention showed improvements on pain, functional capacity, symptomatology and psychological outcomes in female FM patients.

PMID: 22649476 [PubMed] PMCID: PMC3357550 [Free PMC Article](#)

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Reg Anesth Pain Med. 2012 Jul-Aug;37(4):372-82. doi: 10.1097/AAP.0b013e31824f6629.

## Tai chi and chronic pain.

Peng PW.

Department of Anesthesia, Toronto Western Hospital, University Health Network, University of Toronto, Ontario, Canada.  
Philip.peng@uhn.ca

### Abstract

In the last 2 decades, a growing body of research aimed at investigating the health benefits of **Tai Chi** in various chronic health conditions has been recognized in the literature. This article reviewed the history, the philosophy, and the evidence for the role of **Tai Chi** in a few selected chronic pain conditions. The ancient health art of **Tai Chi** contributes to chronic pain management in 3 major areas: adaptive exercise, mind-body interaction, and meditation. Trials examining the health benefit of **Tai Chi** in chronic pain conditions are mostly low quality. Only 5 pain conditions were reviewed: osteoarthritis, fibromyalgia, rheumatoid arthritis, low back pain, and headache. Of these, **Tai Chi** seems to be an effective intervention in osteoarthritis, low back pain, and fibromyalgia. The limitations of the **Tai Chi** study design and suggestions for the direction of future research are also discussed.

PMID: 22609642 [PubMed - indexed for MEDLINE]

[+](#) **Publication Types, MeSH Terms**

[+](#) **LinkOut - more resources**



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*J Am Med Dir Assoc.* 2012 Jul;13(6):568.e15-20. doi: 10.1016/j.jamda.2012.03.008. Epub 2012 May 11.

## **A 1-year randomized controlled trial comparing mind body exercise (Tai Chi) with stretching and toning exercise on cognitive function in older Chinese adults at risk of cognitive decline.**

Lam LC, Chau RC, Wong BM, Fung AW, Tam CW, Leung GT, Kwok TC, Leung TY, Ng SP, Chan WM.

Department of Psychiatry, the Chinese University of Hong Kong, Hong Kong. cwlam@cuhk.edu.hk

### **Abstract**

**OBJECTIVES:** To compare the effectiveness of Chinese-style mind-body exercise (24 forms simplified **Tai Chi**) versus stretching and toning exercise in the maintenance of cognitive abilities in Chinese elders at risk of cognitive decline.

**DESIGN:** A 1-year single-blind cluster randomized controlled trial.

**SETTINGS:** Community centers and residential homes for elders in Hong Kong.

**PARTICIPANTS:** A total of 389 subjects at risk of cognitive decline (Clinical Dementia Rating, CDR 0.5 or amnesic-MCI) participated in an exercise intervention program.

**INTERVENTION:** A total of 171 subjects were trained with **Tai Chi** (Intervention [I]) and 218 were trained with stretching and toning exercise (Control [C]).

**METHODS:** Cognitive and functional performance were assessed at the baseline, and at 5, 9, and 12 months. Data were analyzed using multilevel mixed models. Primary outcomes included progression to clinical dementia as diagnosed by DSM-IV criteria, and change of cognitive and functional scores. Secondary outcomes included postural balance measured by the Berg Balance Scale neuropsychiatric and mood symptoms measured by the Neuropsychiatric Inventory, and Cornell Scale for Depression in Dementia.

**RESULTS:** At 1 year, 92 (54%) and 169 (78%) participants of the I and C groups completed the intervention. Multilevel logistic regression with completers-only analyses controlled for baseline differences in education revealed that the I group had a trend for lower risk of developing dementia at 1 year (odds ratio 0.21, 95% CI 0.05-0.92,  $P = .04$ ). The I group had better preservation of CDR sum of boxes scores than the C group in both intention-to-treat ( $P = .04$ ) and completers-only analyses ( $P = .004$ ). In completers-only analyses, the I group had greater improvement in delay recall ( $P = .05$ ) and Cornell Scale for Depression in Dementia scores ( $P = .02$ ).

**CONCLUSION:**

Regular exercise, especially mind-body exercise with integrated cognitive and motor coordination, may help with preservation of global ability in elders at risk of cognitive decline; however, logistics to promote long-term practice and optimize adherence needs to be revisited.

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