

# INPLASY PROTOCOL

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**Conflicts of interest:**  
None declared.

## Evaluation of the effects of mind-body exercise on osteoarthritis: a systematic review and meta-analysis

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**Review question / Objective:** For the comparative study of mind-body exercise and conventional rehabilitation training for people with osteoarthritis, mind-body exercise mainly includes (tai chi, yoga, qigong, Ba Duan Jin, Wu Qin Xi, Positive Skill-building Activity, Graded Motor Image and Mindfulness-based Meditation), and conventional rehabilitation training mainly includes conventional physical therapy or rest. Outcomes were mainly based on WOMAC (Western Ontario and McMaster Universities Osteoarthritis Index), Berg Balance Scale (BBS) scores, and 6 minutes walk test (6MWT) scores.

**Condition being studied:** Osteoarthritis is a common chronic degenerative joint disease characterized by joint cartilage degeneration and bone hyperplasia, mainly caused by aging, obesity, trauma, heredity and other factors. It is mainly found in middle-aged and elderly people, and the incidence in > 60-year-old and >-75-year-old people is as high as 37%~50% and 80%, respectively. Not only does it cause joint pain, deformity, and dysfunction, but it also significantly increases the risk of cardiovascular events, lower extremity deep vein thromboembolism, hip fracture, and all-cause mortality.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 16 February 2023 and was last updated on 16 February 2023 (registration number INPLASY202320069).

### INTRODUCTION

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exercise mainly includes (tai chi, yoga, qigong, Ba Duan Jin, Wu Qin Xi, Positive Skill-building Activity, Graded Motor Image and Mindfulness-based Meditation), and conventional rehabilitation training mainly includes conventional physical therapy or

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## METHODS

**Participant or population:** People with osteoarthritis.

**Intervention:** Mind-body exercise (tai chi, yoga, qigong, Ba Duan Jin, Wu Qin Xi, Positive Skill-building Activity, Graded Motor Image and Mindfulness-based Meditation).

**Comparator:** Conventional rehabilitation training.

**Study designs to be included:** Randomized controlled trial.

**Eligibility criteria:** Clinical diagnostic index for patients with osteoarthritis, including WOMAC (Western Ontario and McMaster Universities Osteoarthritis Index), Berg Balance Scale (BBS) scores, and 6 minutes walk test (6MWT) scores.

**Information sources:** Pubmed, EMBASE, Cochrane Central Register of Controlled Trials, Web of Science, and Ovid.

**Main outcome(s):** WOMAC (Western Ontario and McMaster Universities Osteoarthritis Index), Berg Balance Scale

(BBS) scores, and 6 minutes walk test (6MWT) scores.

**Quality assessment / Risk of bias analysis:** Two review authors independently assessed risk of bias (ROB) according to the Cochrane Manual version 5.1.0 tool used to assess ROB in RCTs. The following seven domains were considered: (1) random sequence generation, (2) treatment allocation concealment, (3) blinding of participants and (4) personnel, (5) incomplete outcome data, (6) selective reporting, and (7) other sources of bias. Trials are divided into three levels of ROB based on the number of components that may have high ROB: high risk (five or more), moderate risk (three or four), and low risk (two or less). Research manuscripts reporting large datasets stored in public databases should state where the data is stored and provide the relevant login number. If you have not received your accession number at the time of submission, please indicate that it will be provided at the time of review. They must be provided prior to publication. Intervention studies involving animals or humans, as well as other studies requiring ethical approval, must list the institution providing the approval and the corresponding ethical approval code.

**Strategy of data synthesis:** We use the Stata software (version 15.1) and follow the PRISMA NMA instruction manual. NMA aggregation and analysis using Markov chain Monte Carlo simulation chains in Bayesian-based frameworks. We will use the node method to quantify and prove the consistency between indirect and direct comparisons, calculated by the instructions in the Stata software, if the p-value is > 0.05. Conformance test passed.

**Subgroup analysis:** No subgroup analysis.

**Sensitivity analysis:** Sensitivity analysis was performed using stata software to reflect the sensitivity of one article by deleting the change in effect size after the article.

**Country(ies) involved:** China.

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**Keywords:** mind-body exercise,  
Osteoarthritis, taichi, yoga, Ba Duan Jin.

**Contributions of each author:**

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**Author 2 - Henan Song.**

**Author 3 - Ming Zhou.**

**Author 4 - Gongzi Zhang.**

**Author 5 - Yuhan Geng.**

**Author 6 - Jinghua Qian.**

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