# INPLASY PROTOCOL

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Support: University.

**Review Stage at time of this submission: The review has not yet started.** 

Conflicts of interest: None declared.

### INTRODUCTION

**Review question / Objective:** The aim of this protocol for systematic review and meta-analysis of randomized controlled trials is to evaluate the effectiveness and safety of massage for chronic pain in patients with knee osteoarthritis. Condition being studied: Chronic pain, Knee osteoarthritis, Massage Therapy.

### METHODS

Participant or population: All patients with chronic pain over 6 months will be included

## Effectiveness and Safety of Massage for Chronic pain in patients with knee osteoarthritis: a Protocol for Systematic Review and Meta-analysis

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Review question / Objective: The aim of this protocol for systematic review and meta-analysis of randomized controlled trials is to evaluate the effectiveness and safety of massage for chronic pain in patients with knee osteoarthritis. Condition being studied: Chronic pain, Knee osteoarthritis, Massage Therapy.

Information sources: We will perform a comprehensive search in PubMed, the Cochrane Library, EMBASE and four Chinese databases (CNKI, Wan Fang, CBMdisc, and VIP) for articles published before November 2021.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 December 2021 and was last updated on 19 December 2021 (registration number INPLASY2021120087).

without limitation of age, race, gender, economic level, and severity.

**Intervention:** Chinese massage, relaxation, manual lymphatic drainage and so on.

**Comparator:** The interventions of control group will involve any therapy other than massage (e.g., medication, placebo, routine care, etc.).

Study designs to be included: We will include randomised trials to assess the beneficial effects of the treatments, and will supplement these with observational studies for the assessment of harms.

Eligibility criteria: 1) Only RCTs about massage for chronic pain by knee osteoarthritis will be included, with language restrictions in English or Chinese. Case report, experience report, and laboratory studies will not be included.

Information sources: We will perform a comprehensive search in PubMed, the Cochrane Library, EMBASE and four Chinese databases (CNKI, Wan Fang, CBMdisc, and VIP) for articles published before November 2021.

Main outcome(s): Western Ontario McMaster Osteoarthritis Index pain subscore.

Quality assessment / Risk of bias analysis: The risk of bias for each of the following domains will be assessed for each study: (1) random sequence generation, (2) allocation concealment, (3) blinding of participants and personnel, (4) blinding of outcome assessments, (5) incomplete outcome data, (6) selective reporting, and (7) other bias. Each study included will be rated as having a high, low, or unclear risk of bias. Two reviewers (JX and FC) will evaluate the consistency of all the extracted data and quality ratings. Disagreements will be resolved by discussion with a third reviewer (GG).

**Strategy of data synthesis:** For discontinuous variables, the risk ratio (RR) with 95% confidence interval (CI) will be

selected. For continuous variables, the weighted mean difference (WMD) with 95% CI will be selected when the measuring instruments are the same, and the standardized mean difference (SMD) with 95% CI will be selected when the measuring instruments are different. We will use the fixed-effect model if there is no significant heterogeneity (P>.1 or I2.1 or I2< 50%), we will conduct subgroup analysis or sensitivity analysis to identify possible causes of heterogeneity among populations.

Subgroup analysis: If the necessary data are available, subgroup analysis will be conducted according to the following criteria:(1)The treatment period.(2)Different acupuncture points with massage. (3)Different types of manipulation (e.g., kneading, rolling, pressing).

Sensitivity analysis: To identify the robustness of the meta-analysis, lowquality trials, with high risks of bias or outcomes that are seriously distant from the rest of the data, will be excluded.

Country(ies) involved: China.

Keywords: Chronic pain, Knee osteoarthritis, Massage, Protocol, Metaanalysis.

#### **Contributions of each author:**

Author 1 - Jianghan Xu. Author 2 - Boyi Wu. Author 3 - Shengji Xie. Author 4 - Guanghui Wu. Author 5 - Heng Zhang. Author 6 - Yangyang Fu. Author 7 - Guangxin Guo.