

# INPLASY PROTOCOL

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**Support:** None.

**Review Stage at time of this submission:** Completed but not published.

**Conflicts of interest:**  
None declared.

## Supervised exercises versus home based exercises in people with knee osteoarthritis

Schäublin, J<sup>1</sup>.

**Review question / Objective:** The aim of this systematic review and meta analysis was to evaluate and to compare the effects of supervise exercises versus home based exercises in people with knee osteoarthritis.

**Condition being studied:** The aim of this systematic review and meta analysis was to evaluate and to compare the effects of supervise exercises versus home based exercises in people with knee osteoarthritis.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 22 January 2023 and was last updated on 22 January 2023 (registration number INPLASY202310072).

### INTRODUCTION

**Review question / Objective:** The aim of this systematic review and meta analysis was to evaluate and to compare the effects of supervise exercises versus home based exercises in people with knee osteoarthritis.

**Condition being studied:** People with knee osteoarthritis.

### METHODS

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

**Intervention:** Supervised exercises.

**Comparator:** Home based exercises.

**Study designs to be included:** Randmized controlled trials.

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**Eligibility criteria:** People with knee osteoarthritis.

**Information sources:** PubMed, Embase, Cinhal, Cochrane library.

**Main outcome(s):** 8 RCT were included in the systematic review and 6 RCT in the meta-analysis. The Results indicate a better improvement of the WOMAC score and the pain VAS with SE compared with HBE. This Results were significant in the WOMAC analysis (SMD: -0.42, 95% CI: -0.65 to -0.19) and significant in the VAS pain after activity analysis. 8 RCT were included in the systematic review and 6 RCT in the meta-analysis. The Results were significant in the WOMAC analysis (SMD: -0.42, 95% CI: -0.65 to -0.19) and significant in the VAS pain after activity analysis.

**Quality assessment / Risk of bias analysis:** The Cochrane risk of bias tool (RoB 2.0) (Cochrane Handbook for Systematic Reviews of Interventions, n.d.) was used to assess the studies.

**Strategy of data synthesis:** Each included study in the analysis reported either the VAS scores or the WOMAC index or both. Because the WOMAC indices were evaluated differently and could not be clearly calculated back in every case, we calculated the standardized mean changes (SMC). SMC were calculated according to Morris (2008). The changes in the baseline, the post measurements and the pooled standard deviation of the pre values were used. According to Morris 2008 they use a pre- and post correlation for the variance calculation, because this was not reported in the studies this value was set to 0.7 and the sensitivity analysis were made with a correlation with 0.5 and 0.9. The Effect sizes and the standard errors for the effect sizes were calculated with the metafor package in the software R. Appendix 9.2 indicates the R code for the used calculation. Cohen thresholds (Cohen, 1988) was used for the interpretation of the effect sizes with trivial (<0.2), small (0.2 to <0.5), moderate (0.5 to <0.8), and large (0.8). This Calculated results were consequently entered in RevMan 5.4 (RevMan, n.d.),

where the meta-analysis was conducted using inverse variance method.

For The analysis of the VAS activity scores the RevMan Software was used for the continuous data type. Each included study expressed the VAS scale, therefore the mean differences were used for the calculation of the analysis in RevMan.

**Subgroup analysis:** None.

**Sensitivity analysis:** For the sensitivity analysis the correlation coefficient was set to 0.5 and 0.9.

**Language restriction:** English.

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

**Keywords:** Supervised exercises, home based exercises, knee osteoarthritis, WOMAC, VAS.

**Contributions of each author:**

Author 1 - Jonas Schäublin.