

# INPLASY

## Research Status on Non-Pharmacological Korean Medicine Treatments in Improving Physical Performance: A Scoping Review

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### ADMINISTRATIVE INFORMATION

**Support** - There is no financial support.

**Review Stage at time of this submission** - Preliminary searches.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202430040

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 11 March 2024 and was last updated on 11 March 2024.

## INTRODUCTION

**Review question / Objective** What is the current state of research on non-pharmaceutical Korean medicine treatments for physical performance?

**Background** Acupuncture is a commonly utilized modality among athletes for managing pain associated with injuries or delayed-onset muscle soreness. It is noteworthy that Korean medicine treatments, encompassing acupuncture, herbal medicine, and moxibustion, are frequently employed in the sports realm to enhance physical performance. Thus, non-pharmacological Korean medicine interventions such as acupuncture, chuna manual therapy, and moxibustion play a multifaceted role in sports medicine.

**Rationale** While studies investigating Korean medicine treatments like acupuncture and moxibustion in the context of sports medicine have been conducted, research examining the overall utilization of non-pharmacological Korean medicine interventions remains limited. Furthermore, most prior studies have primarily focused on the therapeutic aspects of sports-related injuries. Therefore, this study aims to evaluate the effects of Korean medicine treatments on exercise performance and elucidate the current research landscape in this area.

## METHODS

**Strategy of data synthesis** Database: Medline via Pubmed, Embase, Cochrane Central Register of Controlled Trials(CENTRAL), Chinese National Knowledge Infrastructure(CNKI; <http://www.cnki.net>), Oriental Medicine Advanced

Searching Integrated System(OASIS; <http://www.oasis.kiom.re.kr>), Research Information Sharing Service(RISS; <http://www.riss.kr>) and Korea Citation Index(KCI; <http://www.kci.go.kr>)

The search terms will consist of synonyms and medical terminology related to non-pharmacological Korean medicine treatments and physical performance.

Included studies will undergo quality assessment using appropriate tools matching each study design.

**Eligibility criteria** 1. Population: The target population will be healthy individuals without conditions affecting physical performance evaluation, such as paralytic disorders. No restrictions will be imposed based on gender, age, or athletic level.

2. Intervention: Non-pharmacological Korean medicine treatments including acupuncture (encompassing electroacupuncture and pharmacopuncture), moxibustion, cupping, chuna manual therapy, and qigong will be considered. Pharmacological treatments like herbal medicine and pharmacopuncture will be excluded. For each intervention, no limitations will be set on treatment frequency, duration, acupuncture needle number, diameter, chuna techniques used, acupoint selection methods, or types of cupping (dry or wet).

3. Comparator: No restrictions will be placed on the comparator group, and studies without comparators will be included.

4. Outcomes: Indicators evaluating endurance and strength

Aerobic capacity: Evaluation metrics including heart rate, blood pressure, exercise tolerance, maximal oxygen uptake (VO<sub>2</sub>Max), rating of perceived exertion, etc.

Anaerobic capacity and power: Indicators indirectly assessing strength, such as one-repetition maximum, and those directly measuring strength, like maximum torque, average power, and isometric strength. Oxygen deficit and excess post-exercise oxygen consumption will be included.

While flexibility, delayed-onset muscle soreness recovery time, and injury susceptibility are known to indirectly influence physical performance, this study will exclude such indirect factors and focus on studies directly evaluating physical performance.

5. Study Design: Human studies will be included, with no restrictions on study design elements like controlled groups or blinding. Preclinical studies and literature review studies are excluded from the analysis.

6. Publication Type: Only peer-reviewed journal articles will be considered, excluding gray literature. No restrictions on publication year or language.

**Source of evidence screening and selection** In the process of screening, source selection and if disagreements arise among reviewers, decisions will be reached through consensus among the researchers.

1. Literature searches will be conducted by executing the search strategies across various databases.

2. Duplicate studies will be removed using the reference management software Endnote 21 (version 21.2).

3. Titles and abstracts of retrieved records will be screened against the inclusion and exclusion criteria.

4. Full texts of potentially eligible studies will undergo further evaluation by applying the inclusion and exclusion criteria.

5. In cases where the application of inclusion and exclusion criteria is challenging, independent researchers will discuss and reach a consensus.

**Data management** 1. General characteristics: Author(s), country of researcher affiliation, publication year, study design

Authors will refer to the first author, publication year will be the date the study was published in the journal, and country will be based on the location of the first author's institution.

2. Participant information: Gender, age, participant nationality or ethnicity, number of participants, exercise level

3. Intervention details: Intervention used in the experimental group, intervention used in the control group, treatment duration, follow-up period

4. Outcome measures: Types of outcome variables assessed and corresponding measurement values.

**Language restriction** There is no language restriction in this study.

**Country(ies) involved** This scoping review is conducted in the Republic of Korea.

**Keywords** Korean medicine; physical performance; athletes; East Asian traditional medicine.

**Contributions of each author**

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