## INPLASY PROTOCOL

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# The efficacy of kinesio taping in the treatment of ankle sprain: Systematic review and meta-analysis

Zhu, H<sup>1</sup>; Li, W<sup>2</sup>; Lin, Y<sup>3</sup>; Wu, H<sup>4</sup>.

Review question / Objective: The purpose of this systematic review is to accurately evaluate the efficacy of kinesio tape for ankle sprains.

Condition being studied: Ankle sprain may cause a series of problems, such as pain, swelling, and various dysfunctions. As a physical therapy method that has attracted much attention in recent years, kinesio tape has been proven to relieve pain, reduce swelling and promote functional recovery for some diseases. In this way, we can provide a reference for clinical physical therapy.

Information sources: PubMed, Cochrane, Scopus, Web of Science, Embase, CNKI, Wanfang Data, Technological periodical database, SinoMed.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 December 2021 and was last updated on 12 December 2021 (registration number INPLASY2021120059).

#### INTRODUCTION

Review question / Objective: The purpose of this systematic review is to accurately evaluate the efficacy of kinesio tape for ankle sprains.

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### **METHODS**

Search strategy: CNKI: (主题: 踝关节扭伤 (精确)) AND ((主题: 肌贴 + 肌内效贴(精 确)) AND ((篇关摘: rct + 随机 + 随机对照 (精确)) Wanfang Data: 主题:(踝关节扭伤) and 主题:(肌贴 or 肌内效贴) and 主题:(rct or 随机 or 随机对照) Technological periodical 题名或关键词=踝关节扭伤 AND database: 题名或关键词=肌贴 OR 肌内效贴 AND 文摘 =rct OR 随机 OR 随机对照 Sinomed: "踝关 节扭伤"[标题:智能] AND( "肌贴"[标题:智能] OR "肌内效贴"[标题:智能]) AND( "rct"[摘要:智 能] OR "随机"[摘要:智能] OR "随机对照"[摘 要:智能]) Pubmed: ((ankle sprain[Title/ Abstract] OR ankle injuries[Title/Abstract]) AND (kinesio tape[Title/Abstract] OR kinesio taping[Title/Abstract] OR athletic tape[Title/Abstract] OR athletic taping[Title/Abstract])) AND (randomized controlled trial[Title/Abstract] OR randomized[Title/Abstract] OR placebo[Title/Abstract]) Embase: sprain':ti OR 'ankle injuries':ti) AND ('kinesio tape':ti OR 'kinesio taping':ti OR 'athletic tape':ti OR 'athletic taping':ti) AND ('randomized controlled trial':ab,ti OR randomized:ab,ti) Cochrane: ID Search #1 (kinesio tape):ti,ab OR (kinesio taping):ti,ab OR (athletic tape):ti,ab OR (athletic taping):ti,ab #2 (ankle injuries):ti,ab OR (ankle sprain):ti,ab #3 (randomized):ti,ab,kw OR (placebo):ti,ab,kw OR (randomized controlled trial):ti,ab,kw #4 #1 AND #2 AND #3 Scopus: ( TITLE ( "ankle sprain" OR "ankle injuries" ) AND TITLE ( "kinesio tape" OR "kinesio taping" OR "athletic tape" OR "athletic taping" ) AND TITLE-ABS-KEY ( "randomized controlled trial" OR randomized OR placebo ) ) WOS: ((TI=(kinesio tape OR kinesio taping OR athletic tape OR athletic taping)) AND TI=(ankle sprain OR ankle injuries)) AND TS=(randomized controlled trial OR randomized OR placebo).

Participant or population: Patients with ankle sprain have no limitation with age, gender and source of cases.

Intervention: Kinesio tape.

Comparator: The control group didn't receive kinesio taping treatment and receive conventional physical therapy or not.

Study designs to be included: RCT.

Eligibility criteria: 1. The selected study must be a randomized controlled trial.

Information sources: PubMed, Cochrane, Scopus, Web of Science, Embase, CNKI, Wanfang Data, Technological periodical database, SinoMed.

Main outcome(s): The main outcome is VAS and reduced swelling evaluated by circumference.

Additional outcome(s): Some ankle function evaluation scales, such as kofoed and so on.

Quality assessment / Risk of bias analysis:

RCT bias risk assessment was performed using the Cochrane system recommended criteria, including 7 aspects.1. Generation of random schemes;2. Distribution hiding; 3. Blind method (subject and treatment practitioner); 4. blind method(outcome evaluator); 5. Incomplete data;6. Selective reporting; 7. other. The degree of risk of bias was classified as "low risk", "high risk",and "unclear" (the literature did not

Strategy of data synthesis: In the presence of heterogeneity, the data were combined by random effects; in the absence of heterogeneity, the data were combined by fixed effects. All of data will be analysed by RevMan5.4 provided by Cochrane collaboration.

provide sufficient information for analysis).

Subgroup analysis: Subgroup analysis was performed according to the duration of the

disease, therapy duration or intervention method.

Sensitivity analysis: If the combined results of the remaining papers are not significantly different from those without deletion after deleting any of the papers, it means that the sensitivity analysis is passed.

Country(ies) involved: China.

**Keywords:** kinesio tape; ankle sprain; systematic review; meta-analysis.

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