Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of Soccer-Specific Fatigue on Dynamic Postural Control in Players with and Without Chronic Ankle Instability: The Moderating Role of Kinesio Taping

Protocol summary

Study aim
To assess the effect of soccer-specific fatigue on dynamic balance and whether kinesio taping reduces balance decline in players with and without chronic ankle instability.

Design
A quasi-experimental, counterbalanced crossover study with repeated measures, without masking or placebo.

Settings and conduct
Following eligibility screening and written informed consent, participants will attend a familiarisation session. Before each experimental session, a standardized 10-minute warm-up will be performed. Participants will then complete a 90-minute Bangsbo-style soccer-specific intermittent fatigue protocol involving walking, jogging, moderate-intensity running and high-speed shuttle activities. A 15-minute half-time interval will be provided. Dynamic balance will be assessed at eight time points using the three-direction Star Excursion Balance Test. Testing will be conducted on a safe and appropriate soccer pitch.

Participants/Inclusion and exclusion criteria
Fifty-six male amateur soccer players: 28 with stable ankles and 28 with chronic ankle instability based on CAIT criteria.

Intervention groups
Each participant completes kinesio-taping and no-taping sessions at least 72 hours apart in a counterbalanced order.

Main outcome variables
Normalized composite Star Excursion Balance Test score measured at eight time points during both the kinesio-taping and no-taping conditions.

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20261020071502N1**
Registration date: **2026-11-22, 1405/09/01**
Registration timing: **registered_while_recruiting**

Last update: **2026-11-22, 1405/09/01**
Update count: **0**

Registration date
2026-11-22, 1405/09/01

Registrant information

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Name of organization / entity
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Recruitment status
recruiting

Funding source

Expected recruitment start date
2026-11-22, 1405/09/01

Expected recruitment end date
2027-01-21, 1405/11/01

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title

Effects of Soccer-Specific Fatigue on Dynamic Postural Control in Players with and Without Chronic Ankle Instability: The Moderating Role of Kinesio Taping

Public title

Effect of Ankle Kinesio Taping on Dynamic Balance During Soccer-Specific Fatigue in Players With and Without Chronic Ankle Instability

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

Male amateur soccer player aged 18-24 years, regularly participating in soccer activities and free from acute lower-limb injury at study entry. For the chronic ankle instability group: history of at least one significant ankle sprain, recurrent giving way or perceived ankle instability, and a Cumberland Ankle Instability Tool (CAIT) score of 24 or lower. For the stable-ankle group: no history of ankle sprain or perceived ankle instability and a CAIT score of 28 or higher. Voluntary participation and provision of written informed consent.

Exclusion criteria:

History of lower-limb surgery; acute ankle injury within the previous three months; concurrent knee, thigh, hip, or low-back injury affecting safe participation; neurological disease; or use of medications affecting balance. Known sensitivity to adhesive tape, any medical or musculoskeletal condition making the fatigue protocol unsafe, or inability to complete the soccer-specific fatigue protocol.

Age

From **18 years** old to **24 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **56**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Crossover

Other design features

This is a quasi-experimental, counterbalanced crossover study with repeated measurements. Participants will first be classified according to ankle status into a stable-ankle group or a chronic ankle instability group. Each group will be divided into two equal subgroups to counterbalance the order of the kinesio-taping and no-taping conditions. One subgroup will complete the kinesio-taping condition first and the no-taping condition second, whereas the other subgroup will complete the conditions in the reverse order. Every participant will complete both conditions, separated by at least 72 hours.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Sport Sciences Research Institute

Street address

No. 3, 5th Alley, Mir Emad Street, Motahari Street, Tehran, Iran

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Approval date

2026-08-22, 1405/05/31

Ethics committee reference number

IR.SSRC.REC.1405.051

Health conditions studied

1

Description of health condition studied

Chronic Ankle Instability

ICD-10 code

M25.373

ICD-10 code description

Other instability, unspecified ankle

Primary outcomes

1

Description

Normalized composite dynamic-balance score obtained from the three-direction Star Excursion Balance Test (SEBT). The score is derived from anteromedial, medial and posteromedial reach performance and normalized to lower-limb length. Higher scores indicate better dynamic-balance performance.

Timepoint

In both the kinesio-taping and no-taping conditions at eight time points: before the first half (BFH), minute 15, minute 30, end of the first half (EFH), beginning of the second half after half-time (BSH), minute 60, minute 75, and end of the second half (ESH).

Method of measurement

Three-direction Star Excursion Balance Test. Three valid trials will be recorded in each direction. Mean reach distance will be normalized to lower-limb length and expressed as a percentage, and the composite score will be calculated from the normalized scores of the three

directions.

Secondary outcomes

1

Description
Normalized anteromedial reach score of the Star Excursion Balance Test
Timepoint
The same eight measurement time points as the primary outcome
Method of measurement
Mean of three valid anteromedial reach trials normalized to lower-limb length and expressed as a percentage.

2

Description
Normalized medial reach score of the Star Excursion Balance Test
Timepoint
The same eight measurement time points as the primary outcome
Method of measurement
Mean of three valid anteromedial reach trials normalized to lower-limb length and expressed as a percentage.

3

Description
Normalized posteromedial reach score of the Star Excursion Balance Test
Timepoint
The same eight measurement time points as the primary outcome
Method of measurement
Mean of three valid posteromedial reach trials normalized to lower-limb length and expressed as a percentage.

Intervention groups

1

Description
Kinesio-taping condition: During one of the two experimental sessions, elastic kinesiology tape will be applied to the tested ankle before the standardized warm-up and soccer-specific fatigue protocol. In participants with chronic ankle instability, the affected or more unstable ankle will be taped; in participants with stable ankles, the dominant ankle will be taped. The skin will be cleaned and dried before application. Tape anchors will be applied without stretch and the working portions with moderate elastic tension along a functional pathway around the lateral ankle and foot. A second reinforcement strip will be used to enhance cutaneous stimulation over the lateral ankle region. Participants will then complete the standardized warm-up and 90-minute soccer-specific fatigue protocol, with dynamic balance measured at the eight predefined time points.
Category
Prevention

2

Description
Control group: No-taping control condition: During the other experimental session, each participant will complete the same standardized warm-up, 90-minute soccer-specific fatigue protocol and dynamic-balance measurement schedule without kinesio tape. Testing environment, instructions, fatigue exposure and measurement time points will be identical across sessions. This condition will serve as the within-participant control. The sessions will be separated by at least 72 hours and the order of the kinesio-taping and no-taping conditions will be counterbalanced within each ankle-status group.
Category
Prevention

Recruitment centers

1

Recruitment center
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Sponsors / Funding sources

1

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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Sport Sciences Research Institute
Proportion provided by this source
100
Public or private sector
Public
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Other

Person responsible for general inquiries

Contact
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available
Study Protocol
Yes - There is a plan to make this available
Statistical Analysis Plan
Yes - There is a plan to make this available
Informed Consent Form
Yes - There is a plan to make this available
Clinical Study Report
Undecided - It is not yet known if there will be a plan to make this available
Analytic Code
Yes - There is a plan to make this available
Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

De-identified study data, balance-test results, study protocol, statistical analysis plan, analysis code, and data dictionary.

When the data will become available and for how long

It will be available after publication of the main study results.

To whom data/document is available

Qualified academic and scientific researchers.

Under which criteria data/document could be used

For scientifically valid re-analysis, independent verification of results, systematic review, meta-analysis, or other legitimate research purposes, subject to data confidentiality requirements and approval by the study team.

From where data/document is obtainable

The corresponding author.

What processes are involved for a request to access data/document

A written request describing the research purpose and requested data should be submitted by email to the corresponding author. Requests will be reviewed by the study team for scientific purpose, proposed methodology, and confidentiality requirements. If approved, de-identified data will be provided to the applicant.

Comments