Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effects of kinesio tape and dynamic tape on postural sway, balance, and range of motion of the ankle joint following fatigue in people with pes planus

Protocol summary

Study aim
Determining the effect of kinesio tape and dynamic tape following fatigue in subjects with pes planus

Design
A randomized, single-blind, cross-over study of 35 participants with pes planus. A lottery will be done for randomization.

Settings and conduct
This study will be performed in the sports rehabilitation laboratory of Arak University. Each participant is evaluated in three different sessions with kinesio tape, dynamic tape, and control. The data analyzer will be blinded to the grouping.

Participants/Inclusion and exclusion criteria
Inclusion criteria: the navicular drop of more than 10 mm, no history of lower limb injury in the last 6 months, and age between 18 and 30 years, not taking any drugs affecting the nervous system and postural control. Exclusion criteria: having a history of lower limb surgery,

Intervention groups
Intervention 1: Kinesiotype. In this condition, kinesio tape manufactured by Ares Company in South Korea is applied to the foot with the low-dye taping method. After 20 to 30 minutes, evaluations are done. After completing the evaluations, the fatigue protocol is performed, and after fatigue, the evaluations are repeated. The tape is removed from the foot and the next intervention is performed 2 to 4 days later. Intervention 2: Dynamic type: In this condition the dynamic tape (made in the USA) is applied to the foot with the low-dye taping method. After 45 minutes, evaluations are done. After completing the evaluations, the fatigue protocol is performed, and after fatigue, the evaluations are repeated. The tape is removed from the foot and the next intervention is performed 2 to 4 days later. Intervention 3: Control: In the control condition without tape, evaluations are done before and after fatigue.

Main outcome variables
Navicular drop; Foot posture index; Joint range of motion; Balance; Postural sway; Gait; Joint position sense

General information

Reason for update
Acronym
IRCT registration information
IRCT registration number: **IRCT20200204046368N13**
Registration date: **2023-06-24, 1402/04/03**
Registration timing: **prospective**

Last update: **2023-06-24, 1402/04/03**
Update count: **0**

Registration date
2023-06-24, 1402/04/03

Registrant information

Name
Zahra Raeisi
Name of organization / entity
Arak University
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Iran (Islamic Republic of)
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Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2023-07-04, 1402/04/13
Expected recruitment end date
2023-08-21, 1402/05/30
Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effects of kinesio tape and dynamic tape on postural sway, balance, and range of motion of the ankle joint following fatigue in people with pes planus

Public title

The effect of taping on pes planus

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

A navicular drop of more than 10 mm No history of lower limb injury in the last 6 months Age between 18 and 30 years Not taking any drugs affecting the nervous system and postural control

Exclusion criteria:

Having a history of lower limb surgery

Age

From **18 years** old to **30 years** old

Gender

Male

Phase

N/A

Groups that have been masked

- Data analyser

Sample size

Target sample size: **35**

Randomization (investigator's opinion)

Randomized

Randomization description

In this study, 3 interventions of kinesio tape, dynamic tape, and control are investigated and compared in a group of people with pes planus on three separate days. Each intervention is done in a separate session. The intervention that is done for each session is determined at the beginning of the session through a lottery. Then, in the next session, a draw will be made between the remaining two interventions.

Blinding (investigator's opinion)

Single blinded

Blinding description

The data analyzer will not be aware of the group's classification. The information of the groups will be provided to the data analyzer in the form of numbers 1, 2, and 3, and for each participant with a code.

Placebo

Not used

Assignment

Crossover

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research Ethics Committee of Arak University

Street address

Arak University, Karbala Boulevard, Basij Square

City

Arak

Province

Markazi

Postal code

3848177584

Approval date

2023-04-19, 1402/01/30

Ethics committee reference number

IR.ARAKU.REC.1402.006

Health conditions studied

1

Description of health condition studied

flat foot

ICD-10 code

M21.4

ICD-10 code description

Flat foot [pes planus] (acquired)

Primary outcomes

1

Description

Navicular drop

Timepoint

Before and after fatigue for each of the three control, dynamic tape and kinesio tape conditions

Method of measurement

The Brody's evaluation method

2

Description

Foot posture index

Timepoint

Before and after fatigue for each of the three control, dynamic tape and kinesio tape conditions

Method of measurement

The foot posture index (FPI-6)

Secondary outcomes

1

Description

Joint position sense

Timepoint

Before and after fatigue for each of the three control,

dynamic tape and kinesio tape conditions

Method of measurement

Goniometer

2

Description

Gait

Timepoint

Before and after fatigue for each of the three control, dynamic tape and kinesio tape conditions

Method of measurement

Pedoscan

3

Description

Balance

Timepoint

Before and after fatigue for each of the three control, dynamic tape and kinesio tape conditions

Method of measurement

Y balance test

4

Description

Joint range of motion with and without weight bearing

Timepoint

Before and after fatigue for each of the three control, dynamic tape and kinesio tape conditions

Method of measurement

Goniometer , Weight-bearing lunge test

5

Description

Medial Longitudinal Arch Angle (MLAA)

Timepoint

Before and after fatigue for each of the three control, dynamic tape and kinesio tape conditions

Method of measurement

Photogrammetry

6

Description

Longitudinal arch angle

Timepoint

Before and after fatigue for each of the three control, dynamic tape and kinesio tape conditions

Method of measurement

Photogrammetry

Intervention groups

1

Description

Intervention 1: In the first intervention, the kinesio tape (Ares brand, made in South Korea) is applied to the foot by the low-dye taping method. After 20-30 minutes evaluations are done. After completing the evaluations, the fatigue protocol is performed, and after fatigue, the evaluations are repeated. The tape is removed from the foot and the next intervention is performed 2 to 4 days later.

Category

Other

2

Description

Intervention group 2: In the second intervention group, the dynamic tape (made in the USA) is applied to the foot with the low dye taping method. After 45 minutes, evaluations are done. After completing the evaluations, the fatigue protocol is performed, and after fatigue, the evaluations are repeated. The tape is removed from the foot and the next intervention is performed 2 to 4 days later.

Category

Other

3

Description

Control group: In the control group without tape, evaluations are done before and after fatigue.

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Arak university

Full name of responsible person

Zahra Raeisi

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Arak university

Full name of responsible person

Hamed Safikhani

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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
Arak university

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
Academic

Person responsible for general inquiries

Contact

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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be a plan to make this available

Study Protocol
Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan
Not applicable

Informed Consent Form
Undecided - It is not yet known if there will be 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

Not applicable

Data Dictionary

Not applicable