Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The Effect of Trunk Muscles Fatigue on Some Risk Factors Predictors of Acute Hamstring Strain Injury in Male Soccer Players.

Protocol summary

Study aim
The Effect of Trunk Muscles Fatigue on Some Risk Factors Predictors of Acute Hamstring Strain Injury in Male Soccer Players.

Design
After reviewing the records according to the inclusion criteria, 30 male football players will be selected. Subjects are evaluated for 3 sessions with an interval of at least 48 hours and at most one week. In the first to third sessions, Hamstring Concentric strength, Hamstring Eccentric strength and Hamstring Flexibility are evaluated, respectively. Then the Trunk muscle fatigue protocol will be performed and the assessments taken before performing the protocol will be repeated.

Settings and conduct
The concentric and eccentric strength of the Hamstring will be evaluated using an isokinetic device and flexibility using a goniometer. These evaluations will be performed in the specialized sports pathology laboratory of the Faculty of Sports and Health Sciences of Shahid Beheshti University.

Participants/Inclusion and exclusion criteria
Having at least 2 years of sports experience. Not having balance problems and Chronic Low Back Pain. Not having any injuries in limbs and spine Not having any Neuromuscular Disorders Absence of any significant Musculoskeletal abnormalities.

Intervention groups
The current research design is single-group. Evaluation is pre-test and post-test. At first, Hamstring Eccentric strength, Hamstring Concentric Strength and Hamstring Flexibility are evaluated. Then they perform the Trunk Muscles fatigue protocol and immediately the measurements taken before the fatigue protocol are repeated.

Main outcome variables
Concentric Strength of Hamstring, Eccentric Strength of Hamstring and Flexibility of Hamstring

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20240621062200N1**
Registration date: **2024-11-28, 1403/09/08**
Registration timing: **retrospective**

Last update: **2024-11-28, 1403/09/08**
Update count: **0**

Registration date
2024-11-28, 1403/09/08

Registrant information

Name
Kosar Pourahmadaghdam

Name of organization / entity
Faculty of Physical Education and Sport Science, Shahid Beheshti University.

Country
Iran (Islamic Republic of)

Phone
+98 914 494 8505

Email address
k.purahmadagdam@alumni.sbu.ac.ir

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2024-04-11, 1403/01/23

Expected recruitment end date
2024-08-10, 1403/05/20

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
The Effect of Trunk Muscles Fatigue on Some Risk Factors Predictors of Acute Hamstring Strain Injury in Male Soccer Players.

Public title
The Effect of Trunk Muscles Fatigue on Some Risk Factors Predictors of Acute Hamstring Strain Injury in Male Soccer Players.

Purpose
Prevention

Inclusion/Exclusion criteria

Inclusion criteria:
Having at least 2 years of sports experience. Not having balance problems and Chronic Low Back Pain. Not having any injuries in limbs and spine Not having any Neuromuscular Disorders Absence of any significant Musculoskeletal abnormalities.

Exclusion criteria:
Having back pain during exams. Any expression of pain and discomfort during the tests.

Age
From **23 years** old to **33 years** old

Gender
Male

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **30**

Randomization (investigator's opinion)
N/A

Randomization description

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Single

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics Committee of Shahid Beheshti University

Street address
Ethics committee, Shahid Beheshti University, Shahid Dr. Shahriari Square(University Square). Rashiduddin Fazlullah St, Yaman St., Velenjak, Chamran Highway, Tehran

City
Tehran

Province
Tehran

Postal code
198969411

Approval date
2021-11-13, 1400/08/22

Ethics committee reference number
IR. SBU.REC.1400.201

Health conditions studied

1

Description of health condition studied
Acute Strain of Hamstring

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
Concentric Strength of Hamstring

Timepoint
In one session, Pre test and Post test

Method of measurement
Biodex, Isokinetic Devise

2

Description
Eccentric strength of Hamstring

Timepoint
In one session, Pre test and Post test

Method of measurement
Biodex, Isokinetic Devise

3

Description
Flexibility of Hamstring

Timepoint
In one session, Pre test and Post test

Method of measurement
Goniameter

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: 30 male soccer players are evaluated in 3 sessions as pre-test and post-test. In every 3 sessions after the pre-test, the trunk muscle fatigue protocol is performed and the post-test is repeated. The first session will evaluate concentric strength, the second session will evaluate eccentric strength, and the third session will evaluate hamstring flexibility.

Category
Prevention

Recruitment centers

1

Recruitment center
Name of recruitment center
Laboratory of sports pathology and corrective movements of Shahid Beheshti University
Full name of responsible person
Dr. Fariborz Hovanlo
Street address
Laboratory of Faculty of Physical Education and Sports Sciences, Shahid Beheshti University, Shahid Dr. Shahriari Square(Daneshgah Square), Rashhduddin Fazlollah St., Yaman St., Velenjak, Chamran Highway,Tehran
City
Tehran
Province
Tehran
Postal code
1983969411
Phone
+98 21 2990 5821
Email
f_hovanloo@sbu.ac.ir

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Shahid Beheshti University
Full name of responsible person
Dr. Afshar Jafari
Street address
Faculty of Physical Education and Sports Sciences, Shahid Beheshti University, Shahid Dr. Shahriari Square(Daneshgah Square), Rashhduddin Fazlollah St., Yaman St., Velenjak, Chamran highway,Tehran
City
Tehran
Province
Tehran
Postal code
1983969411
Phone
+98 21 2990 5824
Email
Af_jafari@sbu.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
Faculty of Physical Education and Sports Sciences, Shahid Beheshti 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
Name of organization / entity
Shahid Beheshti University
Full name of responsible person
Fariborz Hovanlo
Position
Associate professor
Latest degree
Ph.D.
Other areas of specialty/work
Physical education
Street address
Faculty of Physical Education and Sports Sciences, Shahid Beheshti University, Shahid Dr. Shahriari Square(Daneshgah Square), Rashhduddin Fazlollah St., Yaman St., Velenjak, Chamran highway,Tehran
City
Tehran
Province
Tehran
Postal code
1983969411
Phone
+98 21 2990 5821
Email
f_hovanloo@sbu.ac.ir

Person responsible for scientific inquiries

Contact
Name of organization / entity
Shahid Beheshti University
Full name of responsible person
Fariborz Hovanlo
Position
Associate Professor
Latest degree
Ph.D.
Other areas of specialty/work
Physical Education
Street address
Faculty of Physical Education and Sports Sciences, Shahid Beheshti University, Shahid Dr. Shahriari Square(Daneshgah Square), Rashhduddin Fazlollah St., Yaman St., Velenjak, Chamran highway,Tehran
City
Tehran

Province
Tehran
Postal code
1983969411
Phone
+98 21 2990 5821
Email
f_hovanloo@sbu.ac.ir

Person responsible for updating data

Contact
Name of organization / entity
Shahid Beheshti University
Full name of responsible person
Fariborz Hovanlo
Position
Associate Professor
Latest degree
Ph.D.
Other areas of specialty/work
Physical Education
Street address
Faculty of Physical Education and Sports Sciences, Shahid Beheshti University, Shahid Dr. Shahriari Square(Daneshgah Square), Rashhduddin Fazlollah St., Yaman St., Velenjak, Chamran highway,Tehran
City
Tehran
Province
Tehran
Postal code
1983969411
Phone
+98 21 2990 5821
Email
f_hovanloo@sbu.ac.ir

Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available
Justification/reason for indecision/not sharing IPD
The information about the subjects is personal and will not be shared with others
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
No - There is not 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
All information except the subjects' personal information
When the data will become available and for how long
Six months after the results are published
To whom data/document is available
All researchers
Under which criteria data/document could be used
The use of research results is unimpeded by acquiring the source
From where data/document is obtainable
k.purahmadagdam@alumni.sbu.ac.ir
What processes are involved for a request to access data/document
At least two working days
Comments