Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

The effect of 12 weeks plyometric and soccer training on the cardiac structural and functional in 13_15 year's old boys

Protocol summary

Summary

The purpose of this investigation was to examine the effects of 12 weeks plyometric and soccer training on the cardiac structural and functional of 13_15 year old healthy boys. For this purpose 20 non-athlete healthy boys voluntarily participated in this study and were randomly divided into two groups: control (n = 10) and training (n = 10). Training group performed plyometric exercises and Football training for 12 weeks, three times a week. The control group during the period of investigation refused to participate in regular sports activities. The dependent variables (left ventricular end-diastolic dimension, left ventricular end-systolic dimension, left ventricular posterior wall thickness, ventricular septal thickness, stroke volume, injection fraction) in both groups at the beginning and the end of plan was measured.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016070326752N2**
Registration date: **2016-11-28, 1395/09/08**
Registration timing: **prospective**

Last update:
Update count: **0**

Registration date

2016-11-28, 1395/09/08

Registrant information

Name

Bahman Ebrahimi- Torkmani

Name of organization / entity

Allameh Tabatabai University in Tehran

Country

Iran (Islamic Republic of)

Phone

+98 914 913 2656

Email address

b.tartibian@atu.ac.ir

Recruitment status

Recruitment complete

Funding source

Investigator

Expected recruitment start date

2016-12-01, 1395/09/11

Expected recruitment end date

2017-03-03, 1395/12/13

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of 12 weeks plyometric and soccer training on the cardiac structural and functional in 13_15 year's old boys

Public title

Effect of plyometric and soccer training on the cardiac structural and functional in boys

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion criteria: No prior history of participation in any regular activity; month before the start of protocol Good health condition; The ages ranged between 13 to 15 years. Exclusion criteria: Lack of preparation before exercise testing; Inability to perform physical activities.

Age

From **13 years** old to **15 years** old

Gender

Male

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **20**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Double blinded
Blinding description
Placebo
Not used
Assignment
Other
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Sport Sciences Reserch Institute of IRAN
Street address
Fifth alley, Miremad street, Motahari, Tehran, Iran.
City
Tehran
Postal code
1587958711
Approval date
2016-08-28, 1395/06/07
Ethics committee reference number
IR.SSRI.REC.1395.107

Health conditions studied

1

Description of health condition studied
Relationship of 12-weeks plyometric and football training with heart structure and function in 13_15 years old boys
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
Left ventricular End-diastolic dimension (LVEDD), Left ventricular end-systolic dimension (LVEDS), Left ventricular end diastolic posterior wall dimension¬(LVPWd), Interventricular septal end diastolic dimension(IVSd), Stroke volume (SV), Ejection fraction (Ef)
Timepoint
Before the training - At the end of the 12 week
Method of measurement
Echocardiography.

Secondary outcomes

1

Description
Left ventricular end- diastolic dimension (LVEDD) , Left ventricular end-systolic dimension (LVEDS) , Left ventricular end diastolic posterior wall dimension (LVPWd), Interventricular septal end diastolic dimension(IVSd), Stroke volume (SV), Ejection fraction (Ef)
Timepoint
At the end of the twelfth week
Method of measurement
Echocardiography.

Intervention groups

1

Description
Participants in training group: The training group performed an exercise program for 12 weeks, three times a week and 90 minutes per session for 3 months. The training program includes a 15 minute warm up, 25 minutes plyometric exercises, 40 minutes of football training and a 10 minute recovery. The intervention of training group: They did not participate in any regular exercises programs during the training period.
Category
Lifestyle

Recruitment centers

1

Recruitment center
Name of recruitment center
Soccer Academy
Full name of responsible person
Street address
Azerbaijani Soccer school, Miyaneh, East Azarbaijan, Iran
City
Miyaneh

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Investigator
Full name of responsible person
Bahman Ebrahimi
Street address
Department of Education Turkmenchay, East

Azarbaijan, Iran
City
Miyaneh
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Investigator
Proportion provided by this source
100
Public or private sector
empty
Domestic or foreign origin
empty
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
empty

Person responsible for general inquiries

Contact
Name of organization / entity
Mohaghegh Ardabili University
Full name of responsible person
Bahman Ebrahimi-Turkmani
Position
PhD student of exercise physiology
Other areas of specialty/work
Street address
University Mohaghegh Ardabili, Unirversity Street, Ardabil, Iran
City
Ardabil
Postal code
Phone
+98 914 913 2656
Fax
Email
IBA.AYDEN@YAHOO.COM
Web page address

Person responsible for scientific inquiries

Contact
Name of organization / entity
Mohaghegh Ardabili University
Full name of responsible person
Bahman Ebrahimi Turkmani
Position
Phd Student
Other areas of specialty/work
Street address
Mohaghegh Ardabili University, University Street, Ardabil, Iran
City
Ardabil
Postal code
Phone
+98 989031546050
Fax
Email
Iba.ayden@yahoo.com
Web page address

Person responsible for updating data

Contact
Name of organization / entity
Mohaghegh Ardabili University
Full name of responsible person
Bahman Ebrahimi-Turkmani
Position
PhD student of sport physiology
Other areas of specialty/work
Street address
Mohaghegh Ardabili University, University Street, Ardabil, Iran
City
Ardabil
Postal code
Phone
+98 914 913 2656
Fax
Email
IBA.AYDEN@YAHOO.COM
Web page address

Sharing plan

Deidentified Individual Participant Data Set (IPD)
empty
Study Protocol
empty
Statistical Analysis Plan
empty
Informed Consent Form
empty
Clinical Study Report
empty
Analytic Code
empty
Data Dictionary
empty