Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

The Effects of Different Methods of Load Carrying on the Plantar Foot Pressure in Dynamic and Static Conditions

Protocol summary

Summary

The aim of this study was to compare the effects of different methods of backpack carrying with 15% of body weight on plantar foot pressure in static and dynamic conditions. Methods: Mean & Peak plantar pressure, peak force & Trajectory of center of force beneath five different foot areas (Medial & Lateral heel, Midfoot, 1th & 5th Metatarsal) and the whole foot area were collected during 3 different test situations: without load & with a load of 15% of body weight in a backpack carrying bilateral or unilateral on the right shoulder. In the static test the subjects kept the static upright posture for 30 sec. In the dynamic test they walked at a preferred speed on a Tekscan mat. A Matscan pressure mat connected to a computer was used to collect the plantar pressure data.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138811052708N2**
Registration date: **2010-09-07, 1389/06/16**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2010-09-07, 1389/06/16

Registrant information

Name

Ali Ghanbari

Name of organization / entity

Shiraz University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 71 1627 1551

Email address

ghanbary@sums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice-chancellery of Research Affairs, Shiraz University of Medical Sciences

Expected recruitment start date

2009-04-04, 1388/01/15

Expected recruitment end date

2009-06-19, 1388/03/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effects of Different Methods of Load Carrying on the Plantar Foot Pressure in Dynamic and Static Conditions

Public title

The Effects of Different Methods of Load Carrying on the Plantar Foot Pressure in Dynamic and Static Conditions

Purpose

Basic scienece

Inclusion/Exclusion criteria

Inclusion criteria: 1- age between 19-27 years, 2- students of Shiraz University of Medical Sciences. Exclusion criteria: 1-structural abnormality in neuromusculoskeletal system, 2- congenital abnormalities, a history of trauma or surgery in lower exterimities and spine which affect the postural alignment, 3- postural abnormality, 4- pregnancy.

Age

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

Gender

Both

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 Shiraz University of Medical Sciences
Street address
Zand street, Shiraz University of Medical Sciences
City
Shiraz
Postal code
7194733669
Approval date
2009-09-03, 1388/06/12
Ethics committee reference number
CT-88-4756

Health conditions studied

1

Description of health condition studied
load carrying
ICD-10 code
w20-w49
ICD-10 code description
Exposure to inanimate mechanical forces

Primary outcomes

1

Description
Plantar foot pressure variables
Timepoint
before and after intervention
Method of measurement
A Mat scan was used to measure Plantar foot pressure variables

Secondary outcomes

empty

Intervention groups

1

Description
without load
Category
N/A

2

Description
with a load of 15% of body weight in a backpack carrying bilateral
Category
Other

3

Description
with a load of 15% of body weight in a backpack carrying unilateral on the right shoulder
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Rehabilitation School
Full name of responsible person
Street address
City
Shiraz

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice-chanceller of research affairs, Shiraz University of Medical Sciences
Full name of responsible person
Dr. Dabaghmanesh
Street address
Zand street, Shiraz University of Medical Sciences
City
Shiraz
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes

Title of funding source
Vice-chanceller of research affairs, Shiraz University of Medical Sciences
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
school of rehabilitation
Full name of responsible person
Ali Ghanbari
Position
Ph.D in Physiotherapy
Other areas of specialty/work
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Person responsible for updating data

Contact
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Full name of responsible person
Ali Ghanbari
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Other areas of specialty/work
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Email
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