

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 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 science

###### 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 extremities 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-chancellor 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-chancellor 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*

PhD in physiotherapy

**Other areas of specialty/work****Street address**

first Abivardi street, Chamran bullvard

**City**

Shiraz

**Postal code**

7194733669

**Phone**

+98 71 1627 1551

**Fax**

+98 71 1627 2495

**Email**

ghanbary@sums.ac.ir

**Web page address****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****Street address**

first Abiverdi street, Chamran Bullvard

**City**

Shiraz

**Postal code**

7194733669

**Phone**

+98 71 1627 1551

**Fax**

+98 71 1627 2495

**Email**

ghanbary@sums.ac.ir

**Web page address****Person responsible for scientific inquiries****Contact****Name of organization / entity**

Rehabilitation School

**Full name of responsible person**

Ali Ghanbari

**Position****Person responsible for updating data****Contact****Name of organization / entity****Full name of responsible person**

Ali Ghanbari

**Position****Other areas of specialty/work****Street address****City****Postal code****Phone****Fax****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*