Clinical Trial Protocol
Iranian Registry of Clinical Trials

15 Jun 2026

A comparison of abdominal hollowing and abdominal bracing exercises on transverse abdominis thickness and balance in recurrent nonspecific low back pain patients.

Protocol summary

Summary

The objective of this clinical trial is the comparison of the effect of abdominal hollowing and bracing exercises on transverse abdominis thickness and static balance in recurrent nonspecific low back pain patients. In this study 45 recurrent nonspecific low back pain participants will be randomly assigned into three abdominal hollowing, abdominal bracing and control group (15 persons in each group). After 6 weeks training, both groups and participants in control group, will be assessed for static balance and transverese abdominis muscle thickness.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201206235112N5**
Registration date: **2013-06-30, 1392/04/09**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2013-06-30, 1392/04/09

Registrant information

Name

Rozita Hedayati

Name of organization / entity

Semnan University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 23 1335 4180

Email address

hedayati@sem-ums.ac.ir

Recruitment status

Recruitment complete

Funding source

Neuromuscular Rehabilitation Research Center,Semnan University of Medical Sciences

Expected recruitment start date

2012-08-22, 1391/06/01

Expected recruitment end date

2013-03-20, 1391/12/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

A comparison of abdominal hollowing and abdominal bracing exercises on transverse abdominis thickness and balance in recurrent nonspecific low back pain patients.

Public title

A comparison of two stabilizing exercises on transverse abdominis thickness and balance in low back pain patients.

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Presence of recurrent non specific low back pain; 18-40 years old; pain fewer than 3 according to VAS questionnaire Exclusion criteria: Presence of diabetes, musculoskeletal disorders, neuromuscular, cardiovascular, respiratory disorders; systemic disease; spondylolysis and spondylolystesis; previous surgery in the spinal region; no history of trauma to lumbar during a year previous the study; disk herniation; nerve root compression; polyneuropathy; carcinoma; malignancy of the spinal region; pregnancy; no history of lumbar region training during 12 months before the study; drugs using

with side effects on the postural control system.

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

Gender
Female

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **45**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Semnan University of Medical Sciences

Street address
The 5th kilometers of Damghasn road- Semnal University of Medical Science

City
Semnan

Postal code

Approval date
2010-09-23, 1389/07/01

Ethics committee reference number
it is going to be evaluated in this comeetee

Health conditions studied

1

Description of health condition studied
Recurrent non-specific low back pain

ICD-10 code
M05, M06,

ICD-10 code description
Inflammatory polyarthropathies

Primary outcomes

1

Description
Transverse abdominis thickness

Timepoint
Beggining of the study and 6 weeks after the first session of intervention

Method of measurement
Sonography

2

Description
COP velocity and displacement

Timepoint
Beggining of the study and 6 weeks after the first session of intervention

Method of measurement
force plate

Secondary outcomes

empty

Intervention groups

1

Description
The abdominal hollowing group do ten repetitions of abdominal hollowing, three times a day for 6 weeks.

Category
Treatment - Other

2

Description
The abdominal bracing groups do ten repetitions of each exercise, tree times a day for 6 weeks.

Category
Treatment - Other

3

Description
The control group receives no intervention in and do not a specific activity other than routine during 6 weeks.

Category
N/A

Recruitment centers

1

Recruitment center

Name of recruitment center
Neuromuscular Rehabilitation Research Center

Full name of responsible person
Dr Rozita Hedayati

Street address
Neuromuscular Rehabilitation Research Center, Mashahir Square, Semnan

City
Semnan

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Semnan University of Medical Sciences
Full name of responsible person
Dr Raheb Ghorbani
Street address
Semnal Sniversity of Medical Sciences, The 5th kilometers of Damghasn road
City
Semnan
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Semnan 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
Semnan University of Medical Sciences
Full name of responsible person
Dr. Rozita Hedayati
Position
Ph.D of Physiotherapy/ Assistant Professor
Other areas of specialty/work
Street address
Semnan University of Medical Sciences, The 5th kilometers of Damghan road
City
Semnan
Postal code
Phone
+98 23 1333 3895
Fax
Email
rosehed@yahoo.com
Web page address

Person responsible for scientific inquiries

Contact
Name of organization / entity
Semnan University of Medical Sciences
Full name of responsible person
Dr. Rozita Hedayati
Position
Ph.D of Physiotherapy/ Assistant Professor
Other areas of specialty/work
Street address
Semnan University of Medical Sciences, The 5th Kilometer of Damghan road
City
Semnan
Postal code
Phone
+98 23 1333 3895
Fax
Email
rosehed@yahoo.com
Web page address

Person responsible for updating data

Contact
Name of organization / entity
Semnan University of Medical Sciences
Full name of responsible person
Dr. Rozita Hedayati
Position
Ph.D of Physiotherapy/ Assisted Professor
Other areas of specialty/work
Street address
Semnan University of Medical Sciences, The5th kilometers of Damghan road
City
Semnan
Postal code
Phone
00
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