

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 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 transverse 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)

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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

Semnan University of Medical Sciences, The 5th kilometers of Damghan 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

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Other areas of specialty/work

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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