Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Nov 2026

Comparing the effects of stability exercises with general exercises in water, on the cross-sectional area and thickness of the multifidus muscle and the thickness of the transversus abdominis muscle in women with non-specific chronic low back pain.

Protocol summary

Study aim
The aim of present study is to compare the effect of stabilization exercise with general exercise in water on cross sectional area and thickness of multifiduse and thickness of transversus abdominis muscles and on pain and functional disability in women with nonspecific chronic low back pain.

Design
The present randomized controlled trial study is single blind, have two groups: control and exprimental including 27 subjects.

Settings and conduct
Patients were selected in Shahid Yaheinejad Hospital and after measuring the variables, they entered the swimming pool to perform the intervention and at the end the intervention, relevant variables were measured again.

Participants/Inclusion and exclusion criteria
Women with nonspecific low back pain

Intervention groups
Experimental group perform the stabilization exercise in water and control group perform general exercise in water.

Main outcome variables
Thickness and cross sectional area of the multifidus muscle, thickness of thickness of the transversus abdominis muscle, pain, functional disability

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20221019056245N1**
Registration date: **2023-01-03, 1401/10/13**
Registration timing: **prospective**
Last update: **2023-01-03, 1401/10/13**
Update count: **0**

Registration date
2023-01-03, 1401/10/13

Registrant information

Name
Khodabakhsh Javanshir

Name of organization / entity

Country
Iran (Islamic Republic of)

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2023-01-15, 1401/10/25

Expected recruitment end date
2023-05-15, 1402/02/25

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparing the effects of stability exercises with general exercises in water, on the cross-sectional area and thickness of the multifidus muscle and the thickness of the transversus abdominis muscle in women with non-specific chronic low back pain.

Public title

Comparison of the effect of stabilization exercise with general exercise in water on women with chronic nonspecific low back pain

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
woman 25-45 years old chronic low back pain low back pain with instability

Exclusion criteria:
tumor and cancer epidural abscess spondyloarthropathy osteoporosis spinal fractures deformities inflammatory process disc herniation spondylolysis spondylosis lumbosacral radicular syndrome radiculopathy cauda equina syndrome spinal stenosis previous spinal surgery rehomatic diseases limb discrepancy uncontrolled increased blood pressure heart failure infectious diseases

Age
From **25 years** old to **45 years** old

Gender
Female

Phase
N/A

Groups that have been masked

- Participant

Sample size
Target sample size: **27**

Randomization (investigator's opinion)
Not randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description
The participants did not know which group they were in.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics committee of Babol University of Medical Sciences

Street address
Ganj afrooz St.

City
Babol

Province
Mazandaran

Postal code
4717647745

Approval date
2020-06-20, 1399/03/31

Ethics committee reference number
IR.MUBABOL.REC.1399.331

Health conditions studied

1

Description of health condition studied
nonspecific low back pain

ICD-10 code
M54.5

ICD-10 code description
Low back pain

Primary outcomes

1

Description
Thickness of right and left transversus abdominis muscle

Timepoint
Before intervention and after intervention

Method of measurement
Using ultrasonography instrument made by south corea (SONOACE R7-EX)

2

Description
Thickness and cross sectional area

Timepoint
Before and after intervention

Method of measurement
Using ultrasonography instrument made by south corea (SONOACE R7-EX)

Secondary outcomes

1

Description
Functional disability

Timepoint
Before and after intervention

Method of measurement
Modified Modified Oswestry

2

Description
Pain

Timepoint
Before and after intervention

Method of measurement
Numeric rating scale

Intervention groups

1

Description
Intervention group: Performing stabilization exercise in water based on the protocol
Category
Rehabilitation

2

Description
Control group: Performing general exercise in water
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Shahid yahyanejad hospital
Full name of responsible person
Maede Jarrahi
Street address
Shahid mostafa khomini
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Babol University of Medical Sciences
Full name of responsible person
Mehdi Rajabnia
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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Babol University of Medical Sciences
Proportion provided by this source
100
Public or private sector
Public
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact
Name of organization / entity
Babol University of Medical Sciences
Full name of responsible person
Khodabakhsh Javanshir
Position
Associate professor
Latest degree
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Latest degree

Ph.D.

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Not applicable

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Not applicable

Data Dictionary

Not applicable