

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

Effect of 4-week physical therapy with and without National Academy of Sports Medicine (NASM) on pain intensity, functional disability, muscle endurance, low back mobility and quality of life in low back pain with discopathy.

Protocol summary

Study aim

Effect of 4-week physical therapy with and without National Academy of sport medicine NASM on pain intensity, Functional disability, muscle endurance, low back mobility and quality of life in low back pain with discopathy.

Design

This single-blinded randomized clinical trial (RCT) includes a control group, treatment (intervention) group. Each group consists of 14 participants who are randomly assigned to their group using Block Randomization with block size four, which results in six possible sequences: AABB, ABAB, ABBA, BAAB, BABA, BBAA. We would then build our full sequence randomly picking, for 7 iterations, one of the previously mentioned sequences to cover all 28 trial participants.

Settings and conduct

This controlled trial performed in Zanzan and physical therapy clinic. We will have two groups: physical therapy with and without NASM. They will assess before beginning of intervention with pretests and then after 4 weeks and intervention again will assess with tests. Results will be analyzed after statistical review.

Participants/Inclusion and exclusion criteria

Inclusion criteria: 1- At least 3-month-long low back pain with radiological findings and diagnostics approved by an orthopedic surgeon. 2- between 18 to 55 years of age. Exclusion criteria: 1-pregnant woman 2-patients' absence for more than three consecutive sessions.

Intervention groups

Intervention group 1 includes patients with low back pain from discopathy who will undergo physical therapy including core stability and low-power laser. Intervention group 2 includes patients with low back pain from discopathy who will undergo physical therapy with corrective exercise.

Main outcome variables

pain

General information

Reason for update

Acronym

lbp pt

IRCT registration information

IRCT registration number: **IRCT20210921052547N1**

Registration date: **2022-01-03, 1400/10/13**

Registration timing: **retrospective**

Last update: **2022-01-03, 1400/10/13**

Update count: **0**

Registration date

2022-01-03, 1400/10/13

Registrant information

Name

Mahdis Hamidi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 24 3346 0725

Email address

mahdis.hamidi61@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-11-21, 1400/08/30

Expected recruitment end date

2021-12-06, 1400/09/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of 4-week physical therapy with and without National Academy of Sports Medicine (NASM) on pain intensity, functional disability, muscle endurance, low back mobility and quality of life in low back pain with discopathy.

Public title

Effect of physical therapy in low back pain

Purpose

Other

Inclusion/Exclusion criteria**Inclusion criteria:**

People with a history of low back pain who have been tested and diagnosed by an orthopedic surgeon. No sign of lower limb deformity. At least 3-month-long Low back pain. No limit for undergoing exercise therapy. No lower extremity sensory impairment. No sensory and movement disorders. No autoimmune disease like such as Rheumatoid arthritis. having filled the consent documents. between 18 to 55 years of age.

Exclusion criteria:

Pregnancy for woman. Absence in 3 seceesions consecutive. consent of continuing. Any of disease in process that make it difficult for participants to continuing . Low back injury or lower extremity.

Age

From **18 years** old to **55 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **28**

Randomization (investigator's opinion)

Randomized

Randomization description

In this resurch we will use 4 letters block which are combined from 2 letters A and B.in every block, every letter repeat 2 times and we will have 6 block that they are put in 6 pockets.pockets will numbered from 1 to 6.we will have 28 cases so we will select 7 times.and base on sequence of A and B, cases goes to A and B groups.

Blinding (investigator's opinion)

Not blinded

Blinding description**Placebo**

Not used

Assignment

Other

Other design features

Participants are randomly divided into two equal group,

and each group will perform physiotherapeutic treatment including core stability exercise and low-power laser therapy.One of the groups will, in addition, perform exercise based on American Academy of Sports medicine.The first group will be considered the controlled group and the second the treatment group.(experimental group).

Secondary Ids

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

zanjan medical science university

Street address

mahdavi bulvar

City

zanjan

Province

Zanjan

Postal code

4513964841

Approval date

2021-09-21, 1400/06/30

Ethics committee reference number

IR.ZUMS.REC.1400.256

Health conditions studied**1****Description of health condition studied**

discopathy

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

pain

Timepoint

4 week after intervention.

Method of measurement

visual analogue scale

2**Description**

functional disability

Timepoint

At the begining and end (after 4 week) of intervention.

Method of measurement

Oswestry disability index

Secondary outcomes

1

Description

muscle endurance

Timepoint

At the begining and end(after 4 week) of intervention.

Method of measurement

sorenson test

2

Description

low back mobility

Timepoint

At the begining and end(after 4 week) of intervention.

Method of measurement

goniometer

3

Description

quality of life

Timepoint

At the begining and end(after 4 week) of intervention.

Method of measurement

whoqol-bref

Intervention groups

1

Description

Intervention group1 :Physical therapy that people goes to physicaltherapy for 4 week 3 secession 1 hour consist of core stability exercise and low pwer laser.

Category

Rehabilitation

2

Description

Intervention group: The second group that receive physicaltherapy with national academy of sport medicine for 4 week 3 cession 1 hour consist of core stability exercise and low power laser and NASM.

Category

Rehabilitation

Recruitment centers

1

Recruitment center**Name of recruitment center**

farabi physical therapy clinic

Full name of responsible person

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Sponsors / Funding sources

1

Sponsor**Name of organization / entity**

Zanjan University of Medical Sciences

Full name of responsible person

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Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

No

Title of funding source

zanjan medical science university

Proportion provided by this source

100

Public or private sector

Private

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

Other

Person responsible for general inquiries

Contact**Name of organization / entity**

Zanjan University of Medical Sciences

Full name of responsible person

Mahdis Hamidi

Position

physiotherapist

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

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Full name of responsible person

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Position

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Latest degree

Bachelor

Other areas of specialty/work

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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

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

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

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

Data Dictionary

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