

Clinical Trial Protocol

Iranian Registry of Clinical Trials

06 Jul 2026

The comparison of the effect of High intensity laser therapy (HILT) versus low intensity laser therapy (LILT) on pain and functional improvement of the patients with non-specific chronic low back pain

Protocol summary

Summary

Objectives: Chronic low back pain is one of the most prevalent musculoskeletal disorders which has been attempted for many years to prescribe more efficient treatment protocols. Based on the literature, there are evidences for the effect of laser therapy on reduction of the pain in the back area but the priority of any kind laser therapy on the treatment of the low back pain is unknown, especially when considering the same dose level. Higher price of the high intensity laser therapy and also higher safety level demands on application of this kind of laser compared with low intensity laser therapy, shows the necessity of further researches on this filed to evaluate the effect of both kind of laser therapy at the same dose level. **Design:** present research is a single blinded randomized clinical trial study. **Setting and conduct:** Thirty participants with chronic low back pain (aged 18-40 Ys) will participated in the study via convenience sampling method. Initial assessment will include pain level detection by visual analogue scale and functional level evaluation by Oswestry questionnaire. Participants will be randomly divided in 3 groups, all engaged in 10 sessions therapy; first group will receive high intensity laser therapy, second group will receive low intensity laser therapy and the third group will receive placebo laser. All groups will receive routine physical therapy treatments. At the end of the treatment sessions and also 2 weeks after finishing the treatment the previously mentioned assessments will be done again. Anova test will be used for between group comparisons, if the data present with normal distribution otherwise Kruskal wallis test will be used.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201707012829N1**

Registration date: **2017-07-18, 1396/04/27**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2017-07-18, 1396/04/27

Registrant information

Name

Mohsen Razeghi

Name of organization / entity

Rehabilitation School, Shiraz University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 71 1626 1081

Email address

razeghm@sums.ac.ir

Recruitment status

Recruitment complete

Funding source

Shiraz University of Medical Sciences

Expected recruitment start date

2017-07-23, 1396/05/01

Expected recruitment end date

2018-04-21, 1397/02/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The comparison of the effect of High intensity laser therapy (HILT) versus low intensity laser therapy (LILT) on pain and functional improvement of the patients with non-specific chronic low back pain

Public title

Effect of laser therapy on chronic low back pain

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Age range between 18 -40 years; Low back pain from 3 months to one year; Pain level between 30 - 60 mm (VAS scale); No physical therapy and manual therapy in past 3 months; Gaining 20% to 70% of the score of the disability level questionnaire Exclusion criteria: Spondylolysis and Spondylolisthesis; Disc herniation; Inability to sit, stand and forward bending for the short time due to severe pain or weakness or balance impairment; Vertebral anomaly; Pregnant women; History of low back and pelvic surgery; Diabetes, Rheumatoid arthritis and any kind of sensory impairment like neuropathy

Age

From **18 years** old to **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Single blinded

Blinding description**Placebo**

Used

Assignment

Parallel

Other design features**Secondary Ids**

empty

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

Shiraz University of Medical Sciences

Street address

Central building of Shiraz University of Medical Sciences, Zand Avenue, Shiraz, Iran

City

Shiraz

Postal code

7134814336

Approval date

2017-05-20, 1396/02/30

Ethics committee reference number

IR.SUMS.REC.1396.30

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

Low back pain

ICD-10 code

M54.9

ICD-10 code description

Dorsalgia, unspecified Backache NOS

Primary outcomes**1****Description**

Pain

Timepoint

End of the treatment sessions and two weeks after finishing the intervention

Method of measurement

Visual Analogue Scale

2**Description**

Disability level

Timepoint

End of the treatment sessions and two weeks after finishing the intervention

Method of measurement

Oswestry disability questionnaire

Secondary outcomes

empty

Intervention groups**1****Description**

High intensity laser therapy

Category

Rehabilitation

2**Description**

Low intensity laser therapy

Category

Rehabilitation

3**Description**

Placebo laser therapy

Category

Placebo

Recruitment centers**1****Recruitment center****Name of recruitment center**

fars oil industry health clinic, physiotherapy ward

Full name of responsible person**Street address****City**

Shiraz

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Shiraz University of Medical Sciences

Full name of responsible person

Kambiz Eskandari

Street address

Central building of Shiraz University of Medical Sciences, Zand Avenue, Shiraz, Iran

City

Shiraz

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

Yes

Title of funding source

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

Person responsible for general inquiries**Contact****Name of organization / entity**

Shiraz University of Medical Sciences

Full name of responsible person

Sobhan Sobhani

Position

PhD of physical therapy

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

Department of rehabilitation sciences, 1st Abiverdi Avenue, Shiraz

City

Shiraz

Postal code

7194733669

Phone

+98 71 3627 1551

Fax**Email**

sobhanis@sums.ac.ir

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

Shiraz University of Medical Sciences

Full name of responsible person

Mohsen Razeghi

Position

PhD of physical therapy

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

Department of rehabilitation sciences, 1st Abiverdi Avenue, Shiraz

City

Shiraz

Postal code

7194733669

Phone

+98 71 3627 1551

Fax**Email**

razeghm@sums.ac.ir

Web page address**Person responsible for updating data****Contact****Name of organization / entity****Full name of responsible person**

Ahmad Moazen zadeh

Position

MS Student of Physical therapy

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

00

Fax**Email**

farid_pt@yahoo.com

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