

Clinical Trial Protocol

Iranian Registry of Clinical Trials

03 Jul 2026

Comparing the effect of Local vibration and Sit up exercise on abdominal local fat thickness in the young healthy women

Protocol summary

Summary

Volunteers informed about the experimental procedure and purpose of this study. Subsequently, their written informed consent is obtained. After the registration of demographic data including age, weight, body mass index, volunteers will be randomly assigned in one of three groups: local vibration, abdominal muscle strength exercise and control. Weight scales with a precision of 0.1 kg and height tape with a precision of 0.1 cm is measured and recorded. Waist circumference is measured with an accuracy of 0.1 centimeter with a tape. Subcutaneous fat thickness is measured using Sahan caliper in lying position at a distance of 3 cm umbilical part (Approximate location of rectus abdominis muscle mass). Intervention: The local vibration at 30-50HZ frequency conducted for 30 minutes in the local vibration group. The vibrator is directly placed on sides of umbilicus (on the rectus abdominis muscle). In the abdominal strengthening group, exercise is performed in the way that subjects lie supine with knee bent at 90 degree. They pull the torso upward from lying position as possible as they can and return to start position (spending 3 second for each movement, followed by 1 second holding). Before exercise, flex ion and extension of the cervical and lumbar spine are done for 10 times to warm up. Exercise are performed 3 set with 8 to 10 repetitions .The interventions are done 3 times per week for 12 weeks. All volunteers are asked not to participate in the any exercise program and not to change their usual diet, which is conducive to weight loss or gain.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201310044549N4**

Registration date: **2013-10-27, 1392/08/05**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2013-10-27, 1392/08/05

Registrant information

Name

Elham Fatemy

Name of organization / entity

Semnan University Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 23 1335 4180

Email address

fatemy@sem-ums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Semnan University of Medical Sciences

Expected recruitment start date

2013-11-06, 1392/08/15

Expected recruitment end date

2014-01-05, 1392/10/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparing the effect of Local vibration and Sit up exercise on abdominal local fat thickness in the young healthy women

Public title

Comparing the effect of Local vibration and Sit up exercise on abdominal obesity in the young healthy

women

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: female, obesity or overweight.

Exclusion criteria: weight loss program, Menstrual irregularities, gynecological disease. pregnancy, History of participation in strength training during the last 6 months, Medical conditions that may prohibit the patient to exercise(neck and low back pain...) Uncontrolled hypertension, sedatives affect weight, The use of lipid-lowering drugs.

Age

From **18 years** old to **35 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **54**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Sampling is convenience and the volunteers randomly are placed in three groups by lottery.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Semnan University of Medical Sciences

Street address

Kilometer 5, Damghan Road

City

Semnan

Postal code

Approval date

2013-10-05, 1392/07/13

Ethics committee reference number

92/351440

Health conditions studied

1

Description of health condition studied

obesity

ICD-10 code

E65-E68

ICD-10 code description

Obesity and other hyperalimantation

Primary outcomes

1

Description

Abdominal local fat thickness

Timepoint

Before and after intervention

Method of measurement

Caliper

Secondary outcomes

1

Description

Waist circumference

Timepoint

Before and after intervention

Method of measurement

Meter

Intervention groups

1

Description

The local vibration at 30-HZ frequency is conducted for 30 minutes in the local vibration group. The vibrator is directly placed on sides of umbilicus. (on the rectus abdominis muscle. The interventions are done 3 times per week for 12 weeks.

Category

Other

2

Description

In the abdominal strengthening group, exercise is performed in the way that subjects lie supine with knee bent at 90 degree. They pull the torso upward from lying position as possible as they can and return to start position (spending 3 second for each movement, followed by 1 second holding). Before exercise, flex ion and extension of the cervical and lumbar spine are done for 10 times to warm up. Exercise are performed 3set with 8 to 10 repetitions .The intervention are done 3 times per week for 12 weeks

Category

Other

3

Description

In control group no intervention will be done.

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Neuromuscular Rehabilitation Research Center,
Semnan University of Medical Sciences.Semnan,Iran

Full name of responsible person

Elham Fatemy

Street address

Mashahir Square, in front of Helal Ahmar

City

Semnan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research,Semnan University of
Medical Sciences

Full name of responsible person

Raheb Ghorbani

Street address

Kilometer 5, 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

Vice chancellor for research,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,Rehabilitation
faculty

Full name of responsible person

Elham Fatemy

Position

MS.c-Instrutor

Other areas of specialty/work

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Person responsible for scientific inquiries

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Semnan University of Medical Sciences

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Email

Web page address

empty

Sharing plan

Informed Consent Form

empty

Deidentified Individual Participant Data Set (IPD)

Clinical Study Report

empty

empty

Study Protocol

Analytic Code

empty

empty

Data Dictionary

Statistical Analysis Plan

empty