Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 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 hyperalimentation

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
Street address
Kilometer 5, Damghan Road, Rehabilitation faculty, Semnan University of Medical Sciences
City
Semnan
Postal code
Phone
+98 23 1332 2328
Fax
Email
fatemyelham@yahoo.com
Web page address

Person responsible for scientific inquiries

Contact
Name of organization / entity
Semnan University of Medical Sciences
Full name of responsible person
Elham Fatemy
Position
MS.c
Other areas of specialty/work
Street address
Kilometer 5, Damghan Road, Rehabilitation faculty, Semnan University of Medical Sciences
City
Semnan
Postal code
Phone
+98 23 1332 1795
Fax
Email
fatemyelham@yahoo:com
Web page address

Person responsible for updating data

Contact
Name of organization / entity
Semnan University of Medical Sciences
Full name of responsible person
Elham fatemy
Position
MS.c-Instructor
Other areas of specialty/work
Street address
Kilometer 5, Damghan Road ,Rehabilitation faculty, Semnan University of Medical Sciences
City
Semnan
Postal code
Phone
+98 23 1332 1795
Fax
Email

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