Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

Effect of Abdominal strength training on subcutaneous abdominal fat thickness in overweight women

Protocol summary

Summary

The purpose of this study was to determine the effect of 12 weeks abdominal strength training program on the abdominal wall subcutaneous fat thickness. Twenty eight women referred to obesity clinic of Tehran University of Medical Sciences with BMI greater than 25 were randomly assigned to receive 12 weeks abdominal wall strength training program as well as weight loss diet or weight loss diet only. At the baseline and 12 weeks after the intervention, abdominal wall subcutaneous fat thickness was measured with sonography and caliper and compared between groups.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138812182973N2**
Registration date: **2010-03-09, 1388/12/18**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2010-03-09, 1388/12/18

Registrant information

Name

Saeed Dehghani

Name of organization / entity

Tehran University Medical Science

Country

Iran (Islamic Republic of)

Phone

+98 21 4490 1346

Email address

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Recruitment status

Recruitment complete

Funding source

Tehran university of medical sciences

Expected recruitment start date

2010-02-23, 1388/12/04

Expected recruitment end date

2010-03-03, 1388/12/12

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of Abdominal strength training on subcutaneous abdominal fat thickness in overweight women

Public title

Effect of Abdominal strength training on subcutaneous abdominal fat thickness in overweight women

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: sedentary overweight women who do not exercise regularly during 6 months prior to the study, not having been on any weight loss diet, no contraindication to strength training Exclusion criteria: using any substance or device for local subcutaneous abdominal fat thickness reduction such as: laser, acupuncture, cream, gel, ultrasound, vacuum, massage, there is no attendance for continue of study, pregnancy during study.

Age

From **19 years** old to **75 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **28**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Sport Medicine Research Center

Street address

Opposite to Shariati hospital, Jalal al ahmad street,

City

Tehran

Postal code

Approval date

empty

Ethics committee reference number

2386/7

Health conditions studied

1

Description of health condition studied

Abdominal subcutaneous fat

ICD-10 code

ICD-10 code description

2

Description of health condition studied

Obesity

ICD-10 code

E66

ICD-10 code description

Obesity

Primary outcomes

1

Description

Abdominal sub cutaneous fat thickness

Timepoint

week 0,week 6,week 12

Method of measurement

ultrasound, caliper

Secondary outcomes

1

Description

weight

Timepoint

week 0 ,week 12

Method of measurement

bioimpedance analyzer

2

Description

waist

Timepoint

week 0 ,week 12

Method of measurement

meter

3

Description

hip circumference

Timepoint

week 0 ,week 12

Method of measurement

meter

4

Description

lean body mass

Timepoint

week 0 ,week 12

Method of measurement

bioimpedance analyzer

Intervention groups

1

Description

12 weeks weight loss diet by 10kcal/kg restriction in daily energy requierment +12 weeks abdominal strength training program include external oblique, Internal oblique, rectus abdominis and transverse abdominis strengthening. person perform abdominal curl , abdominal hallowing and Abdominal Bracing in 3 direct: straight, right diagonal and left diagonal. every exercise are performed 12 repetition and 5 second duration ,daily.

Category

Lifestyle

2

Description

12 weeks weight loss diet by 10kcal/kg restriction in daily energy requierment

Category
Lifestyle

Recruitment centers

1

Recruitment center
Name of recruitment center
Sport Medicine Research Center
Full name of responsible person
Saeed Dehghani
Street address
Jalal Al Ahmad Street, Sport Medicine Center
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Tehran University of Medical Sciences and Health Services
Full name of responsible person
Ramin Kordi
Street address
Jalal Al Ahmad Street, in front of Shariaty Hospital
City
Tehran
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Tehran University of Medical Sciences and Health Services
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
Tehran University of Medical Sciences and Health Services
Full name of responsible person
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Person responsible for updating data

Contact
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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