

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Compression the effects of pilates training and the dill supplementation (Anethum graveolens) on serum Irisin levels, Insulin, glucose, insulin resistance and body composition in overweight and obese woman

Protocol summary

Study aim

comparison the effects of Pilates training and dill supplementation on glucose, Insulin, Irisine and insulin resistance in overweight and obese women.

Design

A randomized controlled clinical trial with factorial groups, triple blinded

Settings and conduct

In this study, 40 overweight and obese women will be selected purposefully and were randomly divided into 4 groups (Pilates + dill, Pilates + placebo, dill and placebo). Pilates training will held at sport gym. Blood samples and body composition will be measured 24 hours before and 48 hours after the fasting intervention. participants in this study will be randomized by Throwing the dice

Participants/Inclusion and exclusion criteria

inclusion criteria: female gender; age of 20-45 years old; BMI>25 exclusion criteria past medical history; addiction; pregnancy; being menopause; participating in extra sport classes .

Intervention groups

intervention group1: Pilates + dill Supplementation: (n = 10): Consume (1.1 g) before each meal for six weeks, and do 6 weeks of Pilates training from 16 to 17:30 PM. intervention group2: Pilates + Placebo (n=10) Take a placebo capsule containing starch before each meal and will practice Pilates (for six weeks). intervention group3: Prior to each meal, taking a capsule containing 1.1 g of dill powder for six weeks. Control group: one capsule (1.1 g starch per capsule) filled with edible green starch flour content before any breakfast, lunch, dinner time.

Main outcome variables

Irisin; insulin resistance insulin glucose

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20191111045412N1**

Registration date: **2020-02-22, 1398/12/03**

Registration timing: **prospective**

Last update: **2020-02-22, 1398/12/03**

Update count: **0**

Registration date

2020-02-22, 1398/12/03

Registrant information

Name

Nafiseh Nasirian

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 56 3220 3164

Email address

nafiseh.nasirian@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-03-15, 1398/12/25

Expected recruitment end date

2020-04-13, 1399/01/25

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Compression the effects of pilates traning and the dill supplementation (Anethum graveolens) on serum Irisin levels, Insulin, glucose, insulin resistance and body composition in overweight and obese woman

Public title

The effect of Pilates training and the dill Supplement on obesity

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

Being female Being at the age of 20-45 years old BMI>25

Exclusion criteria:

Past medical history of an underlying disease addiction menopause

Age

From **25 years** old to **45 years** old

Gender

Female

Phase

N/A

Groups that have been masked

- Participant
- Outcome assessor
- Data analyser

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

Participants in this study was randomized by throwing the dice

Blinding (investigator's opinion)

Triple blinded

Blinding description

participants, data collectors, outcome assessors are blinded In this study, after informing all participants about their grouping and study objectives and they will give informed consent, they will randomly categorize to each group. For placebo groups, capsules of the same size and the same weight as the dill capsules will prepared. The data collectors included a laboratory expert, a blood sampler who did not know the procedure of grouping. And all participants will be treated equally on the sampling day. The statistical expert will be unaware of the participants' identities and the file containing the data and groups will given to him/her.

Placebo

Used

Assignment

Factorial

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Birjand University of Medical Sciences

Street address

Ghaffari street

City

Birjand

Province

South Khorasan

Postal code

9۷۱۷۸۵۳۵۷۷

Approval date

2018-07-23, 1397/05/01

Ethics committee reference number

IR.BUMS.REC.1397.129

Health conditions studied

1

Description of health condition studied

over weight and obesity

ICD-10 code

E66

ICD-10 code description

Overweight and obesity

Primary outcomes

1

Description

serum irisin level

Timepoint

6 weeks after intervention starts

Method of measurement

elisa kit(CK-E90905, Made in USA)

2

Description

insulin resistance

Timepoint

6 weeks after intervention starts

Method of measurement

HOMA-IR formula

3

Description

Body composition

Timepoint

6 weeks after intervention starts

Method of measurement

Body composition including weight, body mass index, percentage of fat, protein, water and bone density of body, fitness score measured by Body composition

analyzer made by South Korea

4

Description

glucose

Timepoint

6 weeks after intervention starts

Method of measurement

Pars Azmoon kit

5

Description

insulin

Timepoint

6 weeks after intervention starts

Method of measurement

insulin kit of Elecsys andcobas (12179113001v11)

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group1: Pilates + dill Supplementation: (n = 10): Consume (1.1 g) before each meal for six weeks, and do 6 weeks of Pilates training from 16 to 17:30 PM.

Category

Treatment - Other

2

Description

Intervention group2: Pilates + Placebo (n=10) Take a placebo capsule containing starch before each meal and will practice Pilates (for six weeks).

Category

Treatment - Other

3

Description

Intervention group 3: Prior to each meal, taking a capsule containing 1.1 g of dill powder for six weeks.

Category

Treatment - Drugs

4

Description

Control group: one capsule (1.1 g starch per capsule) filled with edible green starch flour content before any breakfast, lunch, dinner time.

Category

Placebo

Recruitment centers

1

Recruitment center**Name of recruitment center**

Tak Andam gym center

Full name of responsible person

Nafiseh Nasirian

Street address

Shabanie blvd

City

Birjand

Province

South Khorasan

Postal code

9748564589

Phone

+98 56 3241 4476

Email

nafiseh.nasirian@gmail.com

Sponsors / Funding sources

1

Sponsor**Name of organization / entity**

Birjand University of Medical Sciences

Full name of responsible person

Tooba Kazeni

Street address

Ghaffari street

City

Birjand

Province

South Khorasan

Postal code

۹۷۱۷۸۵۳۵۷۷

Phone

+98 56 3239 5000

Email

public-r@bums.ac.ir

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

Yes

Title of funding source

Birjand University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

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

Academic

Person responsible for general inquiries

Contact

Name of organization / entity
Birjand University of Medical Sciences
Full name of responsible person
Nafiseh Nasirian
Position
Student
Latest degree
Master
Other areas of specialty/work
Physiology
Street address
A09 block, Imam Ali Town, Birjand
City
Birjand
Province
South Khorasan
Postal code
9715975389
Phone
+98 56 3220 3164
Fax
Email
nafiseh.nasirian@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity
Birjand University of Medical Sciences
Full name of responsible person
Nafiseh Nasirian
Position
Student
Latest degree
Master
Other areas of specialty/work
Physiology
Street address
A09 block, Imam Ali Town, Birjand
City
Birjand
Province
South Khorasan
Postal code
9715975389
Phone
+98 56 3220 3164
Fax
Email
nafiseh.nasirian@gmail.com

Person responsible for updating data

Contact

Name of organization / entity

Birjand University of Medical Sciences
Full name of responsible person
Nafiseh Nasirian
Position
Student
Latest degree
Master
Other areas of specialty/work
Physiology
Street address
A09 block, Imam Ali Town, Birjand
City
Birjand
Province
South Khorasan
Postal code
9715975389
Phone
+98 56 3220 3164
Fax
Email
nafiseh.nasirian@gmail.com

Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is 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

No - There is not a plan to make this available

Title and more details about the data/document

Part of the data such as information about the primary outcome

When the data will become available and for how long

Start of access period 6 months after printing results

To whom data/document is available

It will be available to researchers working in academic and scientific institutions

Under which criteria data/document could be used

all researchers working in academic and scientific institutions

From where data/document is obtainable

nafiseh.nasirian@gmail.com

What processes are involved for a request to access data/document

after reading their request as soon as possible if the researcher find out the request valid

Comments