

Clinical Trial Protocol

Iranian Registry of Clinical Trials

18 Sep 2026

The Effect of 12-Week Cyclic Yoga on some Blood Factors, Anthropometric and Upper Body Abnormalities of Type 2 Diabetic Middle-Aged Women

Protocol summary

Study aim

Investigating the Effect of 12 Weeks of Cyclic Yoga Exercise on Blood Indices, Anthropometric Indices and Upper Limb Abnormalities in Middle-Aged Women with Type 2 Diabetes

Design

In this clinical trial with a control group, 46 patients who met the conditions to enter the study were randomly divided into two groups based on lottery.

Settings and conduct

The research method will be quasi-experimental with two yoga exercise group and control groups with pretest and post test. Subjects are 46 Middle-aged type 2 diabetic women in Kermanshah city. Blood variables will be measured in the mother clinic laboratory. Yoga exercise and Abnormalities and anthropometric measurements will be measured in Rize Vandi gym.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Type 2 diabetic women 40 to 60 years old with overweight, With forward shoulder, hyperkyphosis, hyperlordosis abnormalities Exclusion criteria: Insulin treatment, Complications of diabetes (neuropathy, nephropathy, retinopathy), Hormone therapy, Smoking, drugs and alcohol, History of fractures, surgery or joint diseases, Any pain and swelling in the measured positions, History of cardiovascular and mental illness

Intervention groups

Intervention group: Yoga exercise group: This group performed cyclic yoga exercise for two months, three days a week. Cyclic Yoga is the art of sequencing yoga asana, pranayama and mudra techniques to maximize their benefits and energize the mind and body. Control group: They did not have regular physical activities during the intervention.

Main outcome variables

Glycosylated hemoglobin, fasting blood glucose, cholesterol, LDL cholesterol, HDL cholesterol, triglyceride, waist circumference, hip circumference,

blood pressure, insulin hormone, body fat percentage, body mass index, forward shoulder abnormality, kyphosis abnormality, lordosis abnormality

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20110527006611N5**

Registration date: **2023-11-12, 1402/08/21**

Registration timing: **retrospective**

Last update: **2023-11-12, 1402/08/21**

Update count: **0**

Registration date

2023-11-12, 1402/08/21

Registrant information

Name

Zahra Bayat

Name of organization / entity

The University of Tehran

Country

Iran (Islamic Republic of)

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+98 83 3822 9422

Email address

zahra_bayat2008@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-02-03, 1399/11/15

Expected recruitment end date

2022-02-19, 1400/11/30

Actual recruitment start date

2021-02-03, 1399/11/15

Actual recruitment end date

2022-02-19, 1400/11/30

Trial completion date

2022-02-19, 1400/11/30

Scientific title

The Effect of 12-Week Cyclic Yoga on some Blood Factors, Anthropometric and Upper Body Abnormalities of Type 2 Diabetic Middle-Aged Women

Public title

The Effect of Yoga Exercise on Type 2 Diabetic Women

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Type 2 diabetic women 40 to 60 years old with overweight With forward shoulder, hyperkiphosis, hyperlordosis abnormalities

Exclusion criteria:

Insulin treatment Complications of diabetes (neuropathy, nephropathy, retinopathy) Hormone therapy Smoking, drugs and alcohol, Participating in exercise activities during the last 6 months Any pain and swelling in the measured positions History of cardiovascular and mental illness History of fractures, surgery or joint diseases,

Age

From **40 years** old to **60 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **46**

Actual sample size reached: **42**

Randomization (investigator's opinion)

Randomized

Randomization description

After reviewing the patients' records at Taleghani Hospital Diabetes Center, 46 patients who met the inclusion and exclusion criteria of the study were selected. They were given a number from 1 to 46. Then the number of each of them was written on a small paper and poured into a container. One of the hospital staff was asked to take the papers out of the container. The researcher wrote the names in the control and yoga exercise groups respectively.

Blinding (investigator's opinion)

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

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

Research Ethics Committees of Kermanshah University of Medical Sciences

Street address

(AS) Building No. 2, In front of Imam Ali Hospital, Shahid Beheshti blvd.

City

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Province

Kermanshah

Postal code

6714673159

Approval date

2021-08-03, 1400/05/12

Ethics committee reference number

IR.KUMS.REC.1400.466

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

Type 2 Diabetes

ICD-10 code

E11

ICD-10 code description

Type 2 diabetes mellitus

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

Hyperkyphosis

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Flexible Ruler

2**Description**

Hyperlordosis

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Flexible Ruler

3**Description**

Shoulder forward

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Double Square device

Secondary outcomes**1****Description**

Glycosylated Hemoglobin

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Blood test with Biorexfars kit

2**Description**

HDL Cholesterol

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Blood test with BioSystems kit

3**Description**

LDL Cholesterol

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Blood test with BioSystems kit

4**Description**

Triglycerides

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Blood test with BioSystems kit

5**Description**

Cholesterol

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Blood test with BioSystems kit

6**Description**

Waist Circumference

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Standard tape meter

7**Description**

Hip Circumference

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Standard tape meter

8**Description**

Fasting Blood Glucose

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Blood test with BioSystems kit

9**Description**

Blood Pressure

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

brachial digital blood pressure monitor

10**Description**

Insulin Hormone

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Blood test with Siemens kit made in America

11**Description**

Body Mass Index

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Mark Tanita Body Composition Test Device

12**Description**

Body fat percentage

Timepoint

At the beginning of the study (before the intervention) and three months after the intervention

Method of measurement

Mark Tanita Body Composition Test Device

Intervention groups

1

Description

Intervention group: Yoga exercise group: This group performed cyclic yoga exercise for three months, three days a week. Cyclic Yoga is the art of sequencing yoga asana, pranayama and mudra techniques to maximize their benefits and energize the mind and body. The program of selected cyclic yoga exercises includes stretching exercises for large and small pectoral muscles, internal rotators of the arm, glutes, hamstrings, and strengthening the trapezius and rhomboid muscles and the external rotators of the arm and the central muscles of the body were performed in the style of cyclic yoga. Each training session lasted about 50 to 90 minutes. The duration of the exercises increased gradually. Before the start of the test, the patients were taking one tablet of metformin daily. The dosage of the patients' medicine did not change

Category

Lifestyle

2

Description

Control group: During the intervention, they did not have regular physical activities. Before the start of the test, the patients were taking one tablet of metformin daily. The dosage of the patients' medicine did not change

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Diabetes Research Center

Full name of responsible person

Mehrli Rahimi

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Diabetes Research Center, Next to Taleghani Hospital, Beheshti Blvd, Kermanshah City

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Kermanshah University of Medical Sciences

Full name of responsible person

Cyrus Jalili

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No. 2 Central Building, Kermanshah University of Medical Sciences, Shahid Beheshti Street, Kermanshah city

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Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Kermanshah 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

Payame Noor University of Tehran (South)

Full name of responsible person

Seyedeh Soolmaz Mahdioun

Position

Exercise Coach

Latest degree

Master

Other areas of specialty/work

Corrective Exercises

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Mersad Gym, Sangar Crossroad, 22 Bahman, Kermanshah

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Kermanshah University of Medical Sciences

Full name of responsible person

Mehrali Rahimi

Position

Professor

Latest degree

Subspecialist

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Internal Medicine

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Person responsible for updating data

Contact

Name of organization / entity

The University of Tehran

Full name of responsible person

Zahra Bayat

Position

PhD of University of Tehran

Latest degree

Ph.D.

Other areas of specialty/work

Exercise Biochemistry and Metabolism

Street address

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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

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

Data received from participants will remain confidential but general results will be published without individual identification.

When the data will become available and for how long

8 months after the completion of the research

To whom data/document is available

For university students and students in research related fields

Under which criteria data/document could be used

There are no specific conditions to provide such information

From where data/document is obtainable

Zahra Bayat Email: z.bayat@ut.ac.ir

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

Send message to the person responsible for providing the data Email: z.bayat@ut.ac.ir

Comments