Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Nov 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, hyperkiphosis, 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)
Phone
+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
Kermanshah
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 physicsl 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
Mehrali Rahimi

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

City
Kermanshah

Province
Kermanshah

Postal code
67158 47167

Phone
+98 918 132 4023

Email
ma_rahimi@kums.ac.ir

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Kermanshah University of Medical Sciences

Full name of responsible person
Cyrus Jalili

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

City
kermanshah

Province
Kermanshah

Postal code
6714673159

Phone
+98 83 3837 6967

Fax
+98 83 3838 4185

Email
cjalili@kums.ac.ir

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

Street address
Mersad Gym, Sangar Crossroad, 22 Bahman, Kermanshah

City
Kermanshah

Province
Kermanshah

Postal code
6714666647

Phone

+98 83 3838 3184

Email

soolmazmahdioun@gmail.com

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

Other areas of specialty/work

Internal Medicine

Street address

Kermanshah University of Medical Sciences, In front of Imam Ali Hospital, Shahid Beheshti Blvd, Kermanshah City

City

Kermanshah

Province

Kermanshah

Postal code

6714869914

Phone

+98 918 132 4023

Email

ma_rahimi@kums.ac.ir

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

Kish International Campus, University of Tehran, Niyayesh St., Mirmohanna Blvd., Kish Island, Iran.

City

Kish Island

Province

Hormozgan

Postal code

79416-55665

Phone

+98 918 617 1231

Email

z.bayat@ut.ac.ir

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