Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The Effect of MIC Training on Glucose ,insulin and Insulin Resistance a in type 2 diabetes women worker

Protocol summary

Study aim
Determining the effect of moderate intensity continuous physical exercise in working women with diabetes

Design
Randomized controlled clinical trial, Phase 2 on 30 middle-aged women with type 2 diabetes

Settings and conduct
All individuals will be familiarized with the conditions and procedures for participating in the research, and their physiological indicators, including height, weight, BMI, body fat percentage, blood sugar levels, and history of medication and disease, will be examined. All subjects will have their height and weight measured at baseline and 48 hours before the exercise intervention (after 12 hours of fasting, at 8:00 AM) to measure BMI, waist-to-hip ratio, body composition analysis and VO2max, and venous blood samples will be taken to measure blood parameters. Each training session includes approximately 10 minutes of warm-up (2-4 minutes of easy jogging, 2 minutes of joint warming up, and 4 minutes of stretching) and 5 minutes of cool-down. The subjects in the exercise group performed a training program that included walking/running on a treadmill 3 days a week, and the subjects in the control group lived their normal daily lives for 12 weeks. Heart rate will be measured after the training sessions and the intensity of the training will be adjusted using a Polar heart rate monitor. An attempt will be made to record the average heart rate of the subjects in each session and to continue the activity in proportion to the ability level of the individuals.

Participants/Inclusion and exclusion criteria
Women aged 45 to 60 with type 2 diabetes

Intervention groups
The intervention group included an exercise program that included walking/running on a treadmill 3 days a week, and the control group lived their normal daily lives for 12 weeks.

Main outcome variables
Moderate intensity continuous training, fasting glucose, insulin, insulin resistance, blood lipids, height

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20250327065162N1**
Registration date: **2025-04-08, 1404/01/19**
Registration timing: **registered_while_recruiting**

Last update: **2025-04-08, 1404/01/19**
Update count: **0**

Registration date
2025-04-08, 1404/01/19

Registrant information

Name
Tahereh Vahdati

Name of organization / entity

Country
Iran (Islamic Republic of)

Phone
+98 21 8899 4487

Email address
tv4004@yahoo.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2025-04-05, 1404/01/16

Expected recruitment end date
2025-07-07, 1404/04/16

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
The Effect of MIC Training on Glucose ,insulin and Insulin Resistance a in type 2 diabetes women worker

Public title
The Effect of MIC Training in type 2 diabetes women worker

Purpose
Prevention

Inclusion/Exclusion criteria
Inclusion criteria:
Data from 30 Middle-aged Women with type 2 Diabetes Aged 45 to 60 years
Exclusion criteria:

Age
From **45 years** old to **60 years** old

Gender
Female

Phase
2-3

Groups that have been masked
No information

Sample size
Target sample size: **30**

Randomization (investigator's opinion)
N/A

Randomization description

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Other

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Research ethics committees of school of nursing and midwifery and rehabilitation –Tehran university
Street address
Tohid Square
City
Tehran
Province
Tehran
Postal code
1419733171

Approval date
2025-03-25, 1404/01/05

Ethics committee reference number
IR.TUMS.FNM.REC.1404.015

Health conditions studied

1

Description of health condition studied
Diabetes type 2

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
FBS

Timepoint
At the beginning and end of the study

Method of measurement
Kit

2

Description
Insulin

Timepoint
The beginning and end of the study

Method of measurement
Kit

3

Description
Insulin resistance

Timepoint
The beginning and end of the study

Method of measurement
Formula

Secondary outcomes

1

Description
TG

Timepoint
The beginning and end of the study

Method of measurement
Kit

Intervention groups

1

Description
For 12 weeks ,3 sessions per week ,each session 60 minutes Running on a treadmill

Category
Treatment - Other

2

Description
Control group: 12 weeks ,daily life without doing exercise
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Center for Research on Occupational Diseases
Full name of responsible person
Tahereh Vahdati
Street address
No. 1, Enayat Alley, Poursina Street, 16 Azar Street, Keshavarz Boulevar
City
Tehran
Province
Tehran
Postal code
1417635471
Phone
+98 21 8899 4485
Email
Crod@Tums.ac.ir

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Tehran University of Medical Sciences
Full name of responsible person
Dr Ramin Kordi
Street address
Ghods St. Keshavarz Boulevar
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Province
Tehran
Postal code
1416753955
Phone
+98 21 81631
Email
Tumspr@tums.ac.ir
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
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
Tehran University of Medical Sciences
Full name of responsible person
Tahereh Vahdati
Position
Researcher
Latest degree
Ph.D.
Other areas of specialty/work
Occupational Health
Street address
No1, Enayat Alley, Poursina Street, 16 Azar Street, Keshavarz Boulevar
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Person responsible for scientific inquiries

Contact
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Tehran University of Medical Sciences
Full name of responsible person
Tahereh Vahdati
Position
Researcher
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Other areas of specialty/work
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Person responsible for updating data

Contact

Name of organization / entity
Tehran University of Medical Sciences

Full name of responsible person
Tahereh Vahdati

Position
Researcher

Latest degree
Ph.D.

Other areas of specialty/work
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available

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

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

Title and more details about the data/document
The final results will be shared in the form of a training package.

When the data will become available and for how long
Access period starts 9 months after results are published

To whom data/document is available
It will only be available to academic researchers and related medical centers.

Under which criteria data/document could be used
For prevention and treatment

From where data/document is obtainable
Dr.vahdati Tv4004@yahoo.com crod@tums.ac.ir 09125183391

What processes are involved for a request to access data/document
By sending an email or text message with your request, the number will be contacted and the data you need will be sent within 14 to 20 days.

Comments