

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

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

Protocol summary

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

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

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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Tehran

Postal code

1416753955

Phone

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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

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Tehran University of Medical Sciences

Full name of responsible person

Tahereh Vahdati

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Researcher

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Person responsible for updating data

Contact

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Tehran University of Medical Sciences

Full name of responsible person

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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