# Clinical Trial Protocol
# Iranian Registry of Clinical Trials

17 Sep 2026

## The effect of energy conservation techniques on fatigue, eating disorder behaviors and self-management in people with type 2 diabetes

## Protocol summary

**Study aim**
Determining the effect of energy conservation techniques on fatigue, disordered eating behaviors and self-management in people with type 2 diabetes.

**Design**
The study will be a clinical trial with a control group. The study is double-blind and has a sample size of 56 people. The samples are selected according to the available method and assigned to the intervention or control group in a block method.

**Settings and conduct**
This double-blind study will be conducted in Arak University of Medical Sciences without informing the participants and the outcome evaluators of the groups. Training of the desired techniques for the intervention group will be considered for 3 days.

**Participants/Inclusion and exclusion criteria**
Inclusion criteria : 1. Patients with type 2 diabetes (at least 3 to 6 months have passed since the definitive diagnosis of type 2 diabetes) 2. Age range from 20 to 70 years 3. Ability to implement energy conservation techniques 4. Speaking in Persian 5. Having hearing and sight 6. Not suffering from mental illnesses or using psychoactive drugs 7. Willingness to participate in the study 1. Unwillingness to participate in the study 2. Passing energy conservation courses

**Intervention groups**
Training of energy conservation techniques for the intervention group will be considered for 3 days (one day in between one session) and 2 hours every day, patients will use these techniques in their daily activities for 6 weeks. The control group will receive routine treatment.

**Main outcome variables**
fatigue; eating disorder behaviors; self management

## General information

**Reason for update**

**Acronym**

**IRCT registration information**
IRCT registration number: **IRCT20220709055421N1**
Registration date: **2023-01-01, 1401/10/11**
Registration timing: **retrospective**

Last update: **2023-01-01, 1401/10/11**
Update count: **0**

**Registration date**
2023-01-01, 1401/10/11

**Registrant information**

**Name**
Mahtab Farahani

**Name of organization / entity**

**Country**
Iran (Islamic Republic of)

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**Recruitment status**
**Recruitment complete**

**Funding source**

**Expected recruitment start date**
2022-09-11, 1401/06/20

**Expected recruitment end date**
2022-11-11, 1401/08/20

**Actual recruitment start date**
empty

**Actual recruitment end date**
empty

**Trial completion date**
empty

**Scientific title**
The effect of energy conservation techniques on fatigue, eating disorder behaviors and self-management in people with type 2 diabetes

**Public title**
The effect of energy conservation techniques on people with type 2 diabetes
**Purpose**
Supportive
**Inclusion/Exclusion criteria**
**Inclusion criteria:**
Patients with type 2 diabetes (at least 3 to 6 months have passed since the definitive diagnosis of type 2 diabetes) Age range from 20 to 70 years Ability to implement energy conservation techniques(with the researcher's diagnosis) Speaking in Persian Having hearing and sight Not suffering from mental illnesses or using psychoactive drugs Willingness to participate in the study
**Exclusion criteria:**
Taking energy conservation courses
**Age**
From **20 years** old to **70 years** old
**Gender**
Both

**Phase**
N/A
**Groups that have been masked**

- Participant
- Care provider

**Sample size**
Target sample size: **56**
**Randomization (investigator's opinion)**
Randomized
**Randomization description**
Sampling will be done by available method, and if the research samples are eligible to participate in the study, they will be placed in one of the test or control groups by random blocks of four (A, A, B, B). Code A will be assigned to the intervention group and code B will be assigned to the control group.
**Blinding (investigator's opinion)**
Double blinded
**Blinding description**
Since the researcher will perform the intervention and another colleague will collect the data, and also considering that the person who will also perform the data analysis will not know about the codes assigned to the patient, this study A double-blind face will be accepted.
**Placebo**
Not used
**Assignment**
Parallel
**Other design features**

## Secondary Ids

empty

## Ethics committees

**1**

**Ethics committee**
**Name of ethics committee**
Ethics Committee of Arak University of Medical Sciences
**Street address**
Alam El Hadi St., Shahid Shiroudi St
**City**
Arak
**Province**
Markazi
**Postal code**
3819693345
**Approval date**
2022-09-12, 1401/06/21
**Ethics committee reference number**
IR.ARAKMU.REC.1401.142

## 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**
fatigue
**Timepoint**
before the start of the study and six weeks after the end of the intervention
**Method of measurement**
Smets Multidimensional Fatigue Measurement Questionnaire (MFI)

**2**

**Description**
self management
**Timepoint**
before the start of the study and six weeks after the end of the intervention
**Method of measurement**
Diabetes Self-Management Questionnaire

**3**

**Description**
Eating disorder behaviors
**Timepoint**
before the start of the study and six weeks after the end of the intervention
**Method of measurement**
Eating disorder diagnosis scale

## Secondary outcomes

empty

## Intervention groups

### 1

**Description**
Intervention group: The training of energy conservation techniques for the intervention group will be considered for 3 days (one day in between one session) and 2 hours every day, the patients will use these techniques in their daily activities for 6 weeks.
**Category**
Lifestyle

### 2

**Description**
Control group: The control group will receive routine treatment.
**Category**
Lifestyle

## Recruitment centers

### 1

**Recruitment center**
**Name of recruitment center**
Hazrat Waliasr Arak educational and therapeutic center
**Full name of responsible person**
Mahtab Farahani
**Street address**
Hazrat Waliasr Education and Treatment Center., Hazrat Valiasr Square
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https://arakmu.ac.ir/valiasrhos/fa

## Sponsors / Funding sources

### 1

**Sponsor**
**Name of organization / entity**
Arak University of Medical Sciences
**Full name of responsible person**
Mahtab Farahani
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info@arakmu.ac.ir
**Web page address**
https://arakmu.ac.ir/fa
**Grant name**
**Grant code / Reference number**
**Is the source of funding the same sponsor organization/entity?**
Yes
**Title of funding source**
Arak 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**
Arak University of Medical Sciences
**Full name of responsible person**
Kobra Rahzani
**Position**
Associate Professor
**Latest degree**
Ph.D.
**Other areas of specialty/work**
Nursery
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## Person responsible for scientific inquiries

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## Person responsible for updating data

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## Sharing plan

**Deidentified Individual Participant Data Set (IPD)**
No - There is not a plan to make this available

**Justification/reason for indecision/not sharing IPD**
The results will be made available to the public in the form of an article.

**Study Protocol**
No - There is not a plan to make this available

**Statistical Analysis Plan**
No - There is not a plan to make this available

**Informed Consent Form**
No - There is not a plan to make this available

**Clinical Study Report**
No - There is not a plan to make this available

**Analytic Code**
Not applicable

**Data Dictionary**
Not applicable