

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Evaluating the effect of probiotic and vitamin D co-supplementation on clinical indices, inflammation, oxidative stress, mental health, and quality of life in patients with migraine

Protocol summary

Study aim

The purpose of this study is to investigate the effect of vitamin D and probiotic supplements on clinical characteristics, inflammation, oxidative stress, mental health, and quality of life in migraine patients.

Design

Phase 3, randomized, double blind, placebo- controlled, parallel group clinical trial

Settings and conduct

This study will be conducted on migraine patients referring to Neurology Clinic of Al-Zahra Hospital in Isfahan city. At the beginning and end of the study, blood pressure and anthropometric indicators will be evaluated and a fasting venous blood sample will be collected. The intervention will be performed on patients for 12 weeks and blinding will be done for patients and researchers.

Participants/Inclusion and exclusion criteria

Inclusion criteria are: Migraine diagnosis based on international classification of headache, age of 18 to 65 years, BMI of 18.5 to 29.9 kg/m², at least two migraine attacks per month. Exclusion criteria are: Taking Vitamin D 3 months before the intervention, taking probiotic supplements 3 months before the intervention, taking antibiotic drugs 3 months before the intervention, suffering from other types of headache, suffering from neurological disorders, cardiovascular diseases, hypertension, diabetes, malignancies, liver and kidney diseases, Pregnancy or Lactation

Intervention groups

The patients in the intervention group will receive for 12 weeks with a probiotic capsule per day (Farabiotic Company) and a vitamin D pearl (50000 IU) (Zahrava Company) every two weeks. The patients in the control group will receive for 12 weeks with a probiotic placebo capsule per day containing starch and maltodextrin and a vitamin D placebo pearl containing corn oil.

Main outcome variables

Clinical characteristics of migraine, inflammation, oxidative stress, mental health, quality of life

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20121216011763N59**

Registration date: **2023-05-04, 1402/02/14**

Registration timing: **prospective**

Last update: **2023-05-04, 1402/02/14**

Update count: **0**

Registration date

2023-05-04, 1402/02/14

Registrant information

Name

Gholamreza Askari

Name of organization / entity

Isfahan University of Medical Sciences

Country

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-05-22, 1402/03/01

Expected recruitment end date

2023-08-23, 1402/06/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluating the effect of probiotic and vitamin D co-supplementation on clinical indices, inflammation, oxidative stress, mental health, and quality of life in patients with migraine

Public title

The effect of probiotic and vitamin D co-supplementation on migraine

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Migraine diagnosis based on international classification of headache Age of 18 to 65 years BMI of 18.5 to 29.9 kg/m² At least two migraine attacks per month

Exclusion criteria:

Taking Vitamin D 3 months before the intervention
Taking probiotic supplements 3 months before the intervention
Taking antibiotic drugs 3 months before the intervention
Suffering from other types of headache
Suffering from neurological disorders, cardiovascular diseases, hypertension, diabetes, malignancies, liver and kidney diseases
Pregnancy or Lactation

Age

From **18 years** old to **65 years** old

Gender

Both

Phase

3

Groups that have been masked

- Participant
- Investigator

Sample size

Target sample size: **70**

Randomization (investigator's opinion)

Randomized

Randomization description

Migraine patients will be randomly allocated to intervention and placebo groups in a 1:1 ratio using a four-block randomization method with stratification based on two variables of age (<40, ≥40 years) and sex (female, male). Block randomization will be done using a list of random numbers generated by the website <https://www.sealedenvelope.com/simple> and by an independent researcher. Investigators, data analysts, and neurologists will remain blinded to treatment allocation.

Blinding (investigator's opinion)

Double blinded

Blinding description

This is a double-blind randomized controlled clinical trial. The required number of drugs and placebo (identical regarding color, smell, shape, and size) for each patient will be packaged in similar boxes by an independent researcher.

Placebo

Used

Assignment

Parallel

Other design features**Secondary Ids**

empty

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

Ethics Committee of Isfahan University of Medical Sciences

Street address

Deputy of Research & Technology of Isfahan University of Medical Sciences, Hezar Jarib Street, Isfahan

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Postal code

8174673461

Approval date

2023-03-15, 1401/12/24

Ethics committee reference number

IR.MUI.RESEARCH.REC.1401.415

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

Migraine

ICD-10 code

G43

ICD-10 code description

Migraine

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

Clinical characteristics of Migraine (frequency, severity, duration of migraine headaches, and headache impact-test-6)

Timepoint

At baseline and after 12 weeks

Method of measurement

Headache Diary and headache impact test-6 questionnaire

2**Description**

Serum C-reactive Protein

Timepoint

At baseline and after 12 weeks

Method of measurement

Enzyme-linked immunosorbent assay (ELISA) kits

3

Description

Serum nitric oxide

Timepoint

At baseline and after 12 weeks

Method of measurement

Kiazist biochemical kit

4

Description

Oxidant indices (catalase, malondialdehyde, total antioxidant capacity, and total oxidative status)

Timepoint

At baseline and after 12 weeks

Method of measurement

Kiazist biochemical kits

5

Description

Mental health

Timepoint

At baseline and after 12 weeks

Method of measurement

DASS questionnaire

6

Description

Quality of life

Timepoint

At baseline and after 12 weeks

Method of measurement

Migraine -Specific Quality of Life questionnaire

Secondary outcomes

empty

Intervention groups

1

Description

The patients in the intervention group will receive for 12 weeks with a probiotic capsule per day (Farabiotic Company) and a vitamin D pearl (50000 IU) (Zahrava Company) every two weeks.

Category

Treatment - Drugs

2

Description

The patients in the control group will receive for 12 weeks with a probiotic placebo capsule per day

containing starch and maltodextrin and a vitamin D placebo pearl containing corn oil.

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Neurology Clinic of Al-Zahra Hospital

Full name of responsible person

Dr. Gholamreza Askari

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

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Full name of responsible person

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Grant name

Deputy of Research & Technology of Isfahan University of Medical Sciences

Grant code / Reference number

IR.MUI.RESEARCH.REC.1401.415

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

Yes

Title of funding source

Esfahan 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

Isfahan

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Person responsible for general inquiries**Contact****Name of organization / entity**

Esfahan University of Medical Sciences

Full name of responsible person

Dr. Gholamreza Askari

Position

Professor

Latest degree

Ph.D.

Other areas of specialty/work

Nutrition

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Undecided - It is not yet known if there will be 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