Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 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 recieve 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 recieve 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

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Gholamreza Askari
Name of organization / entity
Isfahan University of Medical Sciences
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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
City
Isfahan
Province
Isfehan
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
Headachce 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 recieve 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 recieve 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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Soffeh Blvd
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Sponsors / Funding sources

1

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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

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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Person responsible for updating data

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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