Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

The effect of supplementation of magnesium on serum Level of BDNF and depression status in patients with depression

Protocol summary

Study aim
The effect of magnesium supplements on serum brain-derived neurotrophic factor and depression status in patients with depression
Design
Controlled clinical trial, with parallel groups, blind two-sided, randomized
Settings and conduct
We selected 46 depressed patients referring to Zahedan Baharan Psychiatric Clinic and then divided them into two groups of intervention (23 patients) and control (23 people) using randomized random sampling.The intervention group received 500 mg magnesium oxide tablets daily (2 tablets 250 mg)and the control group also receives 2 placebo tablets (containing starch) for 8 weeks.The patients and the curative staff who provide the pills to patients do not have any information about the contents of the intervention
Participants/Inclusion and exclusion criteria
Entry requirements; all people with depression are diagnosed,Age range 20 to 60 years old. Exclusion conditions: schizophrenia; bipolar disorder; kidney disease; myasthenia gravis; gastrointestinal disease; surgery scheduled in the next three months; use of a drug that interferes with magnesium; acute heart failure.
Intervention groups
The intervention group received 500 mg magnesium oxide tablets daily (2 tablets 250 mg)and the control group also receives 2 placebo tablets (containing starch) for 8 weeks.
Main outcome variables
Depression; BDN; magnesium

General information

Reason for update
Acronym
IRCT registration information
IRCT registration number: **IRCT20190317043084N1**
Registration date: **2019-03-26, 1398/01/06**
Registration timing: **prospective**

Last update: **2019-03-26, 1398/01/06**
Update count: **0**
Registration date
2019-03-26, 1398/01/06

Registrant information
Name
Maryam Afsharfar
Name of organization / entity
Country
Iran (Islamic Republic of)
Phone
+98 44 3275 2372
Email address
maryam.afshaar.1991@gmail.com

Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2019-04-21, 1398/02/01
Expected recruitment end date
2019-09-22, 1398/06/31
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
The effect of supplementation of magnesium on serum Level of BDNF and depression status in patients with depression

Public title
The effect of magnesium supplements on depression

Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
People aged between 20-60 years old and whose depression is diagnosed by the relevant psychiatrist
Exclusion criteria:
Schizophrenia Bipolar disorder kidney disease Myasthenia Graves Gastrointestinal disease Surgery scheduled in the next three months Use of a drug that interferes with magnesium Acute heart failure
Age
From **20 years** old to **60 years** old
Gender
Male

Phase
3
Groups that have been masked
No information
Sample size
Target sample size: **46**
Randomization (investigator's opinion)
Randomized
Randomization description
Randomly with the help of random numbers
Blinding (investigator's opinion)
Double blinded
Blinding description
The patients and the curative staff who provide the pills to patients do not have any information about the contents of the intervention.
Placebo
Used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics Committee of Zahedan University of Medical Sciences
Street address
Dr. Hesabi Square, Zahedan Medical Science Campus
City
Zahedan
Province
Sistan-va-Balouchestan
Postal code
9816743463
Approval date
2019-02-03, 1397/11/14
Ethics committee reference number
IR.ZAUMS.REC.1397.513

Health conditions studied

1

Description of health condition studied
Depression
ICD-10 code
F32, F33
ICD-10 code description
This block contains disorders in which the fundamental disturbance is a change in affect or mood to depression (with or without associated anxiety) or to elation. The mood change is usually accompanied by a change in the overall level of activity; most of

Primary outcomes

1

Description
Depression Score in Beck Questionnaire
Timepoint
Before the intervention and two months after the intervention
Method of measurement
Beck Depression Inventory

Secondary outcomes

1

Description
BDNF
Timepoint
Before the intervention and two months after the intervention
Method of measurement
Measuring with laboratory kit on blood sample

2

Description
Serum magnesium
Timepoint
Before the intervention and two months after the intervention
Method of measurement
Serum magnesium test

Intervention groups

1

Description
Intervention group: consists of 23 depressed people who receive two tablets of magnesium oxid tablets daily after breakfast and one after dinner for 8 weeks, and after 8 weeks again, Beck Depression Test for Depression and Magnesium Serum Assay and BDNF for Measurement The state of magnesium and BDNF is performed.
Category

Treatment - Drugs

2

Description
Control group: consists of 23 depressed people receiving twice daily placebo tablets that have the same shape and color as the original pill, receive one after breakfast and one after dinner for 8 weeks, and again after 8 weeks, Beck Depression Test Serum magnesium and BDNF depression tests are used to measure the magnesium and BDNF status.

Category
Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center
Baharan Hospital

Full name of responsible person
Maryam Afsharfar

Street address
Imam Khomeini Street, Bahareh Psychiatric Hospital

City
Zahedan

Province
Sistan-va-Balouchestan

Postal code
9819713955

Phone
+98 54 3351 3778

Email
baharanhospital@zaums.ac.ir

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Zahedan University of Medical Sciences

Full name of responsible person
Dr. Noor Mohammad Bakhshani

Street address
Dr. Hassabi square, Medical Sciences Campus

City
Zahedan

Province
Sistan-va-Balouchestan

Postal code
9816743463

Phone
+98 54 3329 5715

Email
public@zaums.ac.ir

Grant name

Grant code / Reference number

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

Title of funding source
Zahedan 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
Zahedan University of Medical Sciences

Full name of responsible person
Maryam Afsharfar

Position
Student

Latest degree
Bachelor

Other areas of specialty/work
Nutrition

Street address
No. 25, Farhang St., Golestan blvd.

City
ahwaz

Province
Khouzestan

Postal code
6136946397

Phone
+98 61 3392 7160

Email
maryam.afshaar.1991@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity
Zahedan University of Medical Sciences

Full name of responsible person
Mansour Shahraki

Position
Associate Professor

Latest degree
Ph.D.

Other areas of specialty/work
Nutrition

Street address
7th Alley, Moalem St., Daneshgah blvd.

City
Zahedan

Province
Sistan-va-Balouchestan

Postal code

9816743175

Phone

+98 915 542 1310

Email

shahrakimansour@yahoo.com

Person responsible for updating data

Contact

Name of organization / entity

Zahedan University of Medical Sciences

Full name of responsible person

Maryam Afsharfar

Position

Student

Latest degree

Bachelor

Other areas of specialty/work

Nutrition

Street address

No. 25, Farhang St., Golestan Blvd.

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Ahwaz

Province

Khouzestan

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6136946397

Phone

+98 61 3392 7160

Email

maryam.afshaar.1991@gmail.com

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