

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 May 2026

Effect of vitamin D on menstrual pain in women of childbearing age in comparison with placebo; double-blind randomized controlled clinical trial

Protocol summary

Summary

Primary menstrual pain is one of the most common menstrual disorders. It usually starts 6-12 months after first menstruation cycle. Fifty percentages of women of childbearing age suffer it and about 50% of people worldwide suffer from vitamin D deficiency too. Studies have shown that Vitamin D may reduce the symptoms of premenstrual syndrome, particularly pain. Based on our knowledge, 2 studies have examined the effect of vitamin D on menstrual cramps. The aim of this study was to investigate the effect of vitamin D supplementation on the menstrual pain in women of childbearing age. This study will be conducted as a randomized, double-blind clinical trial. Sixty women, 18 to 30 years old with Primary menstrual pain and 25 hydroxycholecalciferol ≤ 30 ng/ml are investigated in two intervention and control groups. Serum 25(OH) D3, magnesium, calcium, phosphorus, alkaline phosphates, and pain severity are measured in all participants. Intervention group is given cholecalciferol and the control group given placebo weekly for 2 months. The changes in laboratory tests, non-steroidal anti-inflammatory drugs consumption, and pain change severity will be compared 2 months after cholecalciferol administration in two groups. One month after discontinuation of the drug, the pain severity is measured and compared to the pain 2 months after treatment and baseline.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2012100110980N1**

Registration date: **2012-10-18, 1391/07/27**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2012-10-18, 1391/07/27

Registrant information

Name

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Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Tehran University of Medical Sciences

Expected recruitment start date

2013-02-19, 1391/12/01

Expected recruitment end date

2013-12-22, 1392/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of vitamin D on menstrual pain in women of childbearing age in comparison with placebo; double-blind randomized controlled clinical trial

Public title

The effect of vitamin D on primary menstrual pain

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Women aged 18-30 y; with normal menstrual cycles (cycles lasted 21 to 35, with menstrual lasting 3 to 7 days); at least 4 consecutive painful periods in the past 6 months with a diagnosis of primary dysmenorrhea; Serum 25-hydroxyvitamin D level \leq 30 ng/dl. Exclusion criteria: Secondary menstrual pain diagnosed by ultrasound examination; Previous and current use of intrauterine contraceptive devices within the 6 months prior; Previous and current use of drugs including calcium or vitamin D within the 6 months prior; Recent use of oral contraception drugs during the past 2 months; Smoking; BMI \geq 30; history of kidney stones; granulomatous disease; hyperparathyroidism and any malignant disease.

Age

From **18 years** old to **30 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Double blinded

Blinding description**Placebo**

Used

Assignment

Parallel

Other design features**Secondary Ids**

empty

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

Tehran University of Medical Sciences, Deputy of Research

Street address

Qods St, Keshavarz Blvd

City

Tehran

Postal code**Approval date**

2013-01-21, 1391/11/02

Ethics committee reference number

91-04-39-19158-77016

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

primary dysmenorrhoea

ICD-10 code

N94.4

ICD-10 code description

primary dysmenorrhoea

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

Menstrual pain severity

Timepoint

before treatment, 2 months after the treatment, 1 month after finishing intervention

Method of measurement

Visual pain scale

Secondary outcomes

empty

Intervention groups**1****Description**

intervention group: cholecalciferol 50,000 IU oral tablets, once a week for 8 weeks.

Category

Treatment - Drugs

2**Description**

control group: placebo, oral tablet, once a week for 8 weeks.

Category

Placebo

Recruitment centers**1****Recruitment center****Name of recruitment center**

Arash women's hospital

Full name of responsible person

Shahrzad Jafari-Adli

Street address

Arash Women 's Hospital, Rashid Ave., Resalat Highway, Tehranpars

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sciences, Deputy of Research

Full name of responsible person

Dr Akbar Fotouhi

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Ghods St., Keshavarz Blvd. Vali-e-Asr Ave.

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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, Deputy of Research

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

empty

Person responsible for general inquiries

Contact**Name of organization / entity**

Tehran University of Medical Sciences (TUMS)

Full name of responsible person

Shahrzad Jafari-Adli

Position

general practitioner

Other areas of specialty/work**Street address**

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty