

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

09 Jun 2026

### Effect of Oral Glucosamine on blood glucose and insulin level in patients with osteoarthritis during glucose tolerance test

#### Protocol summary

##### Summary

Osteoarthritis is the commonest chronic disease affected the joints in aging. Short intravenous consumption of glucosamine dose not effective on insulin sensitivity. The aim of present study is to evaluate glucosamine effect on blood sugar, insulin and insulin resistance of osteoarthritis patients and comparison of these factors in placebo group. The voluntary osteoarthritis non diabetic patients who randomly divided into two control and intervention groups with 20 cases are received 1500 mg glucosamine capsules daily till three months and placebo capsules. Fast blood glucose, glucose tolerance test and insulin level are measured from the baseline and after 3 months intervention. Results are analyzed as the changes in fast blood glucose, glucose tolerance test, insulin level and insulin resistance level in both intervention and control group.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT201304284167N5**

Registration date: **2014-05-08, 1393/02/18**

Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2014-05-08, 1393/02/18

##### Registrant information

##### Name

Shokoufeh Bonakdaran

##### Name of organization / entity

Endocrine Research Center

##### Country

Iran (Islamic Republic of)

##### Phone

+98 51 1801 2976

##### Email address

bonakdaransh@mums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Vice chancellor for research, Mashhad University of Medical Sciences

##### Expected recruitment start date

2012-05-21, 1391/03/01

##### Expected recruitment end date

2014-05-22, 1393/03/01

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Effect of Oral Glucosamine on blood glucose and insulin level in patients with osteoarthritis during glucose tolerance test

##### Public title

Effect of Oral Glucosamine on glucose and insulin levels in patients with osteoarthritis

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

Inclusion criteria: Osteoarthritis non diabetic patients with American College Of Rheumatology criteria for diagnosis of osteoarthritis of hand, knee and or hip; patients who complete the consent form and participate to study consciously. Exclusion criteria: Having body mass index lower than 20 and or higher than 30, history of diabetes or fast blood sugar upper than 110; history of liver or renal disease, myocardial infarction, uncontrolled inflammatory diseases, malignancy and endocrine

disorder which interfere glucose metabolism;  
consumption of corticosteroids and other effective  
medicine on blood glucose; anemia; pregnancy or  
lactation

**Age**

No age limit

**Gender**

Both

**Phase**

2

**Groups that have been masked**

No information

**Sample size**

Target sample size: 40

**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**

Ethics committee of Mashhad University of Medical  
Sciences

**Street address**

Central Building of Mashhad University of Medical  
Sciences (Ghorshi), Daneshgah 16, Daneshgah Street

**City**

Mashhad

**Postal code****Approval date**

2008-09-22, 1387/07/01

**Ethics committee reference number**

87920

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

Knee Osteoarthritis

**ICD-10 code**

M15.9

**ICD-10 code description**

Polyarthrosis, unspecified

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

Fasting blood glucose

**Timepoint**

Baseline and after 3 months intervention

**Method of measurement**

Glucose oxidase Method

**2****Description**

Glucose tolerance test

**Timepoint**

Baseline and after 3 months intervention

**Method of measurement**

Glucose oxidase Method

**3****Description**

Fasting insulin serum

**Timepoint**

Baseline and after 3 months intervention

**Method of measurement**

Immunoradiometric assay

**Secondary outcomes****1****Description**

Insulin Resistance

**Timepoint**

Baseline and after 3 months intervention

**Method of measurement**

HOMA-IR index

**2****Description**

Fasting insulin serum

**Timepoint**

Baseline and after 3 months intervention

**Method of measurement**

Immunoradiometric assay

**3****Description**

Fasting blood glucose

**Timepoint**

Baseline and after 3 months intervention

**Method of measurement**

Glucose oxidase Method

**4****Description**

Glucose tolerance test

**Timepoint**

Baseline and after 3 months intervention

**Method of measurement**

Glucose oxidase Method

**Intervention groups**

**1**

**Description**

Intervention group: Glucosamine 1500 mg daily until three months

**Category**

Treatment - Drugs

**2**

**Description**

Control group: One placebo tablet daily till 3 months

**Category**

Placebo

**Recruitment centers**

**1**

**Recruitment center**

**Name of recruitment center**

Ghaem Hospital, Mashhad University of Medical Sciences

**Full name of responsible person**

**Street address**

**City**

Mashhad

**Sponsors / Funding sources**

**1**

**Sponsor**

**Name of organization / entity**

Mashhad University of Medical Sciences

**Full name of responsible person**

Dr Mohsen Tafaghodi

**Street address**

Central Building of Mashhad University of Medical Sciences (Ghorshi), Daneshgah 16, Daneshgah Street

**City**

Mashhad

**Grant name**

**Grant code / Reference number**

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

Yes

**Title of funding source**

Mashhad University of Medical Sciences

**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**

Mashhad University of Medical Sciences

**Full name of responsible person**

Shokoufeh Bonakdaran

**Position**

Associate Professor

**Other areas of specialty/work**

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Dr Shokoufeh Bonakdaran

**Position**

**Other areas of specialty/work**

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**Email**  
**Web page address**

## **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*