# Clinical Trial Protocol
# Iranian Registry of Clinical Trials

07 Nov 2026

## Evaluation of the effect of isokinetic exercise with conventional physiotherapy on power in patieuts with knee osteoarthritis.

## Protocol summary

**Summary**

Introduction:Osteoarthritis (OA) is one of the prevalent disease in Joints.The Knee joint is the most frequently involved than other joint to OA.the research had shown quadriceps muscles weakness and proprioceptive deficits in patient related to knee osteoarthritis.The pharmacological treatment approaches that are used for management of knee OA, only reduce pain and swelling, on the other hand,these approaches have different complication with them.So using none-pharmacological treatments such as exercise performing, are very importants. The aim of this study is evaluation of the effect of isokinetic exercise with conventional physiotherapy on power and rate of Stiffness in patieuts with knee osteoarthritis. Methods: In this study with type " single blinded semi practical clinical traits" 30 women patient with mild to moderate knee osteoarthritis without pregnancy in age from 45-65 were used and divided into two groups (control and treatment). Exit criteria of this study were acute disease, existence of pain doing exersice and the intensification of pain under exercise. the first group (as control group) recevived routine knee physical therapy modalities; the second group (as isokenitec training group) in addition to routine protocol received isokinetic training. Rate of stiffens by questioner of Western Ontario McMasters Osteoarthritis index ( WOMAC), and their power was evaluated by biodex4.

## General information

**Acronym**

**IRCT registration information**

IRCT registration number: **IRCT2016070727359N3**
Registration date: **2017-03-06, 1395/12/16**
Registration timing: **retrospective**

Last update:
Update count: **0**

**Registration date**

2017-03-06, 1395/12/16

**Registrant information**

**Name**
Seyed Kazem Shakouri
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**Recruitment status**

**Recruitment complete**

**Funding source**

Tabriz Medical Science University

**Expected recruitment start date**

2016-05-23, 1395/03/03

**Expected recruitment end date**

2016-08-20, 1395/05/30

**Actual recruitment start date**

empty

**Actual recruitment end date**

empty

**Trial completion date**

empty

**Scientific title**

Evaluation of the effect of isokinetic exercise with conventional physiotherapy on power in patieuts with knee osteoarthritis.

**Public title**

The effect of isokinetic exercise in patieuts with knee osteoarthritis.

**Purpose**

Other

**Inclusion/Exclusion criteria**

inclusion criteria: patient with mild to moderate knee osteoarthritis without pregnancy in age from 45-65, existence of balance, lack of skin wound about knee. Exclusion criteria: acute disease, existence of pain doing exersice and the intensification of pain under exercise, surgery background in knee joint.

**Age**

From **45 years** old to **65 years** old

**Gender**

Female

**Phase**

2

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **30**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

**Blinding (investigator's opinion)**

Single blinded

**Blinding description**

**Placebo**

Not used

**Assignment**

Parallel

**Other design features**

## Secondary Ids

empty

## Ethics committees

### 1

**Ethics committee**

**Name of ethics committee**

Ethics Comittee, Tabriz Medical Science University

**Street address**

Tabriz Medical Science University, Golgasht street

**City**

Tabriz

**Postal code**

**Approval date**

2016-05-23, 1395/03/03

**Ethics committee reference number**

IR.TBZMED,REC.1395.275

## Health conditions studied

### 1

**Description of health condition studied**

knee Osteoarthritis

**ICD-10 code**

M19.9

**ICD-10 code description**

knee Osteoarthritis

## Primary outcomes

### 1

**Description**

Power Increasing

**Timepoint**

Before, After 6 sessions and after intervention

**Method of measurement**

Biodex 4

## Secondary outcomes

### 1

**Description**

Rate of Stiffness

**Timepoint**

Befor, After 6 sessions and after intervention

**Method of measurement**

Biodex 4

## Intervention groups

### 1

**Description**

Interventional group sit on chair of biodex 4 and then resistance pad of device was placed the top of leg ankle. Movement domain in range of flexion and full extension, and damping device was regulated hard. Concentric contraction with 10 to 90 degree, the 60-90 speed, 10 replications with six set (between sets 30 -60 second was given rest) defined for biodex4

**Category**

Rehabilitation

### 2

**Description**

For the first group (as control group) received routine knee physical therapy modalities.

**Category**

Rehabilitation

## Recruitment centers

### 1

**Recruitment center**

**Name of recruitment center**

Physical Medicine and Rehabilitation Research Center

**Full name of responsible person**

Seyed kazem Shakouri MD

**Street address**

Physical Medicine and Rehabilitation ward, Imam Reza hospital, Golgasht St.

**City**

Tabriz

## Sponsors / Funding sources

**1**

**Sponsor**
**Name of organization / entity**
Vice chancellor of research, Tabriz Medical Science University
**Full name of responsible person**
Seyed kazem Shakouri. MD
**Street address**
Tabriz Medical Science University, Golgasht St.
**City**
Tabriz
**Grant name**
**Grant code / Reference number**
**Is the source of funding the same sponsor organization/entity?**
Yes
**Title of funding source**
Vice chancellor of research, Tabriz Medical Science University
**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**

## Person responsible for scientific inquiries

**Contact**
**Name of organization / entity**
Physical Medicine and Rehabilitation Group, Tabriz Medical Science University
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Seyed kazem Shakouri
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Professor
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## Person responsible for updating data

**Contact**
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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*