

Clinical Trial Protocol

Iranian Registry of Clinical Trials

05 Jul 2026

The Effect of 6-Week Combined Supplementation with Methyl Sulfonyl Methane (MSM) and Glucosamine on Superoxide Dismutase and Malondialdehyde Levels after A Bout of Plyometric Exercise Training in Male Amateure Kickboxers

Protocol summary

Summary

Intensive physical activity results in release of free radicals and oxidative damages in biomacromolecules. Consumption of sulfuric supplements may effect on the levels of oxidative stress following intensive exercises, specially in combined concentric and eccentric contractions. Therefore, the effect of six weeks combined supplementation of methylsulfonylmethane and glucosamine on the Superoxide Dismutase and Malondialdehyde following a plyometric exercise session in amateur male athletes will be studied in the present study. The study will be a double-blinded quasi-experimental research with a pre- and post-test design in which 22 amateur male athletes will be randomly assigned into two groups of supplement (n = 11) and placebo (n = 11), and participated in two bouts of plyometric exercise before and after the supplementation period. The supplementation period will include daily consumption of 3 mg/bw combined methylsulfonylmethane and glucosamine for six weeks. The serum levels of Superoxide Dismutase and Malondialdehyde will be determined based on the four-times blood sampling (before and after the two plyometric exercise sessions). We expect the combined supplementation of methylsulfonylmethane and glucosamine may increase anti-oxidant capacity in athletes through increased levels of Superoxide Dismutase and Malondialdehyde.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017032632873N3**

Registration date: **2017-04-15, 1396/01/26**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2017-04-15, 1396/01/26

Registrant information

Name

Farzad Zehsaz

Name of organization / entity

Islamic azad University, Tabriz Branch

Country

Iran (Islamic Republic of)

Phone

+98 41 3196 6245

Email address

f-zehsaz@iaut.ac.ir

Recruitment status

Recruitment complete

Funding source

Investigator

Expected recruitment start date

2017-04-14, 1396/01/25

Expected recruitment end date

2017-04-19, 1396/01/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effect of 6-Week Combined Supplementation with Methyl Sulfonyl Methane (MSM) and Glucosamine on Superoxide Dismutase and Malondialdehyde Levels after A Bout of Plyometric Exercise Training in Male Amateure Kickboxers

Public title

The effect of supplementation on athletes oxidative stress

Purpose

Prevention

Inclusion/Exclusion criteria

Amateur kickboxors of Tabriz without any illness and drug use

Age

From **20 years** old to **30 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **22**

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**

Islamic Azad University, Tabriz Branch

Street address

Islamic Azad University, Tabriz Branch, Tabriz

City

Tabriz

Postal code**Approval date**

2016-10-24, 1395/08/03

Ethics committee reference number

IR.IAU.TABRIZ.REC.1395.39

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

Association of 6-Week Combined Supplementation with Methyl Sulfonyl Methane (MSM) and Glucosamine on Superoxide Dismutase and Malondialdehyde Levels after A Bout of Plyometric Exercise Training in Male Amateure Kickboxers

ICD-10 code

F43.1

ICD-10 code description

Post-traumatic stress disorder

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

Superoxide Dismutase

Timepoint

Before intervention and after 6 weeks of the begining of intervention

Method of measurement

(U/gHb) by blood sampling

2**Description**

Malondialdehyde

Timepoint

Before intervention and after 6 weeks of the begining of intervention

Method of measurement

mmol/gHb & Blood sampling

Secondary outcomes

empty

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

Intaking of the combined Supplementation of Methylsulfonylmethane and Glucosamine 3g/day for 6 weeks

Category

Prevention

2**Description**

Intaking starch as a placebo in control group

Category

Placebo

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

Kickboxing clubs of Tabriz

Full name of responsible person**Street address****City**

Tabriz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Investigator

Full name of responsible person

Ali Mehrabani

Street address

Physical Education Department of Islamic Azad
University of Tabriz

City

Tabriz

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Investigator

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

Islamic azad University, Tabriz Branch

Full name of responsible person

Farzad Zehsaz

Position

Academic Staff Member

Other areas of specialty/work

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Web page address

Person responsible for updating data

Contact

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