Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

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Name of organization / entity

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Country

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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

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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