

Clinical Trial Protocol

Iranian Registry of Clinical Trials

26 Jul 2026

Comparison of active recovery and immersion in water after an intense military training on the hs-CRP, coagulation factors and muscle damage index in army navy soldiers

Protocol summary

Study aim

Comparison of active recovery and immersion in water after an intense military training on the hs-CRP, coagulation factors and muscle damage index in army navy soldiers

Design

One group, repeated measures design, with 12 participants

Settings and conduct

Among the experienced soldiers of navy garrison of Rasht city, 12 persons will be select as the study participants. Interventions will be done in three non-consecutive sessions with one-week interval. In each session, after warm up and resistance- aerobic training, one of three types of recovery will be done including: 20 min active recovery, 20 min of immersion in 15°C water and 20 min of immersion in 30°C water.

Participants/Inclusion and exclusion criteria

Inclusion criteria: army navy soldiers with age ranges of 18-24 years old; have appropriate level of physical fitness for military people; Lack of physical disorders
Inclusion criteria: usage of supplements in the past two month

Intervention groups

Intervention group: one group, three type of intervention (recovery type) in three non-consecutive sessions with a one-week interval, each session consist of resistance-aerobic training and in the following one of three types of recovery including: active recovery, immersion in 15°C water and immersion in 30°C water

Main outcome variables

hs-CRP; coagulation factors; muscle damage index

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20150531022498N18**

Registration date: **2018-03-02, 1396/12/11**

Registration timing: **retrospective**

Last update: **2018-03-02, 1396/12/11**

Update count: **0**

Registration date

2018-03-02, 1396/12/11

Registrant information

Name

Ramin Shabani

Name of organization / entity

Islamic Azad University

Country

Iran (Islamic Republic of)

Phone

+98 13 3375 2715

Email address

shabani@iaurasht.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2017-10-22, 1396/07/30

Expected recruitment end date

2017-11-05, 1396/08/14

Actual recruitment start date

2017-10-22, 1396/07/30

Actual recruitment end date

2017-11-05, 1396/08/14

Trial completion date

empty

Scientific title

Comparison of active recovery and immersion in water

after an intense military training on the hs-CRP, coagulation factors and muscle damage index in army navy soldiers

Public title

Comparison of active recovery and immersion in water after an intense military training in army navy soldiers

Purpose

Other

Inclusion/Exclusion criteria

Inclusion criteria:

Army navy soldiers with age ranges of 18-24 years old have appropriate level of physical fitness for military people Lack of physical disorders

Exclusion criteria:

Usage of supplements in the past two month

Age

From **18 years** old to **24 years** old

Gender

Male

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **12**

Actual sample size reached: **12**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Single

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Islamic Azad University Rasht Branch

Street address

Islamic Azad University Rasht Branch, Taleshan Bridge, Rasht

City

Rasht

Province

Guilan

Postal code

-

Approval date

2017-09-18, 1396/06/27

Ethics committee reference number

IR.IAU.RASHT.REC.1396.89

Health conditions studied

1

Description of health condition studied

Army navy soldiers

ICD-10 code

-

ICD-10 code description

-

Primary outcomes

1

Description

High sensitivity C-reactive Protein (hs-CRP)

Timepoint

The measurement will be conducted before, immediately after intervention and after recovery in all three training session.

Method of measurement

Serum level using enzymatic method

2

Description

Coagulation factors

Timepoint

Measurements will be conducted before, immediately after intervention and after recovery in all three training session.

Method of measurement

Using by measuring fibrinogen, prothrombin time (PT), partial thromboplastin time (PTT)

3

Description

muscle damage index

Timepoint

Measurements will be conducted before, immediately after intervention and after recovery in all three training session.

Method of measurement

Using by measuring creatine phosphokinase (CPK), alanine aminotransferase (ALT), aspartate aminotransferase (AST)

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: three non-consecutive sessions with

a one-week interval, each session consist of 60 min resistance- aerobic training and recovery will be conducting at the end of all sessions. In session one active recovery, in session two recovery by immersion in 15°C water and in session three recovery by immersion in 30°C water will be done.

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Navy garrison of Rasht city

Full name of responsible person

Roya Besharati

Street address

Navy Garrison of Rasht City, Resalat Boulevard, Rasht

City

Rasht

Province

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Postal code

-

Phone

+98 13 3375 2715

Email

fa.izaddoust@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University

Full name of responsible person

Ali Delpasand

Street address

Islamic Azad University Rasht Branch, Taleshan Bredge

City

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Grant name

Grant code / Reference number

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

No

Title of funding source

personality, Researcher

Proportion provided by this source

100

Public or private sector

Private

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Other

Person responsible for general inquiries

Contact

Name of organization / entity

Islamic Azad University

Full name of responsible person

Roya Besharati

Position

MA student

Latest degree

Master

Other areas of specialty/work

Others

Street address

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Phone

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Email

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Islamic Azad University

Full name of responsible person

Dr Ramin Shabani

Position

Associate professor

Latest degree

Ph.D.

Other areas of specialty/work

Exercise physiology

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Person responsible for updating data**Contact****Name of organization / entity**

Islamic Azad University

Full name of responsible person

Fatemeh Izaddoust

Position

Ph.D student

Latest degree

Master

Other areas of specialty/work

Exercise physiology

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available