

Clinical Trial Protocol

Iranian Registry of Clinical Trials

12 Sep 2026

The effect of two methods of resistance training (Rest-Pause, FST7) on anthropometric indices, muscle strength and thyroid hormones in young bodybuilders

Protocol summary

Study aim

The effect of two methods of resistance training (Rest-Pause, FST7) on anthropometric indices, muscle strength and thyroid hormones in young bodybuilders

Design

The sample size in this study was 30 people who will be randomly divided into 3 groups of break rest exercises, FST7 and control. Resistance training program with rest-break interval four days a week in two forms: program A (Mondays and Wednesdays) and program B (Tuesdays and Thursdays). FST7 training program five days a week in five sections of chest muscles, Back, shoulders, forearms and legs are divided. The control group will not do anything.

Settings and conduct

The study site is Rasht Zatparvar Gym. Resistance training program with rest-break interval four days a week and in two ways: Program A includes chest press movements, dumbbell chest high press a sloping bench cross-pulling wire, Military press standing, lateral lifting of the dumbbell pair sitting, standing behind the arm, sitting behind the arm with a barbell. Plan B includes squats, 45-degree leg presses, back, legs, armpits from the front of the arm, boat armpits, dumbbell shoulders from the side, barbell forearms. FST7 training program five days a week in five sections of the chest muscles, back, Shoulders, forearms and legs are divided. The control group will do nothing.

Participants/Inclusion and exclusion criteria

inclusion criteria: age (17to 21years), gender (male)
Exclusion criteria: 1) no history of cardiorespiratory, musculoskeletal, neurological, hormonal or orthopedic disorders, 2) no change in daily diet during the study, and 3) no ingestion of androgenic and energetic supplements in the past 1 months.

Intervention groups

Intervention groups include 3 groups of rest break, FST7

group, control group.

Main outcome variables

Anthropometric indices, body mass and percentage of fat, upper and lower torso muscle strength, thyroid hormone TSH, T3, T4

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180503039517N8**

Registration date: **2021-01-20, 1399/11/01**

Registration timing: **registered_while_recruiting**

Last update: **2021-01-20, 1399/11/01**

Update count: **0**

Registration date

2021-01-20, 1399/11/01

Registrant information

Name

Soleyman Ansari Kolachahi

Name of organization / entity

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-01-15, 1399/10/26

Expected recruitment end date

2021-02-03, 1399/11/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of two methods of resistance training (Rest-Pause, FST7) on anthropometric indices, muscle strength and thyroid hormones in young bodybuilders

Public title

The effect of two methods of resistance training (Rest-Pause, FST7) on anthropometric indices, muscle strength and thyroid hormones in young bodybuilders

Purpose

Other

Inclusion/Exclusion criteria**Inclusion criteria:**

Age (17-21years) Gender (male) Have a history of at least 2 years of regular bodybuilding exercises

Exclusion criteria:

Smoking having cardiorespiratory, musculoskeletal, neurological, hormonal or orthopedic disorders No ingestion of androgenic and energetic supplements in the past 1 months

Age

From **17 years** old to **21 years** old

Gender

Male

Phase

N/A

Groups that have been masked*No information***Sample size**

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

30 bodybuilders were selected by available sampling method. Through drawing (The participants' names were written on paper and selected through a simple random draw for the two intervention groups and a control group).

Blinding (investigator's opinion)

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

The ethics committee of Islamic Azad University, Rasht Branch

Street address

Islamic Azad University, Rasht Branch, Lakan Blv

City

Rasht

Province

Guilan

Postal code

۴۱۴۷۶۵۴۹۱۹

Approval date

2020-08-17, 1399/05/27

Ethics committee reference number

IR.IAU.RASHT.REC.1399.041

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

The effect of break rest, exercises and FST7 on thyroid hormones and anthropometric indices, strength and body composition

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

Upper and lower torso strength

Timepoint

One day before and after the exercise intervention

Method of measurement

Upper power with dynamometer and lower body with Sihan digital foot device

2**Description**

Measuring body mass index

Timepoint

One day before and after the exercise intervention

Method of measurement

Use scales and bar meters

3**Description**

Measuring body fat percentage

Timepoint

One day before and after the exercise intervention

Method of measurement

Using the American-made Lafayette caliper and the three-point Jackson-Pollack equation

4

Description

Measurement of thyroid hormones

Timepoint

Measurement of thyroid hormones

Method of measurement

With special kits of Pishtaz Teb Manufacturing Company, made in Iran by ALIZA method and blood sampling from the anti-cobalt vein of the left hand of the subjects will be done at rest and in a sitting position of 5 cc.

Secondary outcomes

1

Description

Measure arm diameter, leg diameter and thigh width

Timepoint

One day before and one day after the exercise intervention

Method of measurement

Tape meter

Intervention groups

1

Description

Intervention group: Intervention group: Resistance training program with rest-break method four days a week in two forms: program A (Mondays and Wednesdays) and program B (Tuesdays and Thursdays). Program A includes chest press movements, dumbbell upper chest presses on a sloping crossbar, standing military press, lateral lifting of a pair of sitting dumbbells, standing behind the arm, sitting behind the arm with a barbell. Program B includes squats, 45-degree foot press, back, foot, armpits from front to back, boat armpits sitting, dumbbell shoulder from the side, barbell arm stands upright.

Category

Other

2

Description

Intervention group: Intervention group: The FST7 training program five days a week in five different sections is as follows: Part 1: Chest muscles with a sloping barbell, Part 2: Back (curved barbell movement), Part 3: Shoulders and trapezius muscles (Shoulder press with dumbbells), part 4: forearm and back of the forearm, arm with EZ bar, part 5: legs (squat with barbell).

Category

Other

3

Description

Control group: They will not do any sports activities

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Essential Sports Club

Full name of responsible person

Alireza Elmieh

Street address

Rasht - Municipality - Zatparvar Sports Club

City

Rasht

Province

Guilan

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4419865615

Phone

+98 13 3375 2906

Email

solomonansari@yahoo.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University

Full name of responsible person

Alireza Seidavi

Street address

Islamic Azad University of Rasht Branch, Lakan Blv

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Guilan

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4147654919

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Email

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Grant name

Grant code / Reference number

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

Yes

Title of funding source

Islamic Azad University

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

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Islamic Azad University

Full name of responsible person

Alireza Elmieh

Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

Sport Medicine

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second floor, Adibsaber Apartment, next to Esparó restaurant, Prof. Samei Blv.

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Islamic Azad University

Full name of responsible person

Soleyman Ansari

Position

Non faculty specialist

Latest degree

Ph.D.

Other areas of specialty/work

Sport Medicine

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Person responsible for updating data

Contact

Name of organization / entity

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Full name of responsible person

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Position

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

There is no further information

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

Raw and processed data

When the data will become available and for how long

Start of the access period from 1401

To whom data/document is available

Academic researchers, research colleagues and participants

Under which criteria data/document could be used

Use research results and data in future meta-analysis research

From where data/document is obtainable

Corresponding Author

What processes are involved for a request to access data/document

Request the researcher via email

Comments