Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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 at (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
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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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solomonansari@yahoo.com
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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Person responsible for updating data

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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