

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

15 Jun 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)

##### Phone

+98 13 3375 2906

##### Email address

solomonansari@phd.iaurasht.ac.ir

##### 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

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### **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

##### **Postal code**

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

##### **City**

Rasht

##### **Province**

Guilan

##### **Postal code**

4147654919

##### **Phone**

+98 13 3342 2153

##### **Email**

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

**Street address**

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

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**Province**

Guilan

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4193191933

**Phone**

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**Email**

solomonansari@yahoo.com

## 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

**Street address**

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

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**Province**

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**Postal code**

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**Phone**

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**Email**

solomonansari@yahoo.com

## Person responsible for updating data

### Contact

**Name of organization / entity**

Islamic Azad University

**Full name of responsible person**

Soleyman Ansari

**Position**

Non faculty specialist

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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**