

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

EFFECTS OF EXERCISE TRAINING WITH WHOLE BODY ELECTRIC MUSCLE STIMULATION ON CARDIORESPIRATORY PERCEIVED EXERTION, DYSPNEA AND PULMONARY FUNCTION TEST IN OBESE FEMALES

Protocol summary

2024-08-22, 1403/06/01

Study aim

To find out Effects of exercise training with whole-body electric muscle stimulation on cardiorespiratory perceived exertion, dyspnea and pulmonary function test in obese females

Design

Two parallel group, single blinded, randomized control trial with pre and post assessment

Settings and conduct

Pro EMS Fitness & Rehabilitation Center

Participants/Inclusion and exclusion criteria

1. Age 25- 40 yrs 2. Obese Females 3. Hypothyroid 4. BMI(30-39.99) 5. Ability to perform physical activity voluntarily 6. Dyspnea Exclusion Criteria: 1. Physical Inactivity 2. Skin Allergies 3. Abdomen or groin hernia tuberculosis 4. Cancer 5. Neurologic disturbances 6. Bleeding tendencies 7. Reported injuries (i.e. hip, abdomen, groin and hernia) 8. Diseases (i.e. epilepsy, cardiac arrhythmia)

Intervention groups

Standardized EMS training program along with obese females

Main outcome variables

Borg Scale 6-Min Walk Test Spirometer

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20191117045462N23**

Registration date: **2024-08-22, 1403/06/01**

Registration timing: **retrospective**

Last update: **2024-08-22, 1403/06/01**

Update count: **0**

Registration date

Registrant information

Name

Wajeeha Zia

Name of organization / entity

Riphah International University

Country

Pakistan

Phone

+92 42 35126110

Email address

wajeeha_z@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-11-27, 1402/09/06

Expected recruitment end date

2023-11-27, 1402/09/06

Actual recruitment start date

2023-11-27, 1402/09/06

Actual recruitment end date

2023-11-27, 1402/09/06

Trial completion date

2023-11-27, 1402/09/06

Scientific title

EFFECTS OF EXERCISE TRAINING WITH WHOLE BODY ELECTRIC MUSCLE STIMULATION ON CARDIORESPIRATORY PERCEIVED EXERTION, DYSPNEA AND PULMONARY FUNCTION TEST IN OBESE FEMALES

Public title

EFFECTS OF EXERCISE TRAINING WITH WHOLE BODY ELECTRIC MUSCLE STIMULATION ON CARDIORESPIRATORY PERCEIVED EXERTION, DYSPNEA AND PULMONARY FUNCTION TEST IN OBESE FEMALES

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Age 25- 40 yrs Obese Females Hypothyroid
BMI(30-39.99) Ability to perform physical activity
voluntarily Dyspnea

Exclusion criteria:

Physical Inactivity Skin Allergies Abdomen or groin hernia
tuberculosis Cancer Neurologic disturbances Bleeding
tendencies Reported injuries (i.e. hip, abdomen, groin
and hernia) Diseases (i.e. epilepsy, cardiac arrhythmia)

Age

From **25 years** old to **40 years** old

Gender

Female

Phase

N/A

Groups that have been masked

- Investigator

Sample size

Target sample size: **46**

Actual sample size reached: **46**

Randomization (investigator's opinion)

Randomized

Randomization description

Taking into account the above mentioned inclusion and
exclusion criteria, patients will be recruited in the study
through convenient sampling technique and then will be
randomly assigned to each group through Random
Sampling sealed opaque enveloped. Labeled as 1 group
A and 2 for group b

Blinding (investigator's opinion)

Single blinded

Blinding description

Investigator will be blind. Assessment will be done by
2nd therapist who will not be involved in treatment and
data analysis

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Riphah college of rehabilitation & Allied Health
Sciences

Street address

13-14-C-civic center, township near Hamdard Chowk,
Lahore

City

Lahore

Postal code

54000

Approval date

2023-11-26, 1402/09/05

Ethics committee reference number

RCR&AHS/REC/MS-CPPT

Health conditions studied

1

Description of health condition studied

Dyspnea

ICD-10 code

R06.00

ICD-10 code description

Dyspnea, unspecified

Primary outcomes

1

Description

Exercise (6MWT)

Timepoint

Pre- Post treatment

Method of measurement

Borg Scale 6-Min Walk Test Spirometer

Secondary outcomes

1

Description

Timepoint

Method of measurement

Intervention groups

1

Description

Control group: will be treated without EMS
Training.Participants were advised to perform exercises
without wearing EMS. The program initiated as: Warm up
for 30 seconds Jumping jacks High Knees Squats Lunges,
Biceps Curls Mountain Climbing Foot Stepper Side Leg
Raises, Flatter Legs Planks Leg Kicks Crunches and
Bicycle Crunch, Bridging followed by Stretching.this
without EMS session time is 20min

Category

Rehabilitation

2

Description

Intervention group: will be treated with EMS Training WB-
EMS :Participants were advised to perform exercises in
combination with EMS by wearing a whole-body electric
muscle stimulation suit. After warming up, the program

started that includes: Warm up for 30 seconds Jumping jacks High Knees squats Lunges, Biceps Curls Mountain Climbing Foot Stepper Side Leg Raises, Flatter Legs Planks Leg Kicks Crunches and Bicycle Crunch, Bridging followed by Stretching. this EMS session time is 20min.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Riphah International University

Full name of responsible person

Nimra Tariq

Street address

13-14-C-civic center, township near Hamdard Chowk,
Lahore

City

Lahore

Postal code

54000

Phone

+92 42 35126110

Email

skyfairynimo@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Riphah International University

Full name of responsible person

Wajeeha

Street address

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Lahore

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Phone

+92 42 35126110

Email

wajeeha_z@yahoo.com

Grant name

Educational

Grant code / Reference number

NO

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

No

Title of funding source

Riphah International 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

Riphah International University

Full name of responsible person

Nimra Tariq

Position

Student

Latest degree

Master

Other areas of specialty/work

Physiotherapy

Street address

13-14-C-civic center, township near Hamdard Chowk,
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City

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Punjab

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Person responsible for scientific inquiries

Contact

Name of organization / entity

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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

uncomplete work

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