Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The Effect of Eccentric Exercise on the Respiratory Capacities , Physical Function and Quality of Life Patients with Chronic Obstructive Pulmonary Disease

Protocol summary

Summary

Chronic obstructive pulmonary disease (COPD) is one of the serious and growing health problems. One of the serious problems in COPD patients is respiratory failure but it is not the only factor that affects patient's physical ability. Due to recent studies early skeletal muscle fatigue is considered as the main factor for limiting the patient's ability to perform physical activities. The purpose of this RCT is to evaluate the effects of eccentric exercises on respiratory capacities physical function and quality of life patients with COPD. Inclusion criteria are COPD, 40-70 years old, stable medical condition, ability to do exercise, Lack of orthopedic, neurological and cardiac disease and also no history of taking Coumadin and thorax surgery. Exclusion criteria are very sever COPD, any systemic disorder, according to the patient and the physician that lead to a change in therapy for the next two months, patients tendency to leave the study, unstable vital signs during the eccentric exercise, unusual living affairs, incompletion of treatment and evaluation programs. There are two groups in this study, (1) eccentric exercise group (eccentric exercise program with treadmill for 10 weeks),(2)control group (conventional drug therapy). In addition to demographic characteristics, smoking history, type of COPD disease, history of COPD, as well as heart rate, blood pressure, FEV1, QOL for COPD patients questionnaire (SGRQ), timed up & Go test, 6-minute walk (6MWT) and stair climbing test will be assessed pre and poat intervention in both groups.

General information

Acronym

Exercise therapy and COPD

IRCT registration information

IRCT registration number: **IRCT201303315486N3**

Registration date: **2013-08-11, 1392/05/20**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2013-08-11, 1392/05/20

Registrant information

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Name of organization / entity

Iran university of medical sciences

Country

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Recruitment status

Recruitment complete

Funding source

Tehran university of medical sciences (Vice chancellor for research) research@tums.ac.ir

Expected recruitment start date

2013-09-23, 1392/07/01

Expected recruitment end date

2014-12-22, 1393/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effect of Eccentric Exercise on the Respiratory

Capacities , Physical Function and Quality of Life Patients with Chronic Obstructive Pulmonary Disease

Public title
Exercise therapy on Patients with COPD
Purpose
Treatment
Inclusion/Exclusion criteria
Sever COPD, 40-70 years old, Stable medical condition, Ability to do exercise, No need for oxygen therapy , Lack of other lung diseases, Lack of infectious diseases during the past three months. Lack of heart disease, Lack of mental disorders, Lack of orthopedic diseases, Lack of neurological disease, Lack of morbid obesity, Absence of acute exacerbation within recent 4 weeks, Not participate in sports and rehabilitation program over the last 3 months, No history of taking Coumadin, No history of thorax surgery. Exclusion criteria: Very sever COPD,(FEV1<30% predicted or FEV1<50%predicted plus chronic respiratory failure) Any systemic disorder according to the patient and the physician that lead to a change in therapy for the next two months, Patients tendency to leave the study, Unstable vital signs during the eccentric exercise, Unusual living affairs during the study, In-completion of treatment and evaluation programs.
Age
From **40 years** old to **70 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **60**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Single blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features
Randomized clinical trial

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Tehran University of Medical Sciences
Street address
Keshavarz blvd- Quods Street
City
Tehran
Postal code
Approval date
2010-09-23, 1389/07/01
Ethics committee reference number
21659

Health conditions studied

1

Description of health condition studied
COPD
ICD-10 code
J44-47
ICD-10 code description
Chronic lower respiratory diseases

Primary outcomes

1

Description
Respiratory Capacities
Timepoint
pre and post intervention
Method of measurement
Spirometery

2

Description
Physical Function
Timepoint
pre and post intervention
Method of measurement
Functional tests

3

Description
Quality of Life in COPD patient
Timepoint
pre and post intervention
Method of measurement
St George's Respiratory Questionnaire

Secondary outcomes

empty

Intervention groups

1

Description
Eccentric training will be consisted of downhill walking on a treadmill regularly 3 times a week for 10 weeks . During each session before beginning any training, a warm up protocol (15 minutes walking accompanied with static stretching for the quadriceps, hamstrings, calf

muscles) will be used. Obviously speed and duration of walking on the treadmill will be progressive during the study.

Category

Rehabilitation

2

Description

Conventional drug treatment

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Sports Medicine and exercise sciences Department, Rasoule Akram Hospital,

Full name of responsible person

Dr Azar Moezy

Street address

Rasoule Akram Hospital, Tehran University of Medical Sciences , Sattarkhan Ave, Niayesh St,

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research -Tehran University of Medical Sciences

Full name of responsible person

Ms Azoun

Street address

Keshavarz Blvd-Quods street

City

Tehran

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Vice Chancellor for Research -Tehran University of Medical Sciences

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

Person responsible for general inquiries

Contact

Name of organization / entity

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Position

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Other areas of specialty/work

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
empty
Study Protocol
empty
Statistical Analysis Plan
empty
Informed Consent Form
empty
Clinical Study Report
empty
Analytic Code
empty
Data Dictionary
empty