



EUROPEAN RESPIRATORY *journal*

FLAGSHIP SCIENTIFIC JOURNAL OF ERS



Are physical activity levels different between non-frail and pre-frail patients with COPD?

Sara Pimenta, Sofia Flora, Ana Alves, Nádia Hipólito, Ana Oliveira, Nuno Morais, Cândida G. Silva, Alda Marques, Dina Brooks, Chris Burtin, Filipa Januário, Fátima Rodrigues, Vitória Martins, Lília Andrade, Joana Cruz

European Respiratory Journal 2023 62: PA1031; DOI: 10.1183/13993003.congress-2023.PA1031

Article

Info & Metrics

Abstract

A decline in physical activity (PA) levels have been observed in pre-frail older adults and are associated with progression to frailty. People with COPD are at risk for frailty, however, PA levels in pre-frail patients with COPD are unknown. This study described and compared PA levels and sedentary behaviour (SB) between non-frail and pre-frail patients with COPD.

Frailty was determined based on the 5 criteria of Fried's frailty phenotype: low grip strength (Jamar dynamometer), unintentional weight loss (self-report), slow walking speed (4.57m course), exhaustion (2 questions from the Center for Epidemiological Studies Depression scale) and low PA (cut-off points of weekly energy expenditure from accelerometry) (≥ 3 criteria – frail; 1-2 criteria – pre-frail; 0 – non-frail). Daily PA was assessed using accelerometry (7 days): steps/day; time in moderate and vigorous PA (MVPA), total PA (TPA – light PA+MVPA) and SB. Mann-Whitney-U tests were used to compare PA and SB between groups.

Forty-three pre-frail (67 \pm 8 years, 81% male, FEV1pp 43 \pm 18, BMI 26 \pm 6) and 39 non-frail (68 \pm 8 years, 72% male, FEV1pp 58 \pm 17, BMI 26 \pm 4) patients were included. Exhaustion was the most prevalent factor in pre-frail patients (72%). Pre-frail patients spent less time in MVPA (median [Q1; Q3] 15[6;31] min/day vs 30[14;55], $p=0.012$); TPA (107[85;193] min/day vs 152[134;212] min/day, $p=0.029$) and presented lower steps/day (3566 [2289;5683] vs 5894 [3434;7909] steps/day, $p=0.006$) than non-frail patients. No differences were found in SB ($p=0.605$).

PA levels are reduced in pre-frail when compared to non-frail patients with COPD. Future studies should explore if increasing PA in PF patients reduces their risk for frailty.

Physical activity COPD - management

Footnotes

Cite this article as: European Respiratory Journal 2023; 62: Suppl. 67, PA1031.

This abstract was presented at the 2023 ERS International Congress, in session “Inflammatory endotyping: the macrophage across disease areas”.

This is an ERS International Congress abstract. No full-text version is available. Further material to accompany this abstract may be available at www.ers-education.org (ERS member access only).

Copyright ©the authors 2023

We recommend

Exercise capacity, physical activity and sedentary levels in over-weight COPD and Non-COPD adults
Amy Jones et al., European Respiratory Journal, 2017

Frailty: a multifaceted challenge in Chronic Obstructive Pulmonary Disease
Warda Jelassi et al., European Respiratory Journal, 2023

Is improving physical activity after pulmonary rehabilitation in COPD left to chance?
Joana Antão et al., European Respiratory Journal, 2023

A comparison of exercise capacity, physical activity level and balance in COPD patients with and without frailty
Sezen Ulusoy et al., European Respiratory Journal, 2019

Frail patients with COPD (grade 2/group B) are at higher risk of falls than non-frail patients with the same disease severity
Katerina Neumannova et al., European Respiratory Journal, 2019

Metabolic dysfunction-associated fatty liver disease increases risk of chronic kidney disease: a systematic review and meta-analysis
Jianghua Zhou et al., eGastroenterology, 2023

Internal Aerodynamics of Infrared Suppressors for Helicopter Engines
Toulmay et al., Journal of the American Helicopter Society

Advances in the diagnosis and management of hepatorenal syndrome: insights into HRS-AKI and liver transplantation
Jorge Arnold et al., eGastroenterology, 2023

Three-Dimensional Sound Directivity around a Helicopter Turboshift Engine
Gounet, Helene et al., Journal of the American Helicopter Society, 2012

Collective Efficacy for Community Change in Response to Immigrant Stigma Stress
Romero, Andrea J. et al., Aztlan: A Journal of Chicano Studies, 2017

Powered by **TREND MD**

I consent to the use of Google Analytics and related cookies across the TrendMD network (widget, website, blog). [Learn more](#)

Yes

No

[← Previous](#)

[^ Back to top](#)

Vol 62 Issue suppl 67 [Table of Contents](#)

[Table of Contents](#)

[Index by author](#)

 [Email](#)

 [Request Permissions](#)

 [Citation Tools](#)

 [Share](#)

Jump To

[Article](#)

[Info & Metrics](#)

Post

 [More in this TOC Section](#)

 [Related Articles](#)

No related articles found.

[Google Scholar](#)

Navigate

[Home](#)
[Current issue](#)
[Archive](#)

About the ERJ

[Journal information](#)
[Editorial board](#)
[Press](#)
[Permissions and reprints](#)
[Advertising](#)

The European Respiratory Society

[Society home](#)
[myERS](#)
[Privacy policy](#)
[Accessibility](#)

ERS publications

[European Respiratory Journal](#)
[ERJ Open Research](#)
[European Respiratory Review](#)
[Breathe](#)
[ERS books online](#)
[ERS Bookshop](#)

Help

[Feedback](#)

For authors

[Instructions for authors](#)
[Publication ethics and malpractice](#)
[Submit a manuscript](#)

For readers

[Alerts](#)
[Subjects](#)
[Podcasts](#)
[RSS](#)

Subscriptions

Accessing the ERS publications



Contact us

European Respiratory Society
442 Glossop Road
Sheffield S10 2PX
United Kingdom
Tel: +44 114 2672860
Email: journals@ersnet.org

ISSN

Print ISSN: 0903-1936
Online ISSN: 1399-3003

Copyright © 2024 by the European Respiratory Society