[37.5; 74.1], p < 0.0001), the 30 sec STS (n = 32, MD 4.1 reps., 95%CI [2.3; 5.9], p < 0.0001) and the 6MST (n = 35, MD 69.0 steps, 95%CI [3.3; 134.7], p = 0.0394) were observed after PR compared with the control group. No statistically significant between-group differences in functional performance measures were observed.
Conclusions: Pulmonary rehabilitation showed significant positive effects on the functional capacity but not on the functional performance of individuals with ILD. Measurements were mainly focused on the 6MWD, and few other functional status outcome measures have been included in PR programs. A more comprehensive assessment of this meaningful health domain to individuals with ILD, namely of their functional performance, which reflects what people do in their daily life, is fundamental to include in the routine assessment of PR, to identify needs and optimize care for this population.

Keywords: *Pulmonary rehabilitation. Interstitial lung diseases. Functional status. Functional capacity. Functional performance.*

CO 061. FUNCTIONAL STATUS FOLLOWING PULMONARY REHABILITATION IN PEOPLE WITH AECOPD - A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction: Acute exacerbations of chronic obstructive pulmonary disease (AECOPD) lead to a decline not only in the patient's lung function but also in other important health domains, such as functional status. Functional status includes functional capacity and functional performance. Functional capacity refers to one's maximal potential to realize a functional activity in a standardized environment. Functional performance refers to the activities people actually do during their daily life. Pulmonary rehabilitation (PR) is fundamental for COPD management, however, its effectiveness in improving the functional status (capacity and performance) during and after AECOPD is less known.
Objectives: To systematize the effects of PR in the functional status (capacity and performance) during or immediately after an AECOPD.
Methods: This systematic review was registered (no. CRD42022298593). Systematic searches for randomised controlled trials (RCTs) comparing PR (with, at least, exercise training and education and/or psychosocial support) with usual care in people during and/or after AECOPD were conducted in PubMed/MEDLINE, Scopus, and Web of Science Core Collection. Two independent reviewers assessed the titles, abstracts and full text of studies, extracted data and assessed the risk of bias with the Risk of Bias 2 tool. Mean and standardized differences (MD/SMD) were calculated to synthesize results. A statistical random effects model was applied in the meta-analysis.
Results: Eight studies were included. The total number of participants was 533, with an age range of 58-74 years and an FEV1%predicted of 35-56%pred. PR was conducted in inpatient (n = 3), outpatient (n = 4) and inpatient/outpatient (n = 1) settings with varying durations and frequencies. Functional capacity was assessed with six measures, the six-minute walk test (6MWT) (n = 3), incremental shuttle walk test (ISWT) (n = 2), the 2-minute walk test (2MWT) (n = 1), 5-repetition sit-to-stand test (5 STS) (n = 1), 30-second sit-to-stand test (30sec STS) (n = 1), and timed up and go (TUG) (n = 1). Functional performance was assessed with four measures, the functional independence measure (FIM) (n = 1), london chest activity of daily living (LCADL) (n = 1), activity of daily living dyspnoea (ADL-D) (n = 1) and stepwatch activity monitor (steps/day) (n = 1). Significant improvements were observed in functional capacity, measured with the 6MWT (n = 159, MD 91.5, 95%CI [23.5; 159.5], p = 0.008) after outpatient and in TUG (n = 32, MD -2.2, 95%CI [-3.9; -0.5], p = 0.009) after inpatient PR in the EG compared to CG. Functional performance, measured with the ADL-D and the LCADL (n = 160, SMD 1.0, 95%CI [0.8; 1.2], p < 0.0001), as well as with the FIM (n = 44, MD 7.5, 95%CI [2.1; 12.8], p = 0.006), improved significantly after inpatient PR in comparison to usual care. No other significant between-group differences were observed for functional capacity or performance.
Conclusions: Pulmonary rehabilitation improves functional status during or immediately after an AECOPD. Nevertheless, few studies with small samples and high heterogeneity of outcome measures and interventions exist, which hinders conclusions. Functional performance is less assessed than functional capacity. Inclusion of both is fundamental to tailor PR in AECOPD and ensure benefits translate not just to what people can, but also do in their daily life.

Keywords: *Chronic obstructive pulmonary disease. Pulmonary rehabilitation. Activities of daily living. Functional status.*

CO 062. INTENSITY AND SAFETY OF COMMUNITY-BASED PHYSICAL ACTIVITIES FOR PEOPLE WITH COPD

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Introduction: long-term maintenance of the benefits obtained with pulmonary rehabilitation (PR) in people with COPD is of upmost importance, yet highly challenging. Integrating these people in community-based physical activities (PAs), after PR, can be a promising strategy to maintain achieved benefits. Nevertheless, to confidently advise people with COPD to enrol these community-based PAs, clinicians must ensure those are safe and ideally are of at least moderate intensity (following PAs guidelines). This study aimed to explore safety and intensity level of community-based PAs (cardiofitness room, senior gymnastics, and aquatic gymnastics) in people with COPD, after PR.
Methods: an observational cross-sectional study, part of a larger trial (NCT04223362) was conducted. People with COPD that had finished a community-based PR programme, conducted in the Respiratory Research and Rehabilitation Laboratory (Lab3R) or in four primary health care centres (Aveiro, Estarreja, Oliveira do Bairro and Montemor-o-Velho), and that had a positive risk-benefit analysis regarding their inclusion on community-based PAs were included. Participants were given the opportunity to choose among the available community-based PAs (previously identified as adequate), the one(s), they wanted to try, and were then accompanied by a physiotherapist. During the community-based PAs, dyspnoea and fatigue perception were assessed every 20 minutes using the modified Borg 0-10 scale; and heart rate (HR) and percentage of peripheral oxygen saturation (SpO2) were constantly monitored. Participants wore the SenseWear Armband on the left triceps to estimate the Metabolic Equivalent Task (METs) of each community-based PA. The final community-based PAs intensity level was obtained by summing the intensity levels yielded by: dyspnoea and fatigue Borg scores, maximal HR percentage predicted (HRmax%predicted) (where HRmaxpredicted = 220-age), and METs; with 3-6 Borg scores, 64-76% of HRmax%predicted, and 3-6 METs identifying moderate intensities. For security standards, SpO2 below 88% and HRmax%predicted above 85% were considered. The occurrence of any adverse event during the PAs was registered.
Results: three community-based PAs were included, cardiofitness room (9 people with COPD, 68 ± 9 years, 100% men, 58 ± 21 FEV1%predicted), senior gymnastics (8 people with COPD, 70 ± 9 years, 75% men, 53 ± 11 FEV1%predicted), and aquatic gymnastics (6 people with COPD, 68 ± 10 years, 100% men, 49 ± 16 FEV1%predicted). Overall, the explored community-based PAs were classified as of moderate intensity. Only one participant presented a SpO2 below 88% on the cardiofitness room (lowest SpO2 registered was 86%) and the

HRmax%predicted was below 85% in all participants. No adverse event was registered.
Conclusions: Cardiofitness room, senior gymnastics, and aquatic gymnastics seem safe and of moderate intensity for people with COPD. Enrolment of people with COPD on these community-based PAs, following PR, should be advised, as these may facilitate the long-term maintenance of PR benefits, while promoting a more physically active lifestyle in this population. Nevertheless, caution is needed when interpreting these results, since intensity of PA is highly influenced by individual factors and patients' enrolment must be preceded by a careful patient selection to ensure their safety.

Keywords: *Physical activity. Maintenance. Pulmonary rehabilitation. Chronic obstructive pulmonary disease. Community.*

CO 063. UNRAVELLING THE RELATIONSHIP BETWEEN FUNCTIONAL CAPACITY AND PHYSICAL ACTIVITY IN PEOPLE WITH INTERSTITIAL LUNG DISEASE

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Functional capacity (FC) and functional performance are distinct domains of functional status. Low functional capacity (FC) is commonly reported in people with interstitial lung disease (ILD). However, the literature on functional performance - possible to be objectively measured quantifying the physical activity (PA) levels - and on the relationship between FC and PA of this population is still scarce. Thus, this study aimed to: i) characterise the PA levels; ii) explore the relationship between FC and PA; and, iii) determine the distribution across the four quadrants of FC and PA of people with ILD. A retrospective cross-sectional study was conducted. PA levels were assessed with accelerometry (Actigraph® GT3X+), through steps/day and time spent in moderate-to-vigorous (MVPA) PA. Participants wore the Actigraph® for, at least, 4 consecutive days (7:00am-10:00pm). FC was assessed with the number of repetitions performed in the 1-minute-sit-to-stand (1-minSTS). PA levels were compared between three ILD diagnostic categories (i.e., fibrotic Hypersensitivity Pneumonitis [fHP], Idiopathic Pulmonary Fibrosis [IPF] and Connective Tissue Disease-related ILD [CTD-ILD]) and severity, using the ILD-GAP Index model (0-3, ≥ 4). U Mann-Whitney and Kruskal-Wallis tests were used to compare groups. Spearman's Correlation was used to analyse the correlation between FC and PA. For the quadrants analysis, participants were divided into the following: 1) low FC (1-minSTS < 70% predicted) and low PA (< 5,000 steps/day or < 150 min/week of MVPA) – "can't do, don't do"; 2) preserved FC (1-minSTS ≥ 70%), low PA (< 5,000 steps/day/< 150 min/week of MVPA) – "can do, don't do"; 3) low FC (1-minSTS < 70% predicted), preserved PA (≥ 5,000 steps/day/ ≥ 150 min/week of MVPA) – "can't do, do do"; 4) preserved FC (1-minSTS ≥ 70%), preserved PA (≥ 5,000 steps/day/ ≥ 150 min/week of MVPA) – "can do, do do". Forty-nine volunteers were included (68 [63-76] years; 23 [46.9%] male, FVC 84 [69-95]% predicted; DLCO 57 [40-73]% predicted). PA levels ranged between 792-113,670 steps/day and 2-1,604 min. spent in MVPA. PA levels across ILD subtype were not different (p = 0.061-0.609) however, significant differences were found across disease severity (GAP0-3 = 41 GAP ≥ 4 = 8 steps/day p = 0.003, GAP0-3 = 41 GAP ≥ 4 = 8 MVPA p = 0.015). Significant, moderate and positive correlations were found between FC and PA for both, steps/day (rs = 0.53, p < 0.001) and MVPA (rs = 0.40, p = 0.005). Participants' distribution on the FC and PA (steps/day) quadrants was: 22 (45%) "can't do, don't do"; 7 (14%) "can do, don't do"; 7 (14%) "can't do, do do"; 13 (27%) "can do, do do". Participants' distribution between FC and PA (MVPA) quadrants was: 20 (41%) "can't do, don't do"; 5 (10%) "can do, don't do"; 9 (18%) "can't do, do do"; 15 (31%) "can do, do do". People with ILD tend to be physically inactive. PA levels decrease with ILD severity and there is a relationship between FC and PA in this population. Applicability of the FC-PA quadrant may guide personalised interventions to optimise outcomes of these meaningful domains in ILD.

Keywords: *Interstitial lung disease. Physical activity. Functional capacity.*

CO 064. ARE PEOPLE WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE MORE MOTIVATED TO EXERCISE AND BE PHYSICALLY ACTIVE AFTER PULMONARY REHABILITATION?

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Physical activity is highly important for the health status of people with chronic obstructive pulmonary disease (COPD) because it has shown associations with reduced risk of all-cause mortality and acute exacerbations. Pulmonary rehabilitation improves functional capacity in people with COPD, but benefits have not been consistently observed in physical activity levels. Recently, it has been shown that motivation to exercise can be a precursor to the adaptation of more active lifestyles however, it is unknown whether pulmonary rehabilitation influences the motivation to exercise of people with COPD and whether this motivation contributes to increase physical activity. Therefore, this study aimed to explore i) motivation to exercise; ii) the relationship between motivation to exercise and physical activity and iii) the distribution across the four quadrants of motivation to exercise and physical activity, in people with COPD after pulmonary rehabilitation. An observational cohort study including people with COPD who undertook a 12-week community-based pulmonary rehabilitation program was conducted. Motivation to exercise was assessed with the global rating of change scale at the end of pulmonary rehabilitation. Global rating of change scale consists in a Likert scale composed by 11 points, ranging from -5 to 5 (-5, means "much worse"; 0, means "unchanged"; 5, means "much better"). Participants who scored 2 points or more were considered "motivated to exercise" (ME). Physical activity levels were evaluated pre- and post-pulmonary rehabilitation through accelerometry data (participants wore an Actigraph during seven days, 24 hours). A minimum of 8h (480 min) per day for four days was established for wear time validation. The minimal clinically important difference of 600 steps per day was used to identify "improvers on physical activity" (IPA). Spearman's (rs) correlation coefficient was used to determine the association between motivation to exercise and change in physical activity. We categorized participants in four motivation to exercise-physical activity quadrants: ME and IPA, ME and non-IPA, non-ME and IPA, non-ME and non-IPA, after pulmonary rehabilitation. Forty-one people with COPD (71 ± 7 years; 93% male; BMI 28 ± 6 kg/m^2; 57 ± 17 FEV1%predicted) were included. After pulmonary rehabilitation, most participants were ME (n = 35; 85%), but less than half were IPA (n = 18; 44%). No correlation between these two variables (rs = 0.132, p = 0.412) was observed. Participants distribution on the motivation to exercise-physical activity quadrants was: 15 (37%) "ME and IPA"; 20 (49%) "ME and non-IPA"; 3 (7%) "non-ME and IPA" and 3 (7%) "non-ME and non-IPA". After pulmonary rehabilitation, most participants were motivated to exercise but nearly half did not change the physical activity levels. Changing physical activity behavior is highly challenging, and research on which interventions can effectively modify it is still needed. Additionally, future studies including a more comprehensive assessment of motivation to exercise are required to confirm our results.