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Unsupervised physical activity interventions for people with COPD: a systematic review

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Effects of supervised physical activity (PA) are well-established in COPD however, the evidence about the effectiveness of unsupervised PA interventions in this population is still scarce. Thus, we aimed to identify and synthesise the effects of unsupervised PA interventions in people with COPD.

A systematic search was conducted on Cochrane Library, PubMed, Scopus, Web of science and EBSCOhost databases, in April 2020. Randomised controlled trials and quasi-experimental studies comparing unsupervised PA with daily life, were included. Two independent reviewers selected the studies, extracted data and assessed the quality of evidence using the Quality Assessment Tool for Quantitative Studies. Effect sizes were calculated via Cohen's d.

7 studies were included, 3 of moderate and 4 of weak quality. Most studies were conducted in a home-based setting (6/7), with the interventions lasting between 8-12 weeks (5/7). Frequencies of the interventions ranged from daily-2x/week (7/7). The components of interventions were: mobility (2/7), aerobic (2/7), strength (2/7), endurance (1/7) and lifestyle PA (2/7). Very small to huge effects [0.14 to 5.26] were found for exercise capacity (4/7) and health-related quality of life (HRQoL) [-2.25 to 0.19] (2/7). Very small to small effects were found for symptoms [-0.03 to 0.28] (2/7).

Unsupervised PA interventions seem to be effective in increasing exercise capacity and HRQoL in people with COPD. Nevertheless, its application is still limited and highly heterogeneous thus, further studies, with robust methodologies, are needed to confirm our results and establish recommendations.