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## Physical Activity coaching in people with COPD: a systematic literature review

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Article

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### Abstract

Current literature contains contradictory findings regarding physical activity (PA) coaching in people with COPD. This study systematically reviewed the effects of PA coaching in this population.

Medline, Scopus, Web of Science, and CENTRAL were searched with monthly updates until December 2022. Randomised clinical trials, comparing PA coaching (EG) vs. usual care (CG) in people with stable COPD were included. Meta-analysis was used to summarise the results. The Cochrane RoB-II and the GRADE were used to assess the risk of bias and quality of evidence.

18 studies with 3103 people with COPD (EG, n=1641, 67.2±8.7y, 65.2%♂, FEV<sub>1</sub> 53±17pp; CG, n=1462, 66.7±8.7y, 65.4%♂, FEV<sub>1</sub> 53±16pp) were included.

PA coaching was mostly home- and community-based, for 12 weeks, and consisted of education, exercise, patient-therapist interactions for goal setting, feedback, reports, and self-monitoring (i.e., by a pedometer).

Meta-analyses revealed a statistically and clinically relevant increase in steps/day (MD=662.36, 95%CI[150.24,1174.48],  $p=0.01$ ), a statistically although not clinically relevant increase in 6-min walk distance (MD=7.40, 95%CI[1.57,13.23],  $p=0.01$ ), and no statistically or clinically relevant change in COPD Assessment Test (MD=-0.10, 95%CI[-1.12,0.93],  $p=0.85$ ), Clinical COPD Questionnaire (MD=0.09, 95% CI[-0.06,0.26],  $p=0.24$ ),

Chronic Respiratory Questionnaire (MD=0.89, 95%CI[-1.83,3.61],  $p=0.52$ ), and St. George's Respiratory Questionnaire (MD=1.83, 95%CI[-0.07,3.73],  $p=0.06$ ).

44% of studies had a low, 28% raised some concerns and 28% had a high RoB. GRADE indicated moderate quality of evidence.

PA coaching improves PA in people with COPD, without interfering with their functional capacity or health status.

COPD    Physical activity    Cognitive behavioral therapy

## Footnotes

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