

## **2.06 Mapping behaviour change interventions for physical activity behaviour in chronic obstructive pulmonary disease to the Theoretical Domains Framework: a systematic review and meta-analysis**

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**Background:** Behaviour change interventions could help to improve physical inactivity in chronic obstructive pulmonary disease (COPD) (1). The aim of this systematic review and meta-analysis was to identify, analyse and synthesise behaviour change interventions for physical activity in COPD, which were subsequently mapped to the Theoretical Domains Framework (TDF) (2).

**Methods:** Nine databases were searched and data was extracted from included studies. Physical activity interventions were mapped to Michie's Behaviour Change Taxonomy (3) and the TDF and synthesized using meta-analysis. Bias, quality and certainty of the evidence were assessed utilizing Cochrane risk of bias tool (4) and GRADE criteria (5).

**Results:** This systematic review of 12 randomized controlled trials (n=1211) identified counselling, step-count monitoring, social support and goal-setting as the most frequently utilized interventions to promote physical activity in people with COPD. There were some significant short-term improvements in physical activity when interventions included domains of goals, behaviour regulation and social influences. Meta-analysis revealed no significant long-term impact on steps-per-day (SMD 0.16, 95% CI -0.03, 0.36; p=0.10).

**Conclusions:** There is some evidence that behaviour change interventions incorporating domains of goals, behaviour regulation or social influences may improve physical activity behaviour in COPD, although changes were not sustained in the longer term. Optimal behaviour change interventions to sustain long term changes in physical activity in people with COPD are not known.

**Keywords:** Chronic obstructive pulmonary disease, physical activity, behaviour change

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