

## **Changing Physical Activity Behaviour in People with Multiple Sclerosis: A Systematic Review**

**Background:** Positive effects of exercise for people with MS (pwMS) are well-established. Despite this, PwMS are largely inactive and lead sedentary lifestyles.

**Objectives:** To identify behavioural interventions for pwMS that aim to change physical activity (PA) behaviour. Additionally, to explore how these interventions use theory and employ behaviour change techniques (BCTs).

**Methods:** A systematic review used the search terms “physical activity/exercise”, “multiple sclerosis” and keywords associated with behaviour change. The resulting behavioural interventions were coded using ‘The Theory Coding Scheme’ and the ‘CALO-RE Taxonomy’ to assess 1) to what extent interventions can be defined as theory-based and 2) to identify what BCTs were employed.

**Results:** Six randomised control trials (RCTs) were included. Behaviour change theories included Social Cognitive Theory (SCT) (n=4), TransTheoretical Model (TTM) (n=1) and a mix of SCT and TTM (n=1). Studies did not meet the definition of “theory-based” and failed to discuss their results in relation to theory and did not attempt to refine theory. Coverage of BCTs reached a mean of 44.7% as per the CALO-RE Taxonomy.

**Conclusions:** There are few behavioural interventions to change PA behaviour in pwMS published. Findings of this review suggest that while reporting to be based on theory, these behavioural interventions do not discuss their results in relation to theory and therefore have not attempted to refine theory in relation to causing a change in PA behaviour in people MS. Use of additional BCTs to change PA behaviour is also required within these interventions