Cochrane Database of Systematic Reviews - - Cochrane Review

Interventions for promoting physical activity in people with cystic fibrosis

Code: CD009448 **Year:** 2013 **Date:** 2013 - updated: 5 DEC 2013 **Author:** Cox NS

Study design (if review, criteria of inclusion for studies)

Randomised and quasi-randomised controlled trials. Studies where the primary focus is not activity promotion, but rather the assessment of physiological outcomes as a response to a physical exercise intervention will not be included in the review.

List of included studies (4)

Hebestreit 2010, Klijn 2004, Schneiderman-Walker 2000, Selvadurai 2002

Participants

People with CF aged over five years, with any degree of disease severity

Interventions

All strategies designed to promote increased participation in daily physical activity (in both the inpatient and outpatient setting). e.g.: one-off one-to-one counselling or advice, self-directed or unsupervised participation in a prescribed physical activity programme, supervised physical activity session in the home, supervised physical activity session in a facility, on-going face-to-face counselling or advice, telephone support, written material, Internet-based or tele-health advice and motivation, monitoring device for motivation (pedometer).

Outcome measures

Primary outcomes: participation in physical activity (measured either subjectively e.g. by an activity diary, or objectively using a monitoring device e.g. a pedometer), intensity of physical activity (metabolic equivalents (METs), or patient rated in terms of perceived exertion score), time spent in physical activity (minutes per week, sessions per week, etc), energy expenditure (calories or joules), step count (using a monitoring device such as a pedometer), health-related quality of life measured by generic or disease specific assessments, or both

Main results

Four studies (199 participants) met the inclusion criteria and were predominantly conducted in children with cystic fibrosis. Only one study had a combined cohort of adult and paediatric participants. The description of study methods was inadequate to assess the risk of bias, particularly with regard to blinding of assessors and selective reporting. One study was conducted in an inpatient setting with follow up in the outpatient setting; while the remaining three studies were conducted in individuals with stable respiratory disease in the outpatient setting. All included studies used exercise training to promote participation in physical activity, with the duration of the intervention period ranging from 18 days to three years. No improvement in physical activity participation was reported with any intervention period less than or equal to six months. Improvements in physical activity participation were only seen where follow up occurred beyond 12 months. There was no significant impact on quality of life from any of the intervention strategies.

Authors' conclusions

Although participation in physical activity is generally regarded as beneficial for people with cystic fibrosis, there is a lack of evidence regarding strategies to promote the uptake and the continued participation in physical activity for this population. This review provides very limited evidence that activity counselling and exercise advice, undertaken over at least six months, to engage in a home exercise programme may result in improved physical activity participation in people with cystic fibrosis. Further research is needed to determine the effect of strategies such as health coaching or telemedicine applications, in promoting the uptake and adherence to regular participation in physical activity. In addition, establishing the ideal duration of any interventions that promote physical activity, including exercise training programmes, will be important in addressing issues relating to participation in physical activity for people with cystic fibrosis.

http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009448.pub2/abstract

See also

Cox NS, Alison JA, Holland AE. Interventions for promoting physical activity in people with cystic fibrosis. Cochrane Database of Systematic Reviews 2013, Issue 12. Art. No.: CD009448. DOI: 10.1002/14651858.CD009448.pub2.

Keywords

Exercise; non pharmacological intervention - devices OR physiotherapy; Counseling; Psychoeducation; non pharmacological intervention - psyco-soc-edu-org; telemedicine;