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Interval versus continuous training in individuals with chronic obstructive pulmonary disease--a systematic review.

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Abstract

BACKGROUND: In patients with chronic obstructive pulmonary disease (COPD), interval exercise has gained recent attention as a possible means of achieving greater physiological training effects compared with continuous exercise. The primary aim of this systematic review was to compare the effects of interval versus continuous training on peak oxygen uptake, peak power, 6 minute walk test (6MWT) distance and health-related quality of life in individuals with COPD. **METHODS:** Randomised controlled trials comparing the effects of interval versus continuous training in patients with COPD were identified after searches of six databases and reference lists of appropriate studies in May 2009. Two reviewers independently assessed study quality. Weighted mean differences (WMD) with 95% CIs were calculated using a random effects model for measures of exercise capacity and health-related quality of life. **RESULTS:** Eight randomised controlled trials, with a total of 388 patients with COPD, met the inclusion criteria. No significant differences were found for peak power (WMD 1 W, 95% CI -1 to 3) or peak oxygen uptake (WMD -0.04 l/min, 95% CI -0.13 to 0.05) between interval and continuous training. The WMD for the Chronic Respiratory Questionnaire dyspnoea score was -0.2 units (95% CI -0.5 to 0.0). There was no difference in 6MWT distance between groups (WMD 4 m, 95% CI -15 to 23). **CONCLUSIONS:** Interval and continuous training modalities did not differ in their effect on measures of exercise capacity or health-related quality of life. Interval training may be considered as an alternative to continuous training in patients with varying degrees of COPD severity.

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