primary studies - published RCT

Effects of anaerobic training in children with cystic fibrosis: a randomized controlled study.

Code: PM15078738 **Year:** 2004 **Date:** 2004 **Author:** Klijn PH

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

RCT. Assigned to group by concealed opaque envelopes. Stable disease. 3-month parallel design.

Participants

20 participants with CF completed the study. 3 participants dropped out: 2 as they did not complete training due to pulmonary exacerbations; and 1 withdrew for practical reasons. Group demographics: mean (SD) age 13.6 years (1.3 years) for training group; 14.2 years (2.1 years) for control group.

Interventions

Long-term anaerobic study. Comparison of anaerobic exercise (2 days per week for 30 - 45 minutes for 12 weeks) versus normal daily activities.

Outcome measures

Included in this study were: BMI; FEV1; FVC; FEF25-75; RV; TLC; Wingate anaerobic test - VO2max; VCO2; VE; RER; lactate; habitual activity estimation scale; CF questionnaire; fat-free mass; total maximal muscle force.

Main results

Patients in the TG significantly improved their anaerobic performance, aerobic performance, and quality of life. No significant changes were seen in other parameters, and no improvements were found in CG. After the follow-up period, only anaerobic performance and quality of life in TG were significantly higher compared to pretraining values.

Authors' conclusions

Anaerobic training has measurable effects on aerobic performance (although not sustained), anaerobic performance, and health-related quality of life in children with CF. Therefore, anaerobic training could be an important component of therapeutic programs for CF patients.

http://dx.doi.org/10.1378/chest.125.4.1299

See also

Chest. 2004 Apr;125(4):1299-305.

Keywords

Adolescent; Child; exercise; non pharmacological intervention - devices OR physiotherapy; training; Aerobic training; Chest physiotherapy;