primary studies - published RCT

Benefits of combining inspiratory muscle with 'whole muscle' training in children with cystic fibrosis: a randomised controlled trial.

Code: PM23681502 **Year:** 2013 **Date:** 2013 **Author:** Santana-Sosa E

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

Randomised controlled trial.

Participants

Paediatric outpatients with CF.

Interventions

Participants were randomly allocated with a block on gender to a control (standard therapy) or intervention group (initial n=10 (6 boys) in each group; age 10+/-1 and 11+/-1 years). The latter group performed a combined programme (inspiratory muscle training - IMT, 2 sessions/day) and aerobic+strength exercises (3 days/week, in-hospital)) that was followed by a 4-week detraining period.

Outcome measures

Primary outcomes: lung volume, inspiratory muscle strength (PImax) and cardiorespiratory fitness (VO2 peak). Secondary outcomes: and dynamic muscle strength, body composition and quality of life. All participants were evaluated at baseline, post-training and detraining.

Main results

Adherence to the training programme averaged 97.5%+/-1.7%. There was a significant interaction (groupxtime) effect for PImax, VO2peak and five-repetition maximum strength (leg-press, bench-press, seated-row) (all (p

Authors' conclusions

The relatively short-term (8-week) training programme used here induced significant benefits in important health phenotypes of paediatric patients with CF. IMT is an easily applicable intervention that could be included, together with supervised exercise training in the standard care of these patients.

http://dx.doi.org/10.1136/bjsports-2012-091892

See also

Br J Sports Med. 2013 May 16.

Keywords

Child; non pharmacological intervention - psyco-soc-edu-org; training; inspiratory muscle training; exercise; Chest physiotherapy; non pharmacological intervention - devices OR physiotherapy; Aerobic training;