primary studies - published RCT

Respiratory muscle training improves respiratory muscle endurance but not exercise tolerance in children with cystic fibrosis.

Code: PM28114723 **Year:** 2017 **Date:** 2017 **Author:** Bieli C

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

crossover trial

Participants

22 children, aged 9-18 years, with CF

Interventions

Respiratory muscle endurance (RME) training (8 weeks) and standard chest physiotherapy in a randomized sequence separated by a 1 week washout period. All children underwent training sessions using the RME training device before beginning the study.

Outcome measures

The primary outcomes were RME (in minutes) and exercise endurance (in minutes). Data were analyzed according to the intention-to-treat principle.

Main results

Sixteen of 22 children (73%) completed the study. Study dropouts tended to be older with more advanced lung disease. After RME training, respiratory muscle endurance significantly increased by 7.03 +/- 8.15 min (mean +/- standard deviation, P

Authors' conclusions

RME training led to a significant increase in respiratory muscle endurance in children with CF. However, RME training did not improve exercise endurance or other CF-related health outcomes. Thus, our results do not support the routine use of RME training in the care of children with CF. Future studies in larger populations and with prolonged intervention time may overcome the limitations of our study.

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See also

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Keywords

Adolescent; Adult; Inhalation OR nebulised; non pharmacological intervention - psyco-soc-edu-org; non pharmacological intervention - devices OR physiotherapy; pharmacological_intervention; training; inspiratory muscle training; exercise; Chest physiotherapy;