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primary studies - published RCT

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

**Code:** PM23681502

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### **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 (P<sub>Imax</sub>) and cardiorespiratory fitness (VO<sub>2</sub> 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 P<sub>Imax</sub>, VO<sub>2</sub>peak 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 - psycho-soc-edu-org; training; inspiratory muscle training; exercise; Chest physiotherapy; non pharmacological intervention - devices OR physiotherapy; Aerobic training;