

primary studies - published RCT

# Immediate changes in blood-gas tensions during chest physiotherapy with positive expiratory pressure and oscillating positive expiratory pressure in patients with cystic fibrosis.

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

RCT

## Participants

15 patients (mean age 12.5 y, range 6.9-21.5 y) participated.

#### Interventions

The treatments were randomized and performed on 2 separate occasions, 8 weeks apart.

#### Outcome measures

Spirometry was conducted before and after each treatment.Transcutaneous oxygen tension (P(tO2) was measured.

#### Main results

There were no changes in spirometry values. During PEP, different trends in blood-gas tension were seen, and there were no consistent changes. During oscillating PEP, P(tO2) increased and P(tCO2) decreased. During oscillating PEP, P(tCO2) was lower and the intra-individual change in P(tCO2) was more pronounced than during PEP. The results obtained immediately after oscillating PEP showed a higher P(tO2) and a lower P(tCO2) than with PEP.

## Authors' conclusions

PEP and oscillating PEP can both cause transitory effects on blood gases in patients with cystic fibrosis. However, oscillating PEP alters blood-gas tensions more than does PEP, and hyperventilation during oscillating PEP may reduce treatment time.

http://www.rcjournal.com/contents/10.06/10.06.1154.pdf

## See also

Respir Care. 2006 Oct;51(10):1154-61.

### Keywords

Adolescent; Adult; Airway clearance technique; Chest Wall Oscillation; Child; non pharmacological intervention - devices OR physiotherapy; oscillating devices; Positive-Pressure Respiration- PEP- pep mask; Chest physiotherapy;