*primary studies - published, non RCT*

# The Short Term Influence of Chest Physiotherapy on Lung Function Parameters in Children With Cystic Fibrosis and Primary Ciliary Dyskinesia.

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

Single-center, prospective cross-over study

### Participants

Pediatric patients with CF and PCD. A total of 31 children were included: 14 with PCD and 17 with CF.

### Interventions

Airway clearance therapy (ACT); to evaluate the short term effect of a single ACT session using positive expiratory pressure mask, compared to no ACT (control)

### Outcome measures

Forced expiratory volume in 1 s (FEV(1)) and lung clearance index (LCI), derived from MBW

### Main results

For the whole group, there was no difference in median change of FEV(1) pp between the treatment and the control group (p 0.969), nor in median change of LCI (p 0.294). For the CF subgroup, the mean change in FEV(1) pp with ACT was -1.4% (range -9 to + 5) versus -0.2% (range -6 to + 5) for no ACT (p 0.271), the mean change in LCI with ACT was + 0.10 (range -0.7 to + 1.2) versus + 0.17 (range -0.5 to + 2.8) for no ACT (p 0.814). In the PCD subgroup, the mean change in FEV(1) pp with ACT was + 1.0 (range -7 to + 8) versus -0.3 (range -6 to + 5) for no ACT (p 0.293) and the mean change in LCI with ACT was -0.46 (range -3.7 to + 0.9) versus -0.11 (range -1.4 to + 1.3) for no ACT (p 0.178). There was no difference between PCD and CF for change in FEV(1) pp after ACT (p = 0.208), nor for LCI (p = 0.095). I

### Authors' conclusions

In this small group of pediatric patients, no significant short-term effect of chest physiotherapy on FEV(1) pp nor LCI in PCD and CF values nor variability was documented.

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### See also

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### Keywords

Primary Ciliary Dyskinesia; Respiratory Tract Diseases; non pharmacological intervention - devices OR physiotherapy; Airway clearance technique; Chest physiotherapy; Positive-Pressure Respiration- PEP- pep mask;