primary studies - published RCT

Effect of airway clearance therapies on mucociliary clearance in adults with cystic fibrosis: A randomized controlled trial.

Code: PM35594286 **Year:** 2022 **Date:** **Author:** Trimble A

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

Randomized controlled trial

Participants

Ten subjects with CF

Interventions

Three different physiotherapy methods to augment cough-clearance were studied in addition to cough-clearance alone: high-frequency chest-wall oscillating vest, oscillatory positive expiratory pressure, and whole-body vibration.

Outcome measures

Gamma scintigraphy after inhalation of radiolabeled particles to quantify mucus clearance before, during, and after physiotherapy. As secondary endpoints, concentrations of small molecules in exhaled breath that may impact mucus clearance.

Main results

No differences were identified between any method of airway clearance, including cough clearance alone. We did identify changes in certain small molecule concentrations in exhaled breath following airway clearance.

Authors' conclusions

Due to the limitations of this study, we do not believe the negative results suggest a change in clinical practice with regard to airway clearance. Findings pertaining to small molecules in exhaled breath may serve as future opportunities for study.

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See also

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Keywords

non pharmacological intervention - devices OR physiotherapy; Respiratory Tract Diseases; Airway clearance technique; Chest physiotherapy; High Frequency Chest Wall Oscillation -HFCWO-; VEST Airway Clearance System; oscillating devices; Vibration; Positive-Pressure Respiration- PEP- pep mask; Active Cycle of Breathing Technique -ACBT-; forced expiration technique;