

primary studies - published RCT

## Chest percussion: Help or hindrance to postural drainage?

Code: PM6862833

Year: 1983 Date: 1991

Author: Murphy, M.B.

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

Cross-over design. Randomised controlled trial.

### Participants

28 participants (gender unspecified); mean age 14 years, range 8 - 21 years; mean FEV1 68, range 15 - 114% predicted; mean Schwachman score 65, range 33 - 91 points. CF confirmed by sweat tests.

### Interventions

1. PEP treatment. Pressure 10 - 15 cm H<sub>2</sub>O. Seated participants exhaled 10 - 15 times through an Astra or Vitapep mask, followed by forced expiration and cough, if required. This cycle was then repeated; 2. PEP & FET intervention. The following was added to the above technique: 1 or 2 forced expirations with an open glottis from mid-lung volume to low-lung volume followed by a period of relaxed diaphragmatic breathing (FET); 3. PDP & FET intervention. Participants received percussion in postural drainage positions, with FET; 4. 5PEP-PDP & FET intervention. Participants performed PEP (position not defined) for 5 minutes, followed by PDP&FET. Frequency and duration of treatment sessions was not specified. There was no washout period between months.

### Outcome measures

FEV1 and FVC were measured at the start and finish of each month. At the end of each month, the wet weight of expectorated sputum over a 2-hour period which included a treatment with that month's intervention was measured. At the end of the study period

### Main results

At the end of the trial, no significant difference was found between the programmes as regards growth, Shwachman score, Chrispin-Norman score or pulmonary function tests. Twenty-three patients chose to continue using the PEP mask in conjunction with FET long-term as their chest physiotherapy programme as they felt it was an effective treatment allowing increased independence, with postural drainage being kept to a minimum.

### See also

Irish Medical Journal

### Keywords

Adolescent; Adult; Airway clearance technique; Child; Drainage; non pharmacological intervention - devices OR physiotherapy; mask; Postural Drainage; Positive-Pressure Respiration- PEP- pep mask; percussion; Chest physiotherapy; forced expiration technique; Active Cycle of Breathing Technique -ACBT-;