*primary studies - published RCT*

# Chest physiotherapy in cystic fibrosis: a comparative study of autogenic drainage and the active cycle of breathing techniques with postural drainage.

**Code:** PM7701456 **Year:** 1995 **Date:** 1995 **Author:** Miller S

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

Study type: RCT.

### Participants

Age: mean (NR); median (NR); SD (NR); range (11-32 years). Inclusion criteria: age greater than or equal to 11 years; clinically stable participants not receiving intravenous antibiotics. Exclusion criteria: NR. 18 enrolled/ 18 evaluated/ 10 male (55.6% male) Characteristics: all 18 participants were clinically stable at the time of the study and not receiving intravenous antibiotics. Each participant used 2 treatment regimens in randomised order over 2 days. The treatments were ACBT and AD. Each day consisted of 2 identical treatment sessions with each session lasting 30 minutes. There was a 1-week washout period between the 2 treatme

### Interventions

AD: breathing control in conjunction with cough suppression to mobilise mucus. After multiple cycles, sputum was expectorated. The position was either sitting or supine. ACBT: a postural drainage regimen was performed with ACBT (including breathing control, deep breathing, and forced expirations).

### Outcome measures

Additional outcomes: heart rate; xenon-133 gas ventilation study. Outcome measures: patient preference; lung function; sputum secretion; oxygen saturation.

### Main results

Autogenic drainage cleared mucus from the lungs faster than ACBT over the whole day. Both methods improved ventilation, as assessed by the xenon-133 ventilation studies. No overall differences were found in the pulmonary function test results, but more patients had an improved forced expiratory flow from 25% to 75% with autogenic drainage, while more showed an improved forced vital capacity with ACBT. No differences were found in sputum weight and heart rate, nor in mean SaO2 over the series, but four patients desaturated during ACBT.

### Authors' conclusions

Autogenic drainage was found to be as good as ACBT at clearing mucus in patients with cystic fibrosis and is therefore an effective method of home physiotherapy. Patients with cystic fibrosis should be assessed as to which method suits them best.

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### See also

Thorax. 1995 Feb;50(2):165-9.

### Keywords

Adolescent; Adult; Airway clearance technique; Child; Drainage; non pharmacological intervention - devices OR physiotherapy; Postural Drainage; Active Cycle of Breathing Technique -ACBT-; Chest physiotherapy; Autogenic drainage;