
Chest Physiotherapy Techniques in Bronchiectasis

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Setting the scene:

All patients with bronchiectasis should be assessed and taught an Airway Clearance Technique (ACT) by a specialist Respiratory Physiotherapist. Respiratory Physiotherapists managing Bronchiectasis need to be proficient in a range of techniques as patients will present with a diversity of symptoms, severity of disease and competence in techniques.

What did they do?

Bronchiectasis is a persistent and progressive condition characterized by destruction of the bronchial wall and airway dilatation as shown on computed tomography (CT) scan in association with clinical symptoms of cough and production of sputum. Variety of airway clearance techniques (ACTs) have developed over time

Available for use in bronchiectasis was summarized as the following:

Independent techniques:

Active cycle of breathing techniques
Autogenic drainage

Device-dependent techniques:

Positive expiratory pressure
Oscillating positive expiratory pressure
Intrathoracic: Flutter, Acapella
Extrathoracic: high-frequency chest wall oscillations
Intermittent positive pressure breathing
Non-invasive ventilation
Test of incremental respiratory endurance

Assistive components to techniques:

Manual techniques Chest: percussion/ clapping/ Chest wall vibrations/
Overpressure
Gravity-assisted positioning
Modified postural drainage

Adjuncts to assist techniques:

Humidification Nebulized therapy
B2 agonists

Mucolytics Saline (0.9%)

Hypertonic saline 7%

Mannitol

Takeaway message:

There is evidence to support the effectiveness of ACT in bronchiectasis. ACTs in bronchiectasis offer similar effectiveness, with ACBT and GAP perhaps being both the most effective although the least preferred. Current understanding suggests that we should balance effectiveness with adherence when deciding on a technique for each individual patient. In the United Kingdom, British Thoracic Society guidelines, advise that patients with a daily productive cough or evidence of mucus plugging on high-resolution CT should be taught ACT. It is recommended that patients without daily production of sputum should be taught methods for use during exacerbations. Clinical practice may differ internationally; however, physiotherapists managing bronchiectasis need to be proficient in a range of techniques because patients present with a diversity of symptoms, disease state, and competence in techniques. It is therefore essential that patients are assessed by a specialist respiratory physiotherapist with an understanding of these ACTs who uses their experience and clinical reasoning to assess and teach the most relevant and effective technique.