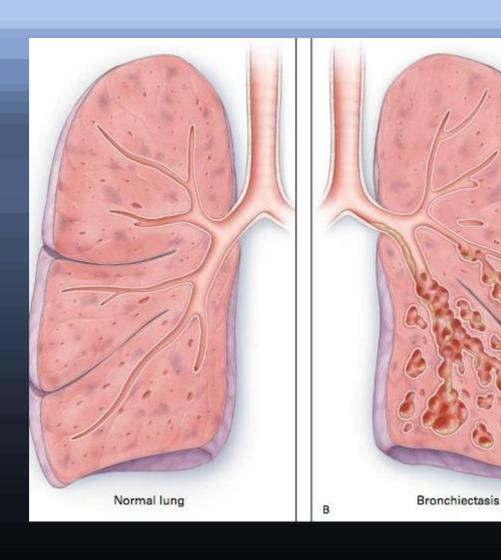
Ο ΡΟΛΟΣ ΤΗΣ ΦΥΣΙΚΟΘΕΡΑΠΕΙΑΣ ΣΤΗΝ ΣΥΓΧΡΟΝΗ ΑΝΤΙΜΕΤΩΠΙΣΗ ΤΩΝ ΒΡΟΓΧΕΚΤΑΣΙΩΝ

ΚΟΚΟΛΙΟΣ ΑΛΕΞΗΣ ΦΥΣΙΚΟΘΕΡΑΠΕΥΤΗΣ

AΘHNA 2019

ΒΡΟΓΧΕΚΤΑΣΙΕΣ



ΒΡΟΓΧΕΚΤΑΣΙΕΣ

- $\bullet BHXA\Sigma$
- •ΠΑΡΑΓΩΓΗ ΕΚΚΡΙΣΕΩΝ
- •ΦΛΕΓΜΟΝΗ ΤΩΝ ΒΡΟΓΧΩΝ
- •ΔΙΑΤΑΣΗ ΤΩΝ ΒΡΟΓΧΩΝ
- $\bullet \Delta Y \Sigma \Pi NOIA$

- •ΡΙΝΟΚΟΛΠΙΤΙΔΑ
- •ΚΟΠΩΣΗ
- •AIMOΠΤΥΣΗ
- •ΘΩΡΑΚΙΚΟ ΑΛΓΟΣ

ΣΥΧΝΟΤΗΤΑ ΕΜΦΑΝΙΣΗΣ ΝΟΣΟΥ ΘΝΗΤΟΤΗΤΑ

- ↑HΛIKIA
- . ΓΥΝΑΙΚΕΣ
- . 1437,7/100.000
- . 30%→ 1Ετος+Παρόξυνση+ΧΑΠ

ΣΥΝΝΟΣΗΡΟΤΗΤΑ

•XAП •EΛΛΕΙΨΗ •AΣΘΜΑ

•54,3% males •A1AT

•4,63 pack years

•ΡΙΝΟΚΟΛΠΙΤΙΔΑ

•ΡΕΥΜΑΤΟΕΙΔΗΣ ΑΡΘΡΙΤΙΔΑ •ΝΟΣΗΜΑΤΑ ΣΥΝΔΕΤΙΚΟΥ ΙΣΤΟΥ

- SJORGEN
- • Σ Y.EPY Θ . Λ YK $O\Sigma$

ΑΞΙΟΛΟΓΗΣΗ ΒΑΡΥΤΗΤΑΣ ΤΗΣ NOΣOY Bronchiectasis Severity Index

BTS Guideline

0-4 Points=mild disease; 5–8=moderate disease; 9 and over=severe disease

Age (years)	Factor and points for scoring system			
	<50 (0 points)	50-69 (2 points)	70-79 (4 points)	>80 (6 points)
BMI (Kg/m²)	<18.5 (2 points)	18.5-25 (0 points)	26-30 (0 points)	>30 (0 points)
FEV ₁ % predicted	>80 (0 points)	50-80 (1 point)	30-49 (2 points)	<30 (3 points)
Hospital admission within last 2 years	No (0 points)		Yes (5 points)	
Number of exacerbations in previous 12 months	0 (0 points)	1-2 (0 points)	≥3 (2 points)	
MRC breathlessness score	1-3 (0 points)	4 (2 points)	5 (3 points)	
P. aeruginosa colonisation	No (0 points)		Yes (3 points)	
Colonisation with other organisms	No (0 points)		Yes (1 point)	
Radiological severity	<3 lobes affected (0 points)	≥3 lobes or cystic bronchiectasis in any lobe (1 point)		

Bronchiectasis Severity Index

+9

SCORE 5	-8	SCORE

1st YEAR 1st YEAR

0,8-4,8% mortality 7,6-10,5% mortality

1-7,2% hospitalisation 16,7-52,6% hospitalisation

4 YEARS 4 YEARS

4-11.3% mortality 9,9-29,2% mortality

9,9-19,4% hospitalisation 41,2-80.4% hospitalisation

ΣΥΣΤΑΣΕΙΣ ΠΡΟΣ ΤΟΥΣ ΑΣΘΕΝΕΙΣ ΣΥΜΦΩΝΑ ΜΕ ERS

ΕΚΜΑΘΗΣΗ ΤΕΧΝΙΚΩΝ ΒΡΟΓΧΙΚΗΣ ΠΑΡΟΧΕΤΕΥΣΗΣ ΑΠΟ ΦΥΣΙΚΟΘΕΡΑΠΕΥΤΗ ΜΕ ΕΦΑΡΜΟΓΗ 2 ΦΟΡΕΣ/ΗΜΕΡΑ.

ΣΥΣΤΑΣΗ ΣΥΜΜΕΤΟΧΗΣ ΣΕ ΠΡΟΓΡΑΜΜΑ ΠΝΕΥΜΟΝΙΚΗΣ ΑΠΟΚΑΤΑΣΤΑΣΗΣ ΣΕ ΑΣΘΕΝΕΙΣ ΜΕ ΜΕΙΩΜΕΝΗ ΙΚΑΝΟΤΗΤΑ ΣΤΗΝ ΑΣΚΗΣΗ

Lee AL, Burge AT, Holland AE. Airway clearance techniques for bronchiectasis. Cochrane database Syst Rev 2015; 11: CD008351 Bradley J, Moran F, Greenstone M. Physical training for bronchiectasis. Cochrane Database Syst Rev 2002; CD002166.

ERS CHEST PHYSIOTHERAPY GUIDELINES

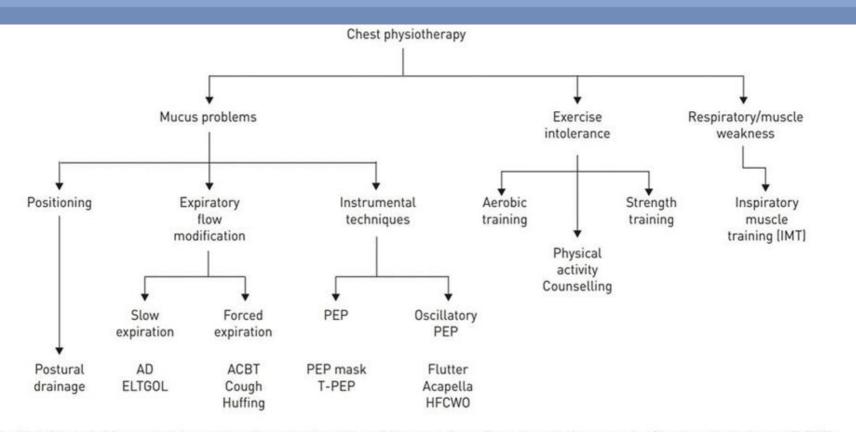


FIGURE 6 Chest physiotherapy interventions flow chart based on clinical experience from the task force panel. AD: autogenic drainage; ELTGOL: total slow expiration with open glottis and infralateral position; ACBT: active cycle of breathing techniques; PEP: positive expiratory pressure; T-PEP: temporary positive expiratory pressure; HFCWO: high frequency chest wall oscillation.

ΔΙΑΡΚΗΣ ΔΙΑΧΕΙΡΙΣΗ ΕΚΚΡΙΣΕΩΝ

BTS Guideline

STEP

1

Offer active cycle of breathing techniques (ACBT) to individuals with bronchiectasis.

Consider gravity assisted positioning (where not contraindicated) to enhance the effectiveness of an airway clearance technique. If contraindicated then modified postural drainage should be used.

Patients should be reviewed within 3 months.

This should include evaluation of patient reported effectiveness (ease of clearance/patient adherence).

The inclusion of gravity assisted positioning should be evaluated for its additional effectiveness.

STEP

2

If ACBT is not effective or the patients demonstrates poor adherence, oscillating Positive Expiratory Pressures + Forced Expiration Technique should be considered.

STEP

3

If airway clearance is not effective then nebulised Isotonic (0.9% saline) or Hypertonic Saline (3% saline and above) should be evaluated for its effectiveness pre-airway clearance (especially in patients with viscous secretions or there is evidence of sputum plugging)

Individuals should be advised to complete Airway Clearance in the following order, if prescribed:

- Bronchodilator
- Mucoactive treatment
- Airway Clearance
- Nebulised antibiotic and/or inhaled steroids (if applicable)

ACBT: Active cycle of breathing techniques

Figure 3 Physiotherapy management-stepwise airway clearance.

ΔΙΑΧΕΙΡΙΣΗ ΕΚΚΡΙΣΕΩΝ ΣΕ ΠΑΡΟΞΥΝΣΗ

STEP

Increase airway clearance frequency. E.g.: from twice daily to three/four times daily. STEP

2

Commence the use of mPD or PD if tolerated.

For individuals with radiological changes, PD or mPD should be targeted appropriately.

STEP

3

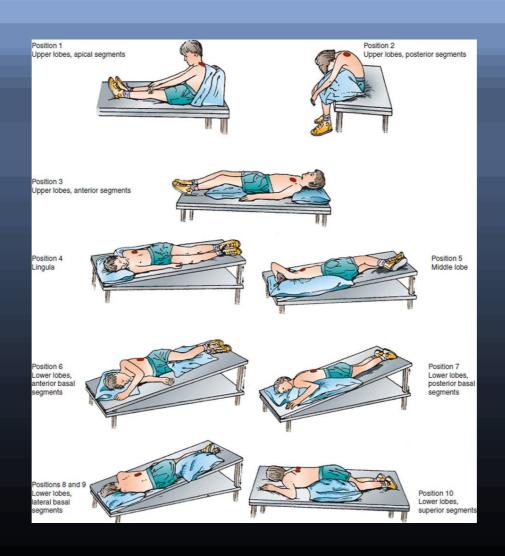
Individuals with ongoing difficulty with airway clearance may benefit from the addition of other techniques. It is recommended that these should be commenced and evaluated in the following order (unless contraindicated)

- Enhanced humidification / hydration of airways if secretions viscous (isotonic (0.9% saline) or hypertonic saline (3% saline and above)/humidification/increased fluid intake)
- 2. Manual Techniques
- Positive pressure devices including Intermittent Positive Pressure Breathing (IPPB) or Non Invasive Ventilation (NIV) to be used during Airway Clearance

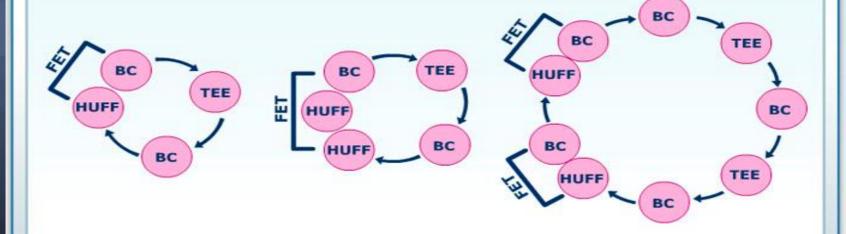
PD=postural drainage; mPD= modified postural drainage

Figure 4 Airway clearance - exacerbations.

POSTURAL DRAINAGE



Active Cycle of Breathing Techniques



BC=Breathing Control TEE=Thoracic Expansion Exercise FET=Forced Expiratory Technique

ΕΚΠΝΕΥΣΤΙΚΟΙ ΕΞΑΣΚΗΤΕΣ

FLUTTER, ACAPELLA, PEP







IMT inspiratory muscle trainer



ELTGOL

(slow expiration with the glottis opened in the lateral posture)

The ELTGOL technique increases expectoration, reduces exacerbations and improves quality of life in bronchiectasis

"Long-term benefits of airway clearance in bronchiectasis: a re

Gerard Muñoz, Javier de Gracia, Maria Buxó, Antonio Alvarez and Montserrat Vendrell. Eur Respir J 2018; 51: 1701926. - April 01, 2018

Control group 22 Placebo 22 12 months treatment

•Ασθενείς σε παρόξυνση •Control group 13

·Placebo group 16

•Ημέρα εμφάνισης

•Control group 226

•Placebo group 85

.Βελτίωση

•Χωρίς βελτίωση

•SGQR,LCQ

•mMRC,FEV₁,

"Long-term benefits of airway clearance in bronchiectasis: a randomised placebo-controlled trial." Gerard Muñoz, Javier de Gracia, Maria Buxó, Antonio Alvarez and Montserrat Vendrell. Eur Respir J 2018; 51: 1701926. - April 01, 2018

Guidelines Recommendation Airway clearance techniques (ACT)	Grade of recommendation	Quality of evidence
ERS 2017		
Teach ACT by respiratory physiotherapist	Weak	Low
Perform ACT once or twice daily in chronic productive cough or difficulty to expectorate	Weak	Low
BTS 2019		
Teach ACT to perform	D	3 to 1-
Offer active cycle of breathing techniques or oscillatory positive expiratory pressure	D	1-
Consider gravity assisted positioning where not contraindicated to enhance effectiveness of	ACT D	1-
SEPAR 2018		
ACTs are safe. In stable bronchiectasis with productive cough (hypersecretion or frequent ex TSANZ 2015	xacerbations) Strong	Low
Perform ACT	Strong	Moderate
Get respiratory physiotherapist's advice	Strong	Moderate
Individualise ACT	Strong	Moderate
BTA 2019		
	igns of musus plugging MD	NR
Teach and apply ACT to all patients with chronic production of secretions and/or (CT scan) si	igns of mucus plugging inc	INK

Respiratory physiotherapy in the bronchiectasis guidelines: is there a loud voice we are yet to hear? Arietta Spinou, James D. Chalmers
European Respiratory Journal 2019 54: 1901610; DOI: 10.1183/13993003.01610-2019

ΕΥΧΑΡΙΣΤΩ ΓΙΑ ΤΗΝ ΠΡΟΣΟΧΗ ΣΑΣ

