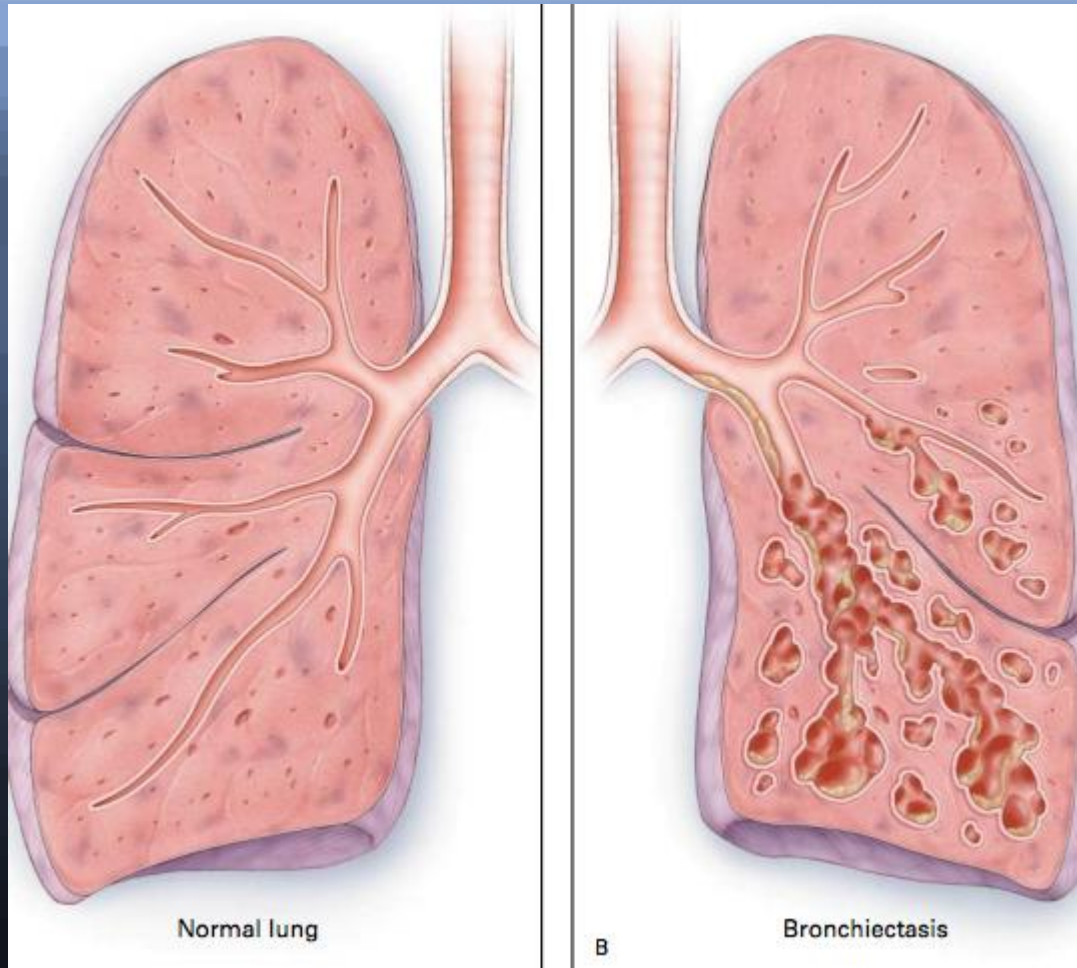


Ο ΡΟΛΟΣ ΤΗΣ ΦΥΣΙΚΟΘΕΡΑΠΕΙΑΣ ΣΤΗΝ
ΣΥΓΧΡΟΝΗ ΑΝΤΙΜΕΤΩΠΙΣΗ ΤΩΝ
ΒΡΟΓΧΕΚΤΑΣΙΩΝ

ΚΟΚΟΛΙΟΣ ΑΛΕΞΗΣ
ΦΥΣΙΚΟΘΕΡΑΠΕΥΤΗΣ

ΑΘΗΝΑ 2019

ΒΡΟΓΧΕΚΤΑΣΙΕΣ



ΒΡΟΓΧΕΚΤΑΣΙΕΣ

•ΒΗΧΑΣ

•ΠΑΡΑΓΩΓΗ
ΕΚΚΡΙΣΕΩΝ

•ΦΛΕΓΜΟΝΗ ΤΩΝ
ΒΡΟΓΧΩΝ

•ΔΙΑΤΑΣΗ ΤΩΝ
ΒΡΟΓΧΩΝ

•ΔΥΣΠΝΟΙΑ

•ΡΙΝΟΚΟΛΠΙΤΙΔΑ

•ΚΟΠΩΣΗ

•ΑΙΜΟΠΤΥΣΗ

•ΘΩΡΑΚΙΚΟ ΑΛΓΟΣ

ΣΥΧΝΟΤΗΤΑ ΕΜΦΑΝΙΣΗΣ

• 53-566/100.000
ΝΟΣΟΥ ΘΝΗΤΟΤΗΤΑ

• ↑ ΗΛΙΚΙΑ

• ΓΥΝΑΙΚΕΣ

• 1437,7/100.000

• 30% → 1 Έτος + Παρόξυνση + ΧΑΠ

ΣΥΝΝΟΣΗΡΟΤΗΤΑ

.ΧΑΠ

.54,3% males

.4,63 pack years

.ΕΛΛΕΙΨΗ

.Α1ΑΤ

.ΑΣΘΜΑ

.ΡΙΝΟΚΟΛΠΙΤΙΔΑ

.ΡΕΥΜΑΤΟΕΙΔΗΣ
ΑΡΘΡΙΤΙΔΑ

.ΝΟΣΗΜΑΤΑ
ΣΥΝΔΕΤΙΚΟΥ
ΙΣΤΟΥ

. SJORGEN

.ΣΥ.ΕΡΥΘ.ΛΥΚΟΣ

ΑΞΙΟΛΟΓΗΣΗ ΒΑΡΥΤΗΤΑΣ ΤΗΣ ΝΟΣΟΥ

Bronchiectasis Severity Index

BTS Guideline

Table 4 Variables involved in calculating the severity score in the Bronchiectasis severity index

	Factor and points for scoring system			
Age (years)	<50 (0 points)	50–69 (2 points)	70–79 (4 points)	>80 (6 points)
BMI (Kg/m ²)	<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)	
<i>P. aeruginosa</i> 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)		

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

Bronchiectasis Severity Index

SCORE 5-8

1st YEAR

0,8-4,8% mortality

1-7,2% hospitalisation

4 YEARS

4-11.3% mortality

9,9-19,4% hospitalisation

SCORE + 9

1st YEAR

7,6-10,5% mortality

16,7-52,6% hospitalisation

4 YEARS

9,9-29,2% mortality

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.

Polverino E, Goeminne PC, McDonnell MJ, et al. European Respiratory Society guidelines for the management of adult bronchiectasis. Eur Respir J 2017;

ERS CHEST PHYSIOTHERAPY GUIDELINES

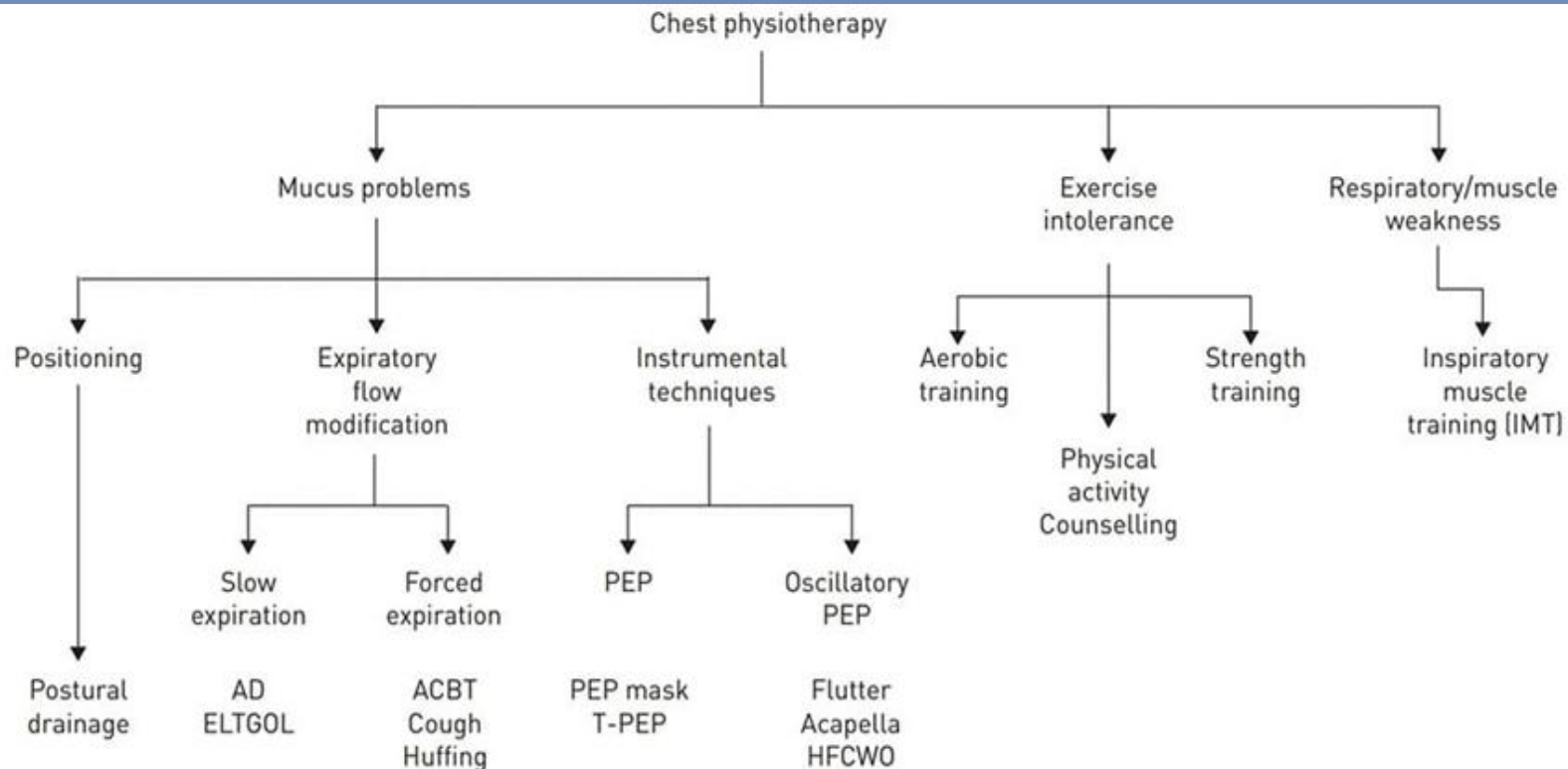


FIGURE 6 Chest physiotherapy interventions flow chart based on clinical experience from the task force panel. AD: autogenic drainage; ELTGOL: total slow expiration with open glottis and infralateral position; ACBT: active cycle of breathing techniques; PEP: positive expiratory pressure; T-PEP: temporary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

ΔΙΑΡΚΗΣ ΔΙΑΧΕΙΡΙΣΗ ΕΚΚΡΙΣΕΩΝ

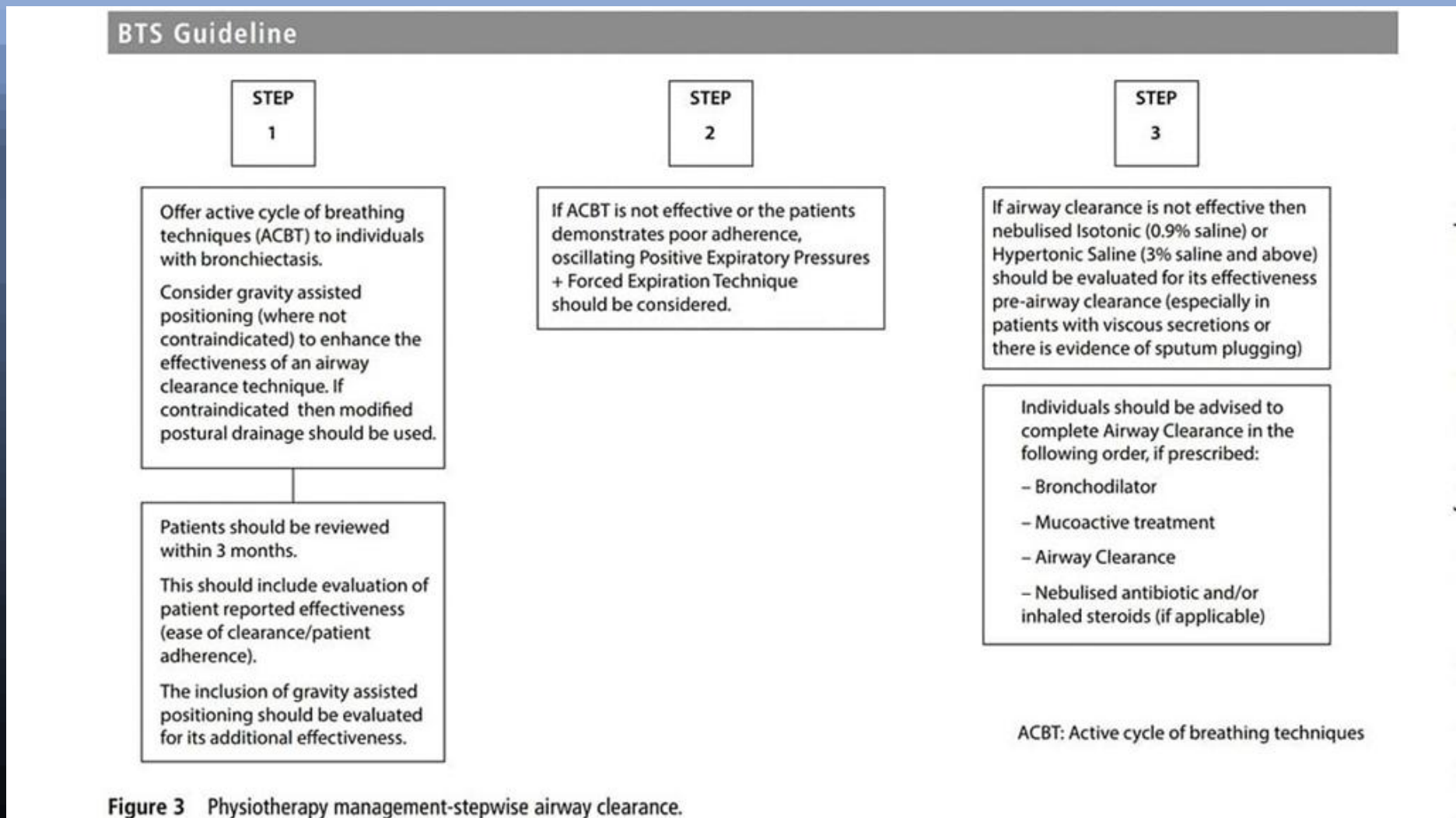


Figure 3 Physiotherapy management-stepwise airway clearance.

ΔΙΑΧΕΙΡΙΣΗ ΕΚΚΡΙΣΕΩΝ ΣΕ ΠΑΡΟΞΥΝΣΗ

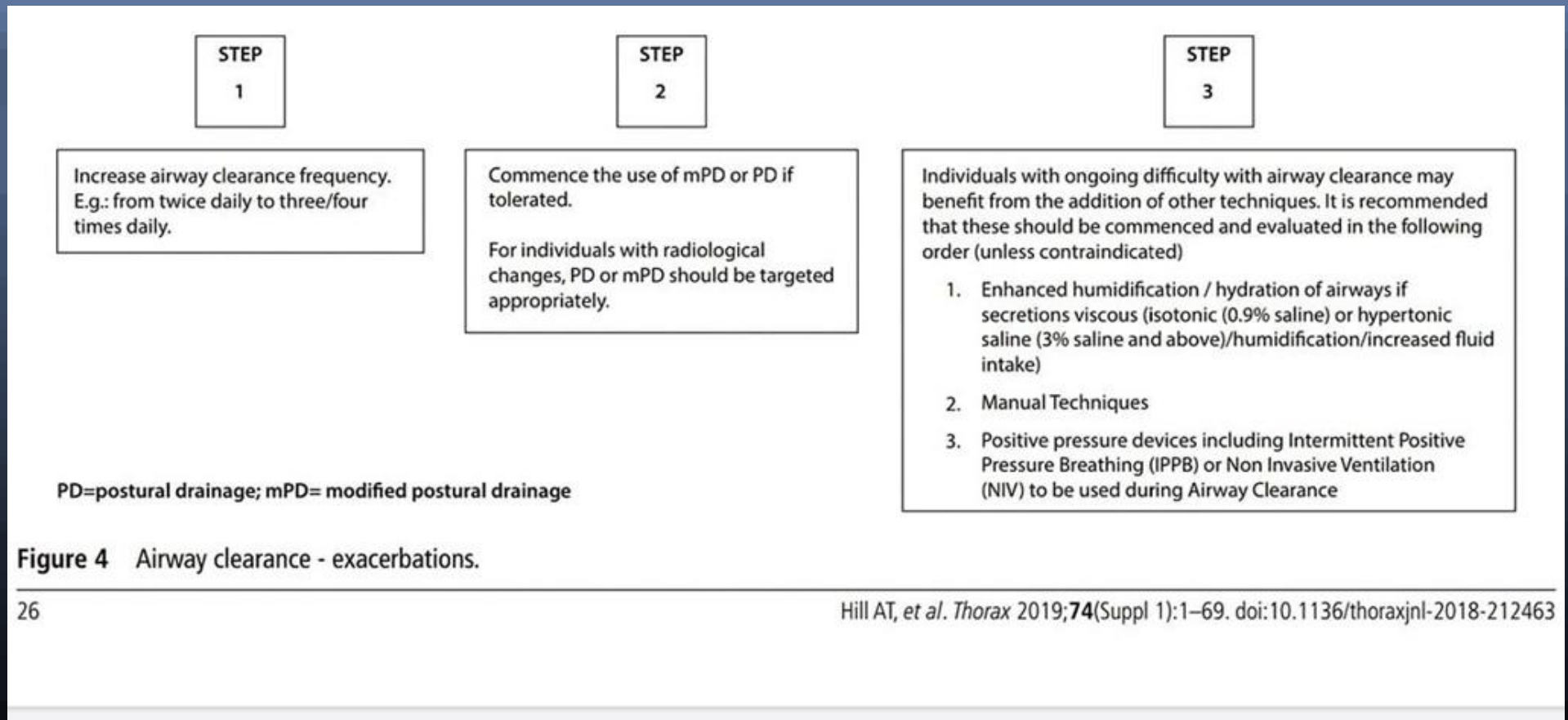
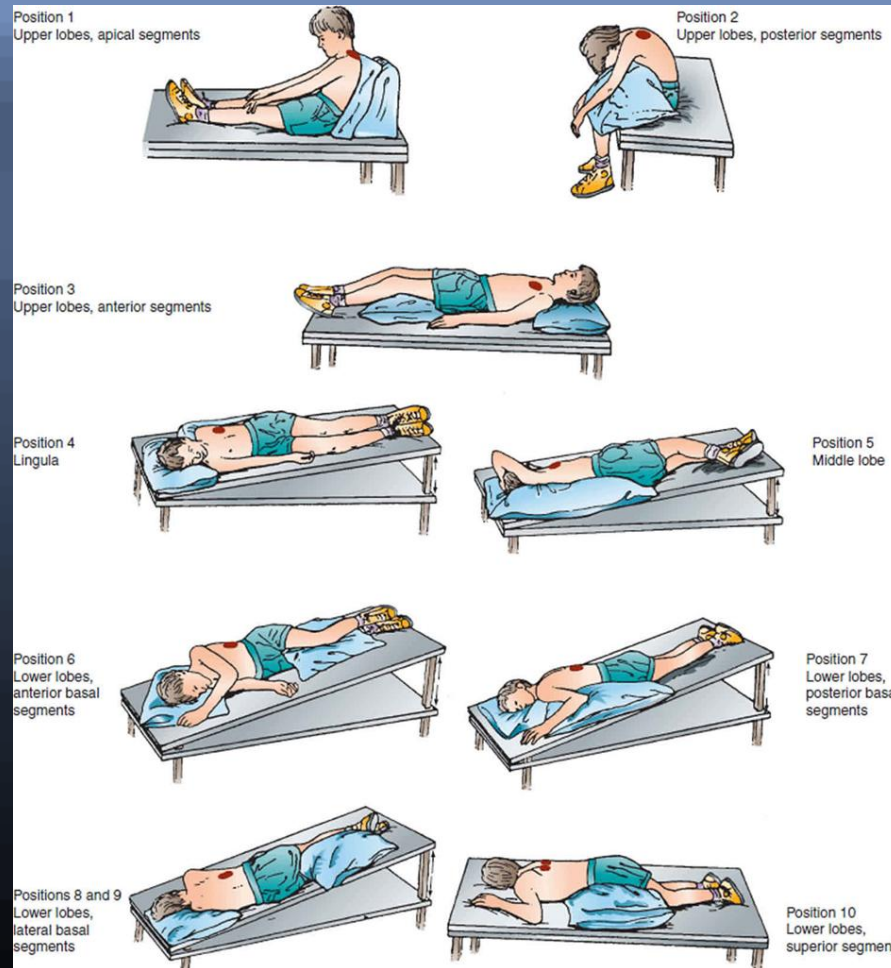
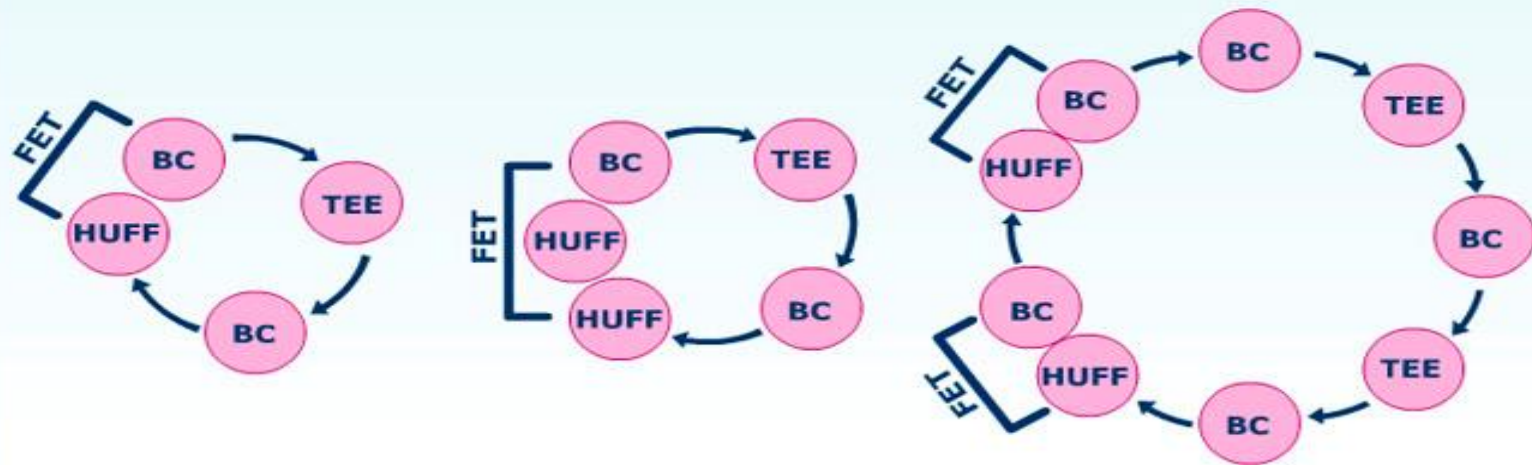


Figure 4 Airway clearance - exacerbations.

POSTURAL DRAINAGE



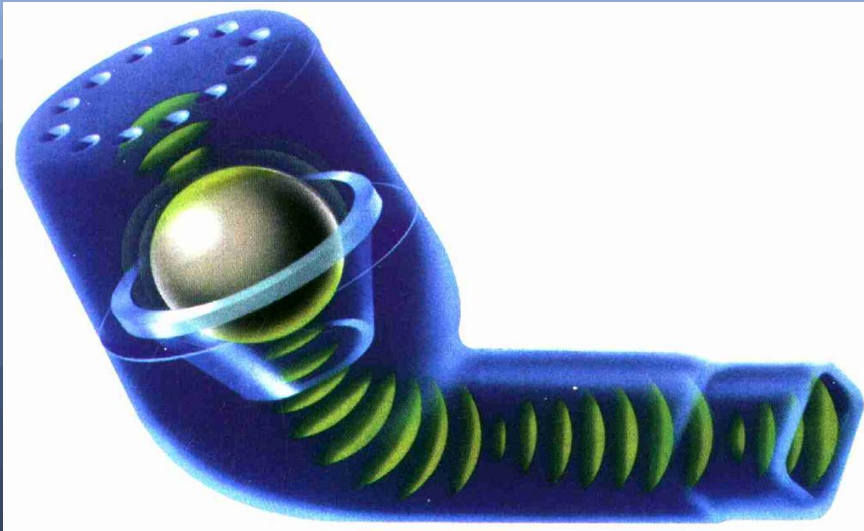
Active Cycle of Breathing Techniques



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 r

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

• SGQR, LCQ

• Βελτίωση

• mMRC, FEV₁,

• Χωρίς βελτίωση

Guidelines Recommendation Airway clearance techniques (ACT)	Grade of recommendation	Quality of evidence
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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 exacerbations)	Strong	Low
---	--------	-----

TSANZ 2015

Perform ACT	Strong	Moderate
Get respiratory physiotherapist's advice	Strong	Moderate
Individualise ACT	Strong	Moderate

BTA 2019

Teach and apply ACT to all patients with chronic production of secretions and/or (CT scan) signs of mucus plugging	NR	NR
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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

