MASTERCLASS

Désencombrement Bronchique manuel

Guillaume Prieur (PT, PhD)

(Le Havre Hospital, France)

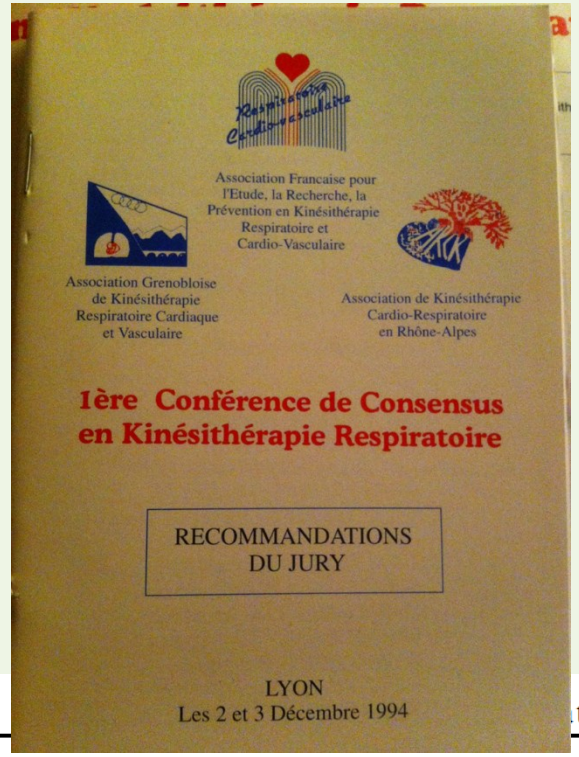
- **Liens d'intérêt :**

Health Impact
GHAHR
Actukine
FullPhysio
Air Liquide
ASTEN
ASDIA
EPIONE
SOS oxygène

Déclaration des liens d'intérêts
J'ai actuellement, ou j'ai eu au cours des trois dernières années, une affiliation ou des intérêts financiers ou intérêts de tout ordre avec les sociétés commerciales suivantes en lien avec la santé.

Aucun conflit d'intérêt en relation avec la présentation

Historique



JIKRI 16 et 17/11/2000 ...tions Lyon

Recommandations des Journées Internationales de Kinésithérapie Respiratoire Instrumentale (JIKRI)


Grégory
REYCHLER

Groupe de travail

- Chef de projet : Gregory Reychler - Olivier Contal
- Comité d'organisation : Nicolas Audag, Olivier Contal, Guillaume Prieur, Gregory Reychler
- Groupes d'experts :

1- AIDE A LA TOUX : Michel Toussaint; Jésus Gonzales; Jeanne Maisonobe; Estelle Wozniak

2- DÉSENCOMBREMENT EXPIRATOIRE NON-INSTRUMENTALE : William Poncin; Ophélie Ortiz; Benjamin Mauroy

3- DÉSENCOMBREMENT INSPIRATOIRE NON-INSTRUMENTALE : Yann Combret; Marc Beaumont ; Tristan Bonnevie

4- DÉSENCOMBREMENT INSTRUMENTAL INTRATHORACIQUE : K. Ides; Jean-Bernard Michotte; Jean Roeseler; Ines ; Guillaume Prieur

5- DÉSENCOMBREMENT INSTRUMENTAL EXTRATHORACIQUE : Clément Médrinal; Francis-Edouard Gravier

6- DÉSENCOMBREMENT DES VOIES AERIENNES SUPERIEURES : Yann Combret; Guillaume Prieur

7- ACTIVITÉ PHYSIQUE ET DÉSENCOMBREMENT: Yann Combret, Marc Beaumont ; Tristan Bonnevie

Avant de commencer, un peu de lecture…

Respir Care. 2015 Jul;60(7):1071-7. doi: 10.4187/respcare.04165.

AARC Clinical Practice Guideline: Effectiveness of Pharmacologic Airway Clearance Therapies in Hospitalized Patients.

Strickland SL[1], Rubin BK[2], Haas CF[3], Volsko TA[4], Drescher GS[5], O'Malley CA[6].

Respir Care. 2013 Dec;58(12):2187-93. doi: 10.4187/respcare.02925. Epub 2013 Nov 12.

AARC clinical practice guideline: effectiveness of nonpharmacologic airway clearance therapies in hospitalized patients.

Strickland SL[1], Rubin BK, Drescher GS, Haas CF, O'Malley CA, Volsko TA, Branson RD, Hess DR; American Association for Respiratory Care, Irving, Texas.

NPJ Prim Care Respir Med. 2019 Jun 27;29(1):24. doi: 10.1038/s41533-019-0136-8.

Primary care implications of the British Thoracic Society Guidelines for bronchiectasis in adults 2019.

Gruffydd-Jones K[1], Keeley D[2], Knowles V[3], Recabarren X[4], Woodward A[5], Sullivan AL[6], Loebinger MR[7], Payne K[8], Harvey A[9], Grillo L[10], Welham SA[11], Hill AT[12].

Respir Care. 2009 Jun;54(6):733-50; discussion 751-3.

Airway-clearance therapy guidelines and implementation.

Lester MK[1], Flume PA.

Respir Care. 2017 Feb;62(2):236-245. doi: 10.4187/respcare.04877.

Use of Mechanical Insufflation-Exsufflation Devices for Airway Clearance in Subjects With Neuromuscular Disease.

Auger C[1], Hernando V[2], Galmiche H[2].

Cochrane Database Syst Rev. 2012 Mar 14;(3):CD008328. doi: 10.1002/14651858.CD008328.pub2.

Airway clearance techniques for chronic obstructive pulmonary disease.

Osadnik CR[1], McDonald CF, Jones AP, Holland AE.

Cochrane Database Syst Rev. 2017 Oct 6;10:CD009595. doi: 10.1002/14651858.CD009595.pub2.

Autogenic drainage for airway clearance in cystic fibrosis.

McCormack P[1], Burnham P, Southern KW.

Int J Nurs Stud. 2018 Dec;88:165-166. doi: 10.1016/j.ijnurstu.2018.02.007. Epub 2018 Feb 23.

Oscillating devices for airway clearance in people with cystic fibrosis: A Cochrane review summary.

Wilson A[1].

Cochrane Database Syst Rev. 2017 May 4;5:CD006842. doi: 10.1002/14651858.CD006842.pub4.

Oscillating devices for airway clearance in people with cystic fibrosis.

Morrison L[1], Innes S[2].

Cochrane Database Syst Rev. 2015 Jun 17;(6):CD003147. doi: 10.1002/14651858.CD003147.pub4.

Positive expiratory pressure physiotherapy for airway clearance in people with cystic fibrosis.

McIlwaine M[1], Button B, Dwan K.

Author information

Cochrane Database Syst Rev. 2015 Nov 23;(11):CD008351. doi: 10.1002/14651858.CD008351.pub3.

Airway clearance techniques for bronchiectasis.

Lee AL[1], Burge AT, Holland AE.

Cochrane Database Syst Rev. 2017 Sep 27;9:CD011699. doi: 10.1002/14651858.CD011699.pub2.

Positive expiratory pressure therapy versus other airway clearance techniques for bronchiectasis.

Lee AL[1], Burge AT, Holland AE.

Paediatr Respir Rev. 2019 Feb;29:23-24. doi: 10.1016/j.prrv.2018.06.002. Epub 2018 Jul 7.

A systematic Cochrane Review of autogenic drainage (AD) for airway clearance in cystic fibrosis.

McCormack P[1], Burnham P[2], Southern KW[3].

Patient non intubé

VAI

1. Aide à la toux

INSPIRATOIRE

- IPPB
- Air Stacking
- Bagging
- Respi glossophary ngée (Frog Breathing)

EXPIRATOIRE

- MAC

- Cough Assist (MIE)
- Pegaso
- Nippy clearway

2. Désencombrement expiratoires non instrumentales

- ELPr
- ELTGOL
- AFE
- Huffing
- DA
- ACBT

3. Désencombrement inspiratoires non instrumentales

- EDIC
- RIM
- TILA

4. Désencombrement instrumentales intra-thoracique

- PEP Mask
- Treshold
- Flutter
- Acapella
- RC Cornet
- IPV
- Aerobika
- Shaker

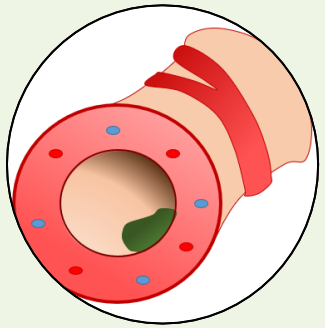
5. Désencombrement instrumentales extra-thoraciques

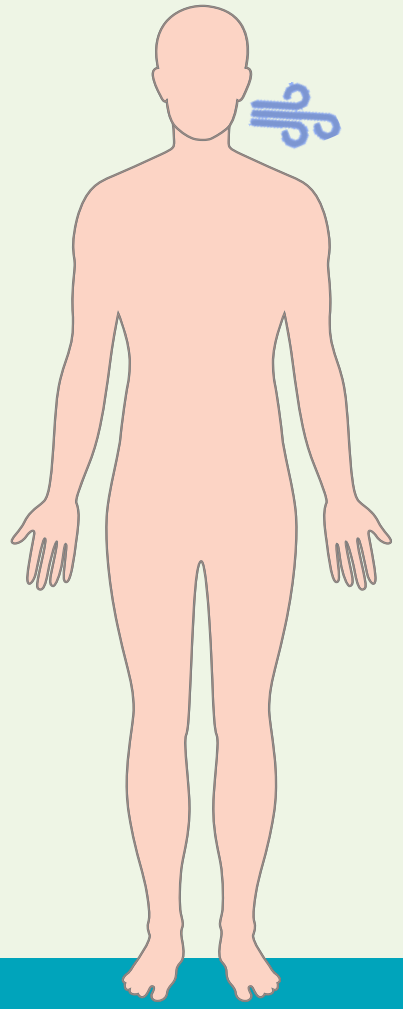
- HCFWO
- Clapping
- Vibrations
- Sangles

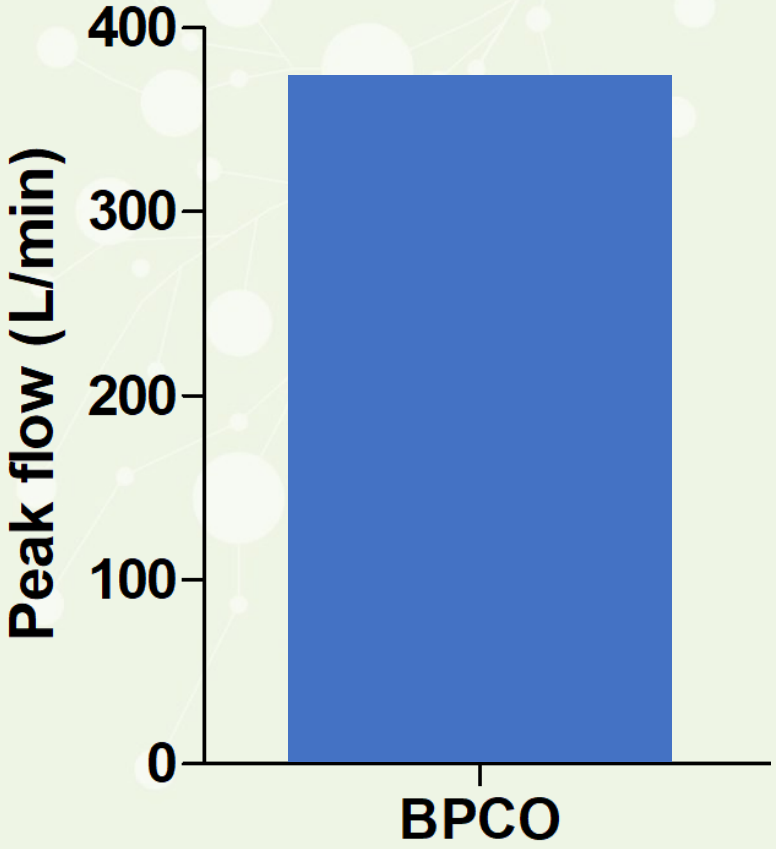
6. VAS

- Rinçage nez
- DRR

Aide à la toux (pathologie obstructive)

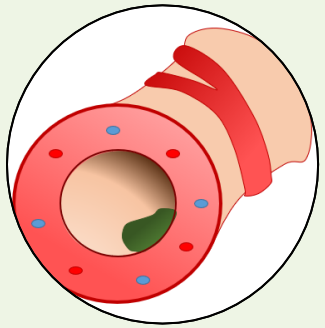


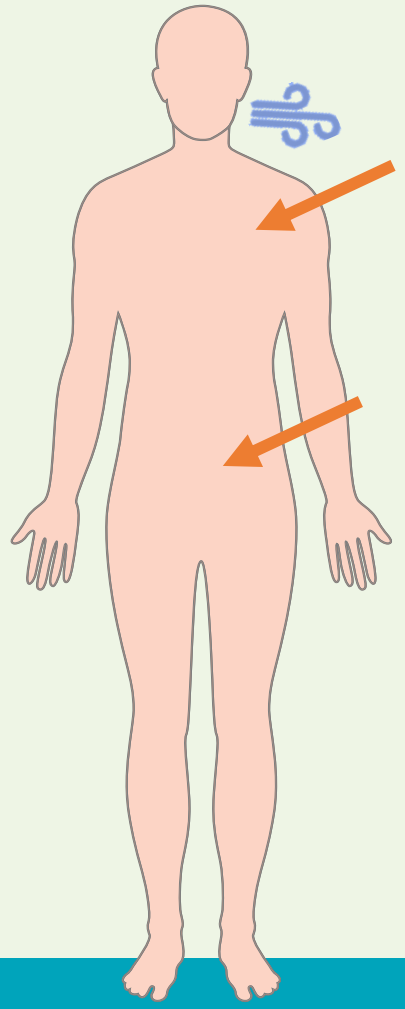


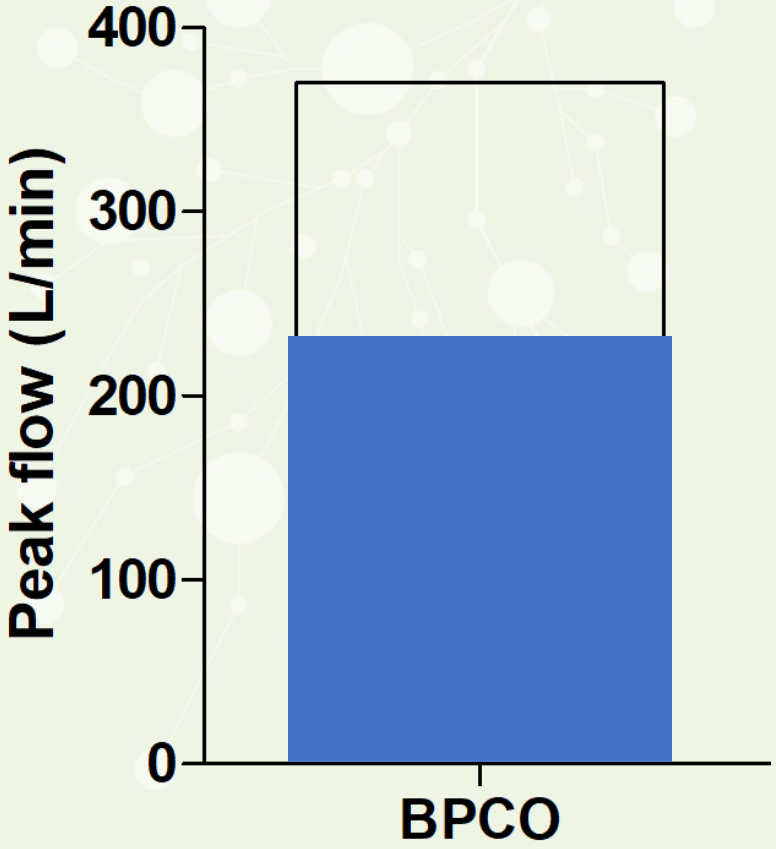


Sivasothy, Thorax 2001

Aide à la toux (pathologie obstructive)

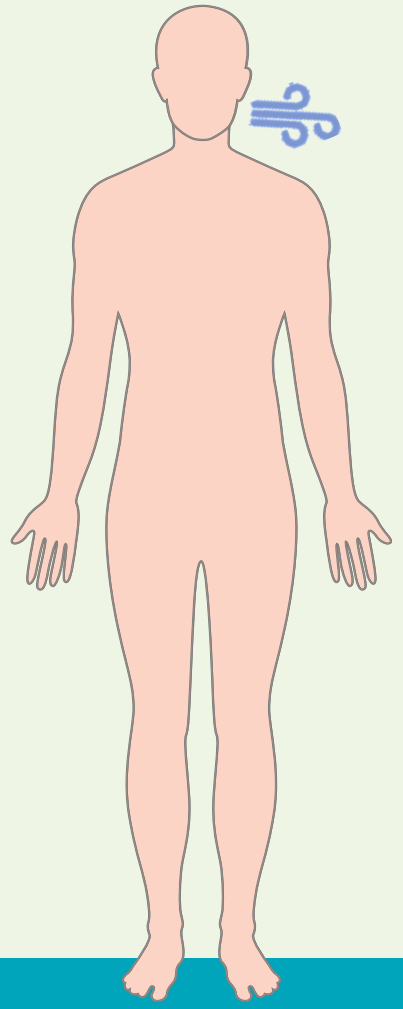


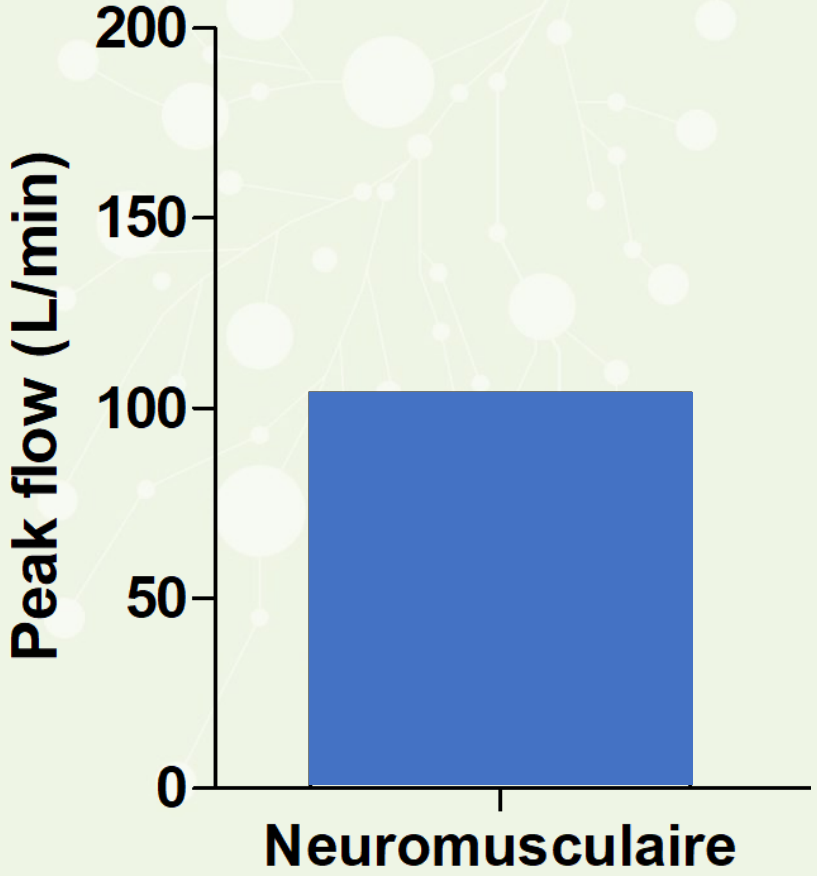




Sivasothy, Thorax 2001

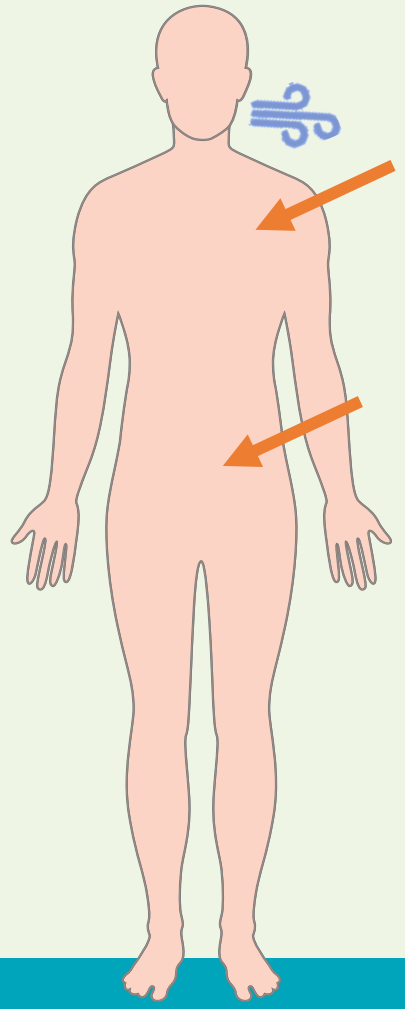
Aide à la toux (pathologie Restrictive)

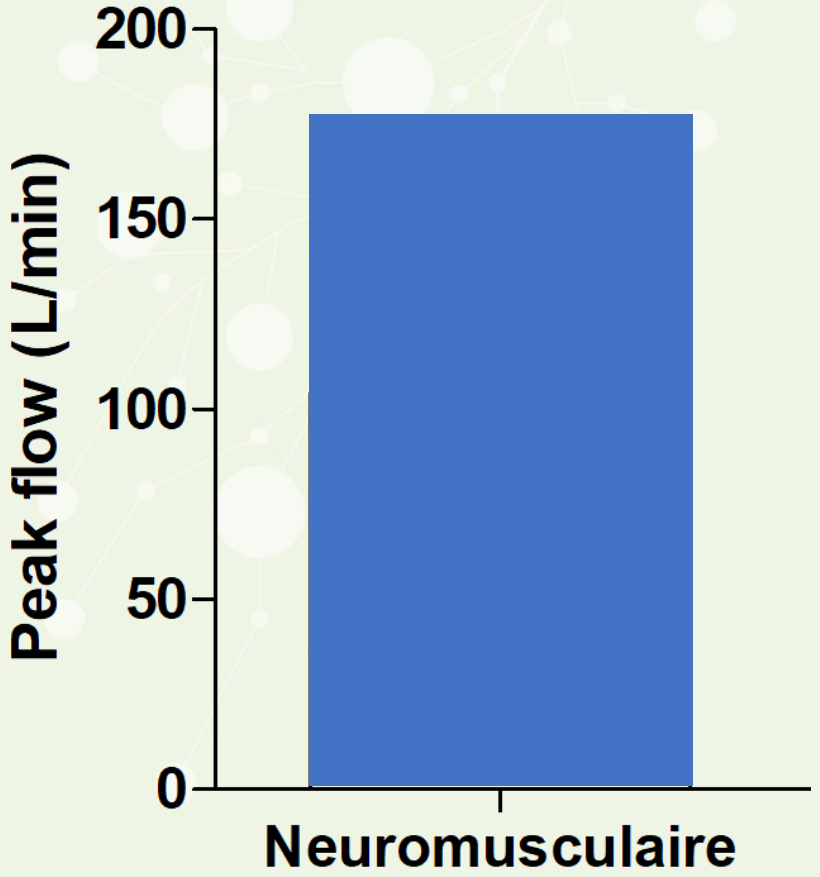




Sivasothy, Thorax 2001

Aide à la toux (pathologie Restrictive)

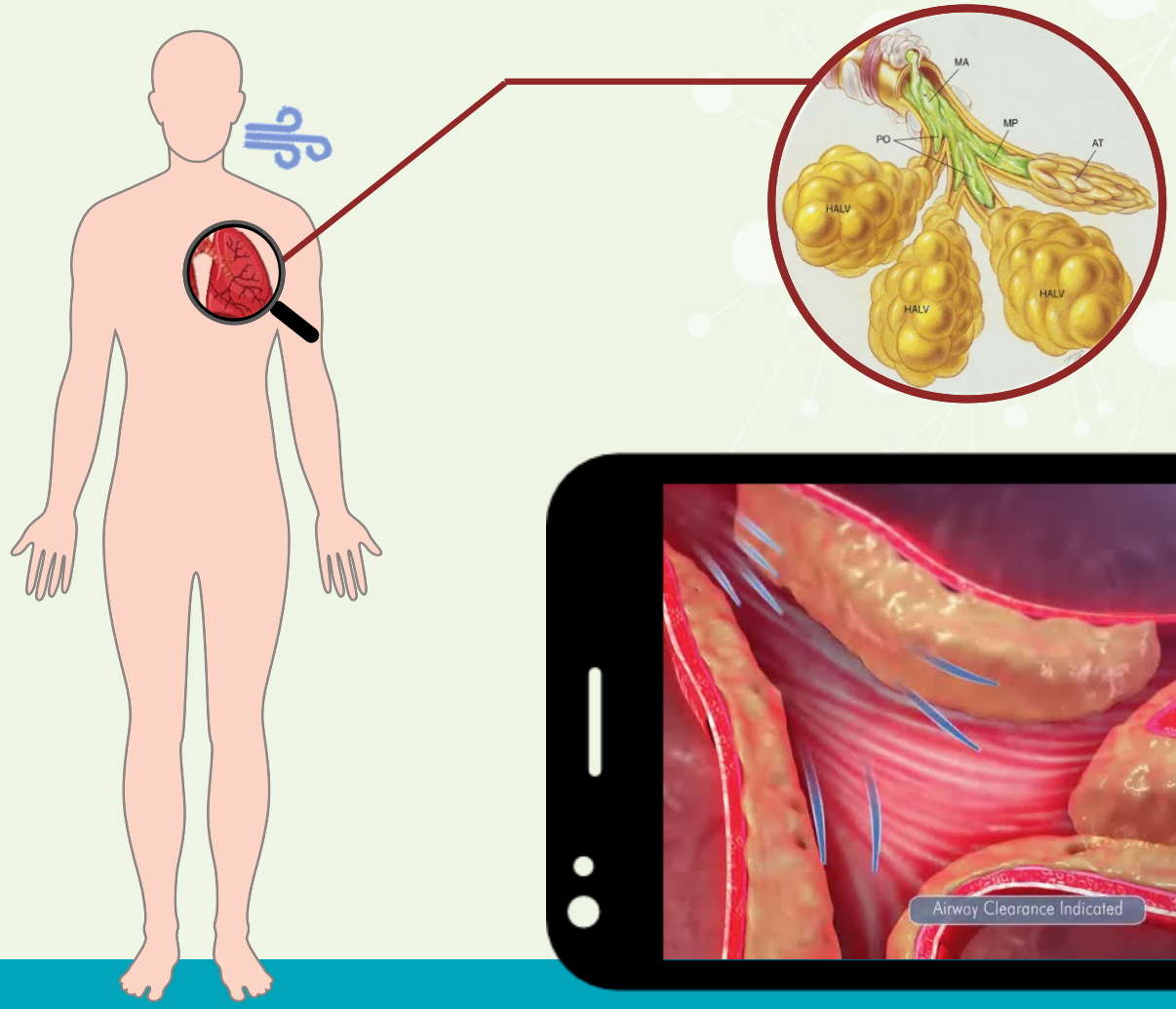


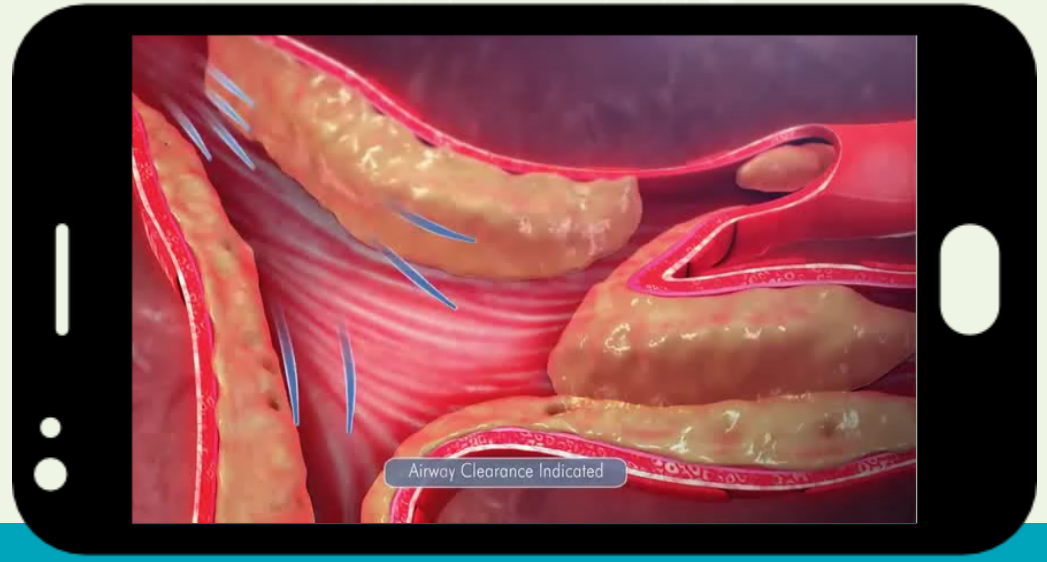


Sivasothy, Thorax 2001

Le désencombrement bronchique

une question de flux !

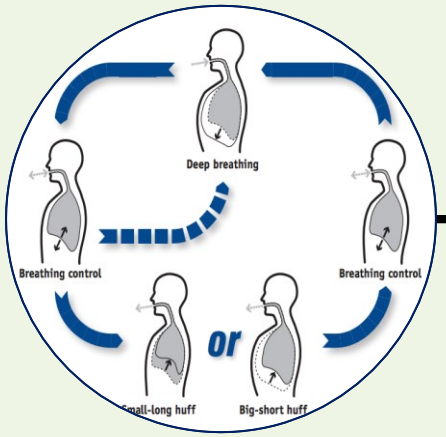




Les différentes techniques manuelles

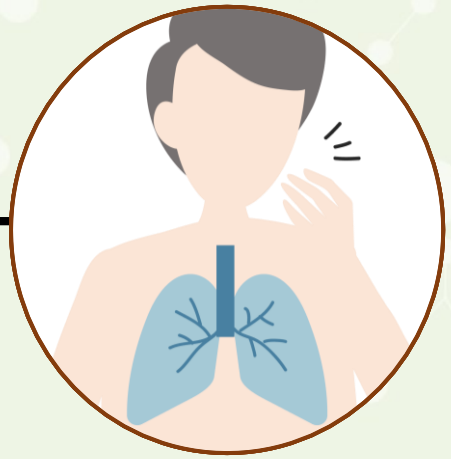
(non exhaustif)

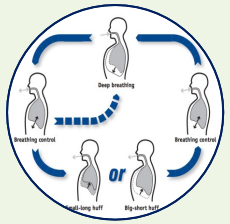
Active Cycle Breathing Technique



Expiration Lente totale Glotte Ouverte
En Latéro-Cubitus

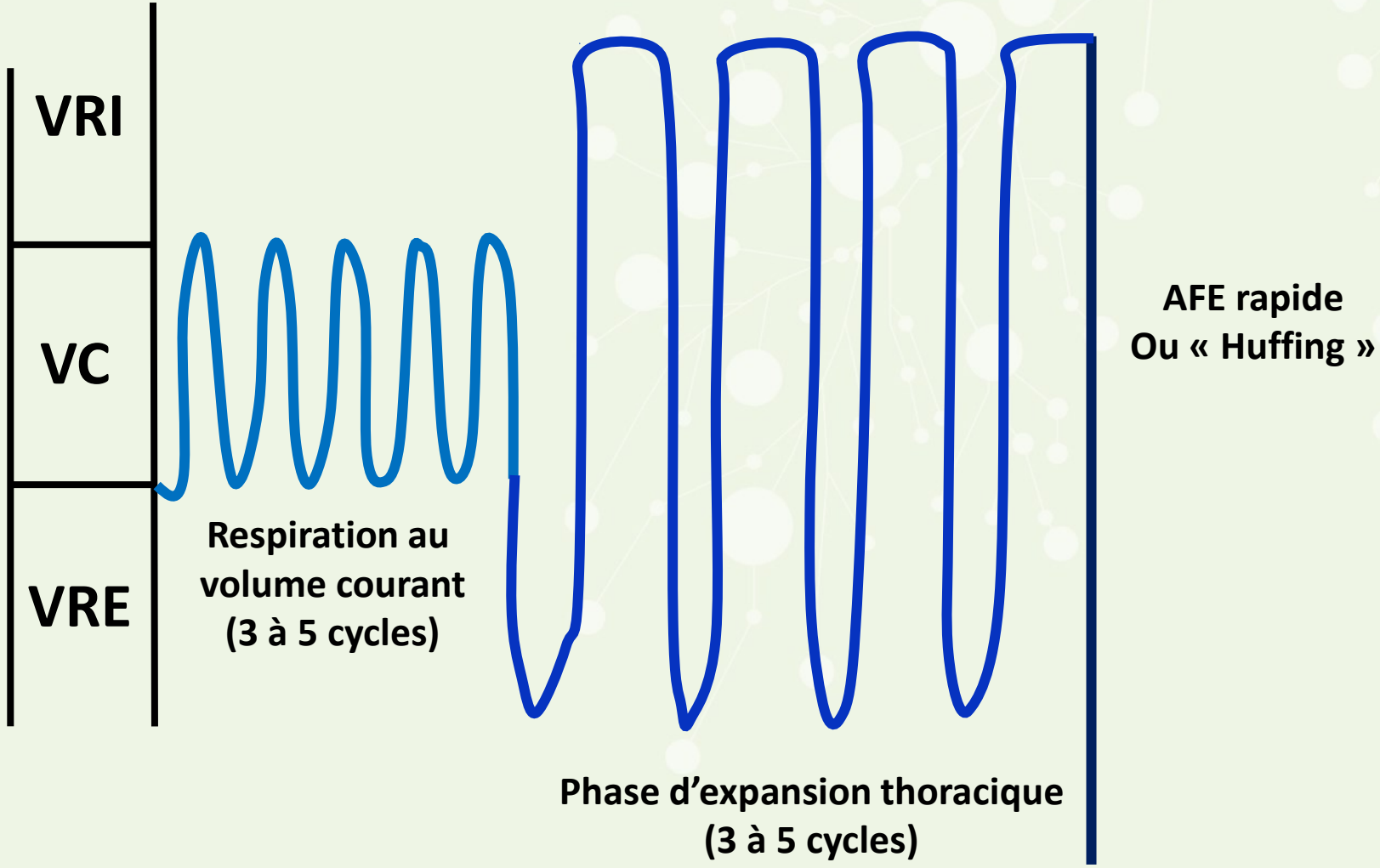
Drainage Autogène





Active Cycle Breathing Technique

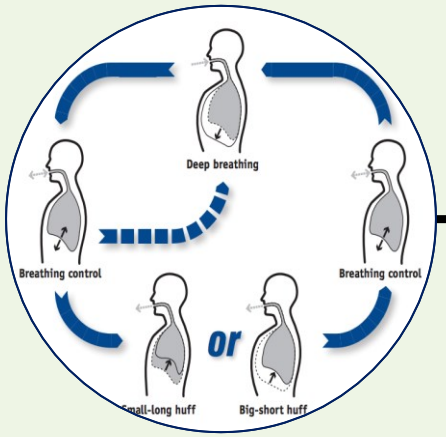
(Atelier animé par Jésus Calabuig-Lopez)



Les différentes techniques manuelles

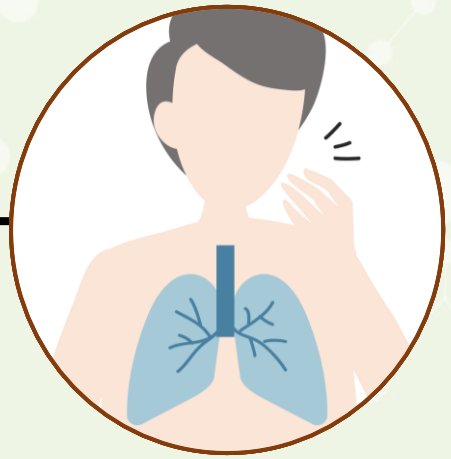
(non exhaustif)

Active Cycle Breathing Technique



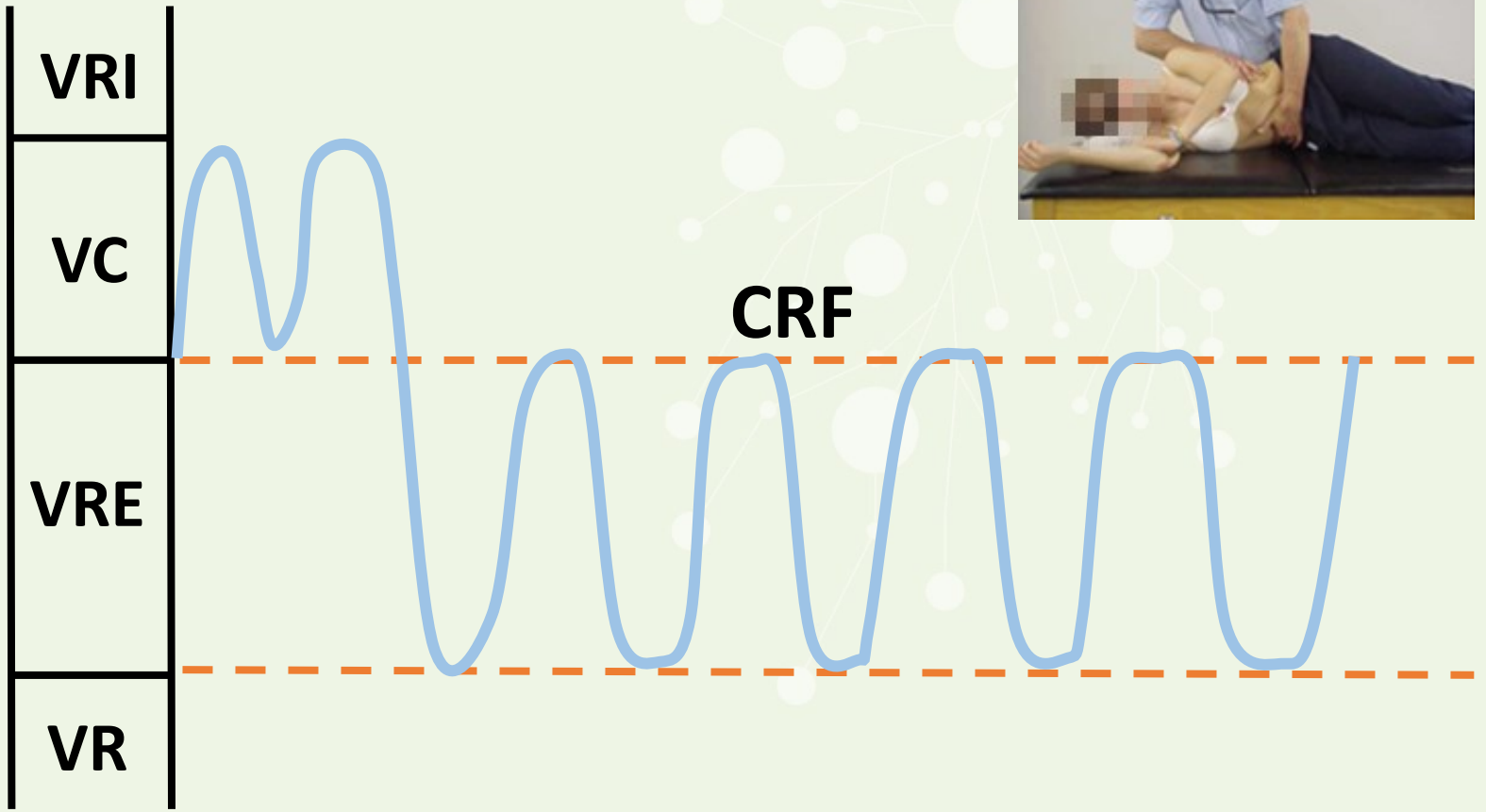
Expiration Lente totale Glotte Ouverte
En Latéro-Cubitus

Drainage Autogène



Expiration Lente totale Glotte Ouverte En Latéro-Cubitus

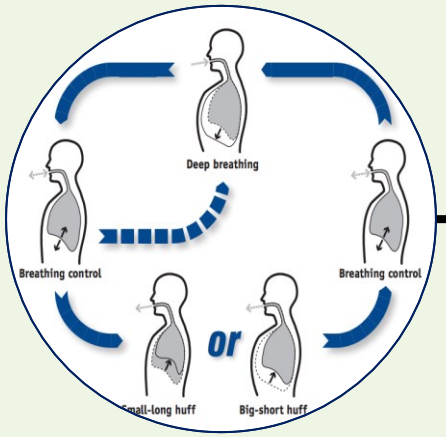
(Atelier animé par Stéphane Otto)



Les différentes techniques manuelles

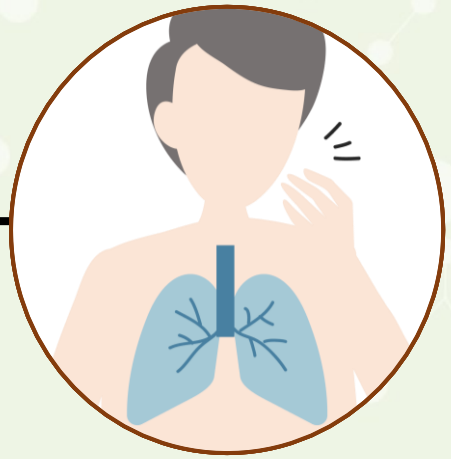
(non exhaustif)

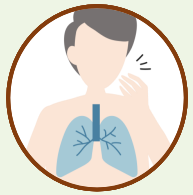
Active Cycle Breathing Technique



Expiration Lente totale Glotte Ouverte
En Latéro-Cubitus

Drainage Autogène





Drainage Autogène

(Atelier animé par Hugues Gauchez)

Mobilisation des sécrétions

Rassemblement des sécrétions

Evacuation des sécrétions

VRI

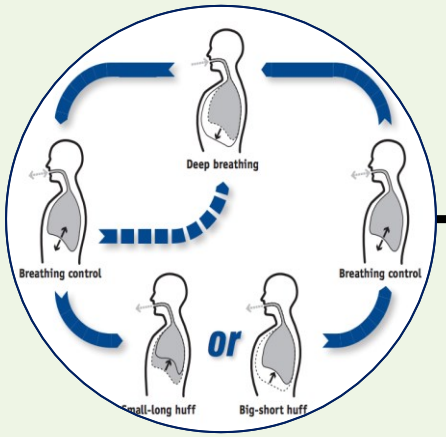
VC

VRE

Les différentes techniques manuelles

(non exhaustif)

Active Cycle Breathing Technique



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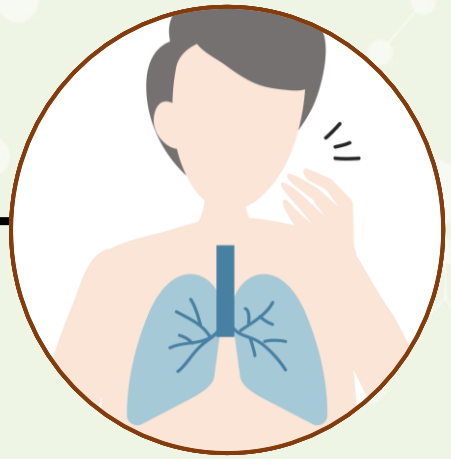
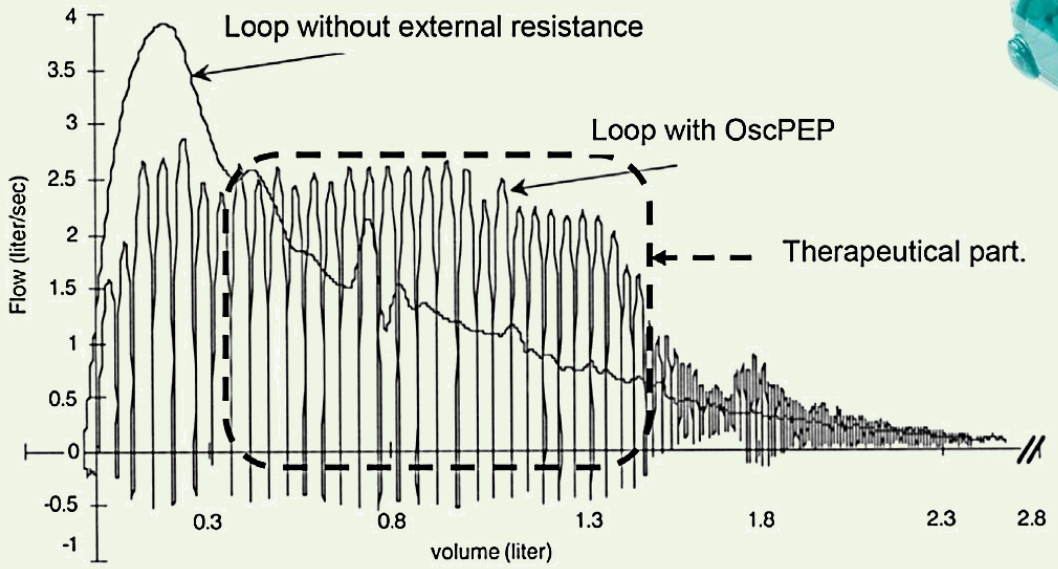
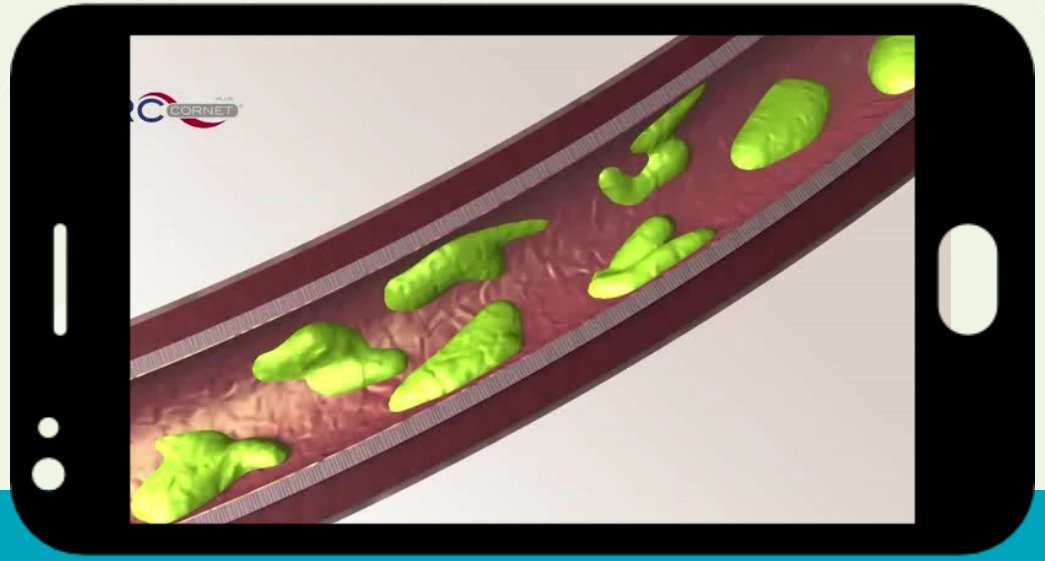
Drainage Autogène



Adjuvants au désencombrement bronchique
(non exhaustif)



Fagevik Olsén; Resp Medi 2015



Adjuvants au désencombrement bronchique

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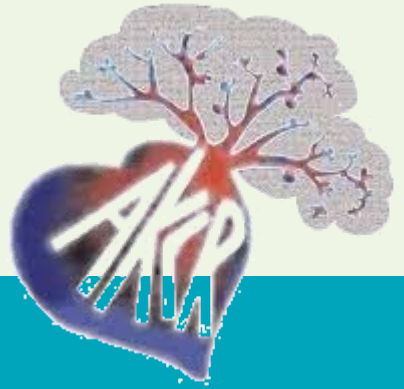
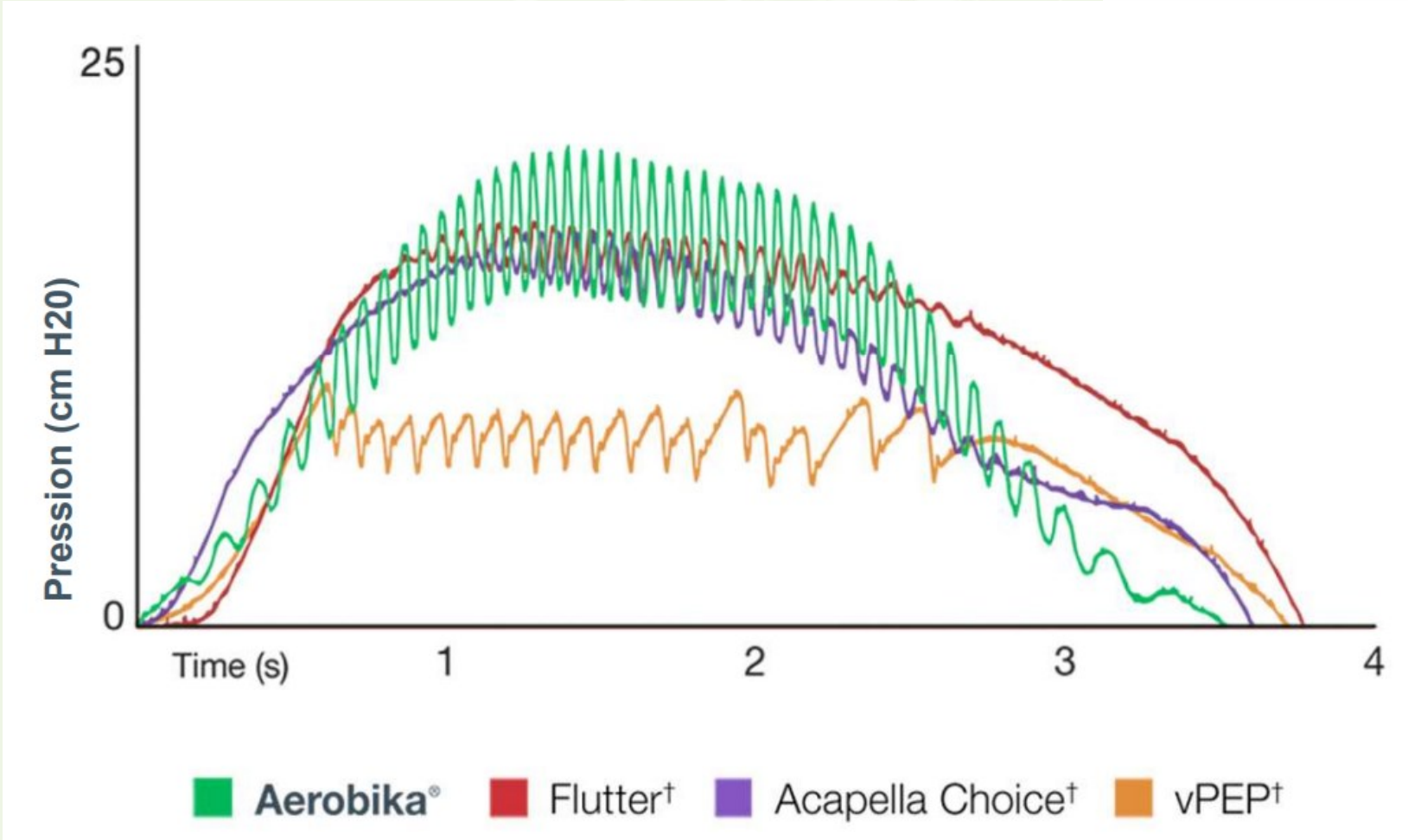


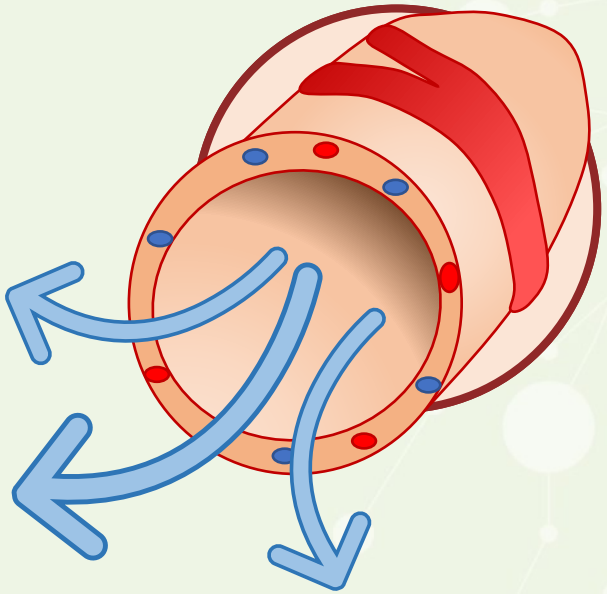


Hillary Van Fleet, Respir Care 2017

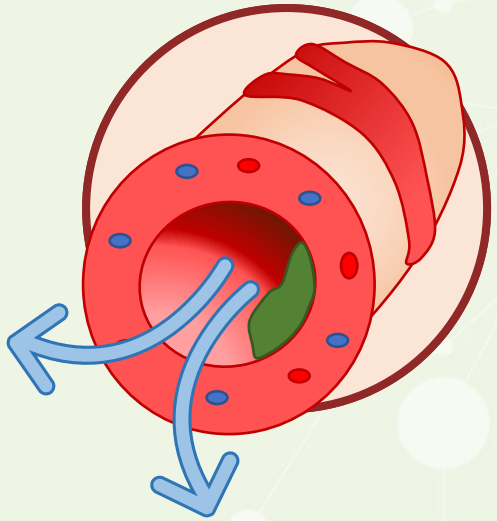
William Poncin, Respir Care 2020

Quels sont les bénéfices dans les différentes pathologies ?

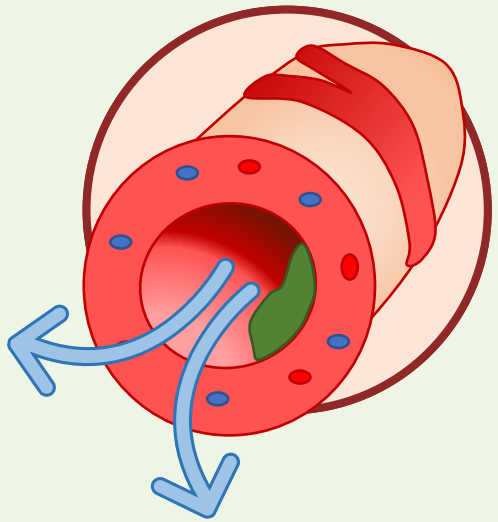
BPCO phase stable



BPCO phase stable



BPCO phase stable



Niveau	N Etude
I	-
II	1
IV	6

« Il n'est ni possible de déterminer l'avantage d'une TDENI sur une autre tant les résultats sont discordants »

« Aucune recommandation ne peut être effectuée sur l'utilisation des TDENI chez le patient atteint de BPCO stable dans le but de mobiliser les sécrétions pulmonaires périphériques, d'améliorer la dyspnée et la capacité à l'exercice »

BPCO phase stable

AARC Clinical Practice Guideline: Effectiveness of Nonpharmacologic Airway Clearance Therapies in Hospitalized Patients

Shawna L Strickland PhD RRT-NPS AE-C FAARC, Bruce K Rubin MD MEngr MBA FAARC, Gail S Drescher MA RRT, Carl F Haas MLS RRT FAARC, Catherine A O'Malley RRT-NPS, Teresa A Volsko MHHS RRT FAARC, Richard D Branson MSc RRT FAARC, and Dean R Hess PhD RRT FAARC

Recommendations Supported by Low-Level Evidence

2. ACT is not recommended for routine use in patients with COPD.
3. ACT may be considered in patients with COPD with symptomatic secretion retention, guided by patient preference, toleration, and effectiveness of therapy.
4. ACT is not recommended if the patient is able to mobilize secretions with cough, but instruction in effective cough technique (eg, FET) may be useful.

BPCO phase stable

Airway clearance techniques for chronic obstructive pulmonary disease (Review)

Osadnik CR, McDonald CF, Jones AP, Holland AE

In people with stable COPD, data from single studies revealed no significant short-term benefit of ACTs on the number of people with exacerbations (OR 3.21, 95% CI 0.12 to 85.20; one study on 30 people), significant short-term improvements in HRQoL as measured by the SGRQ total score (MD -6.10, 95% CI -8.93 to -3.27; one study on 15 people) and a reduced long-term need for respiratory-related hospitalisation (OR 0.27, 95% CI 0.08 to 0.95; one study on 35 participants).

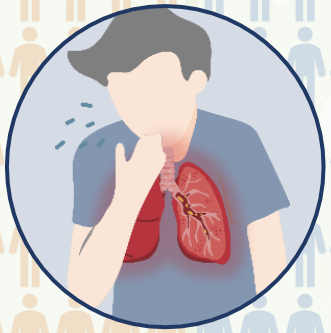
The magnitude of effect of PEP-based ACTs on the need for increased ventilatory assistance and hospital length of stay was greater than for non-PEP ACTs, however we found no statistically significant subgroup differences. There was one report of vomiting during treatment with postural drainage and head-down tilt.

Thorax

Oscillatory positive expiratory pressure therapy in COPD (O-COPD): a randomised controlled trial

Saeed M Alghamdi ,[1,2] Abdullah S Alsulayyim ,[2,3] Ali M Alasmari,[2,4] Keir E J Philip ,[2] Sara C Buttery,[2] Winston A S Banya,[2] Michael I Polkey ,[2] Surinder S Birring,[5] Nicholas S Hopkinson [2]

122 patients
BPCO



CAT ≥ 5 points combinés sur les deux premiers Items (toux et expectoration)

Thorax

Oscillatory positive expiratory pressure therapy in COPD (O-COPD): a randomised controlled trial

Saeed M Alghamdi ,[1,2] Abdullah S Alsulayyim ,[2,3] Ali M Alasmari,[2,4] Keir E J Philip ,[2] Sara C Buttery,[2] Winston A S Banya,[2] Michael I Polkey ,[2] Surinder S Birring,[5] Nicholas S Hopkinson [2]

Intervention

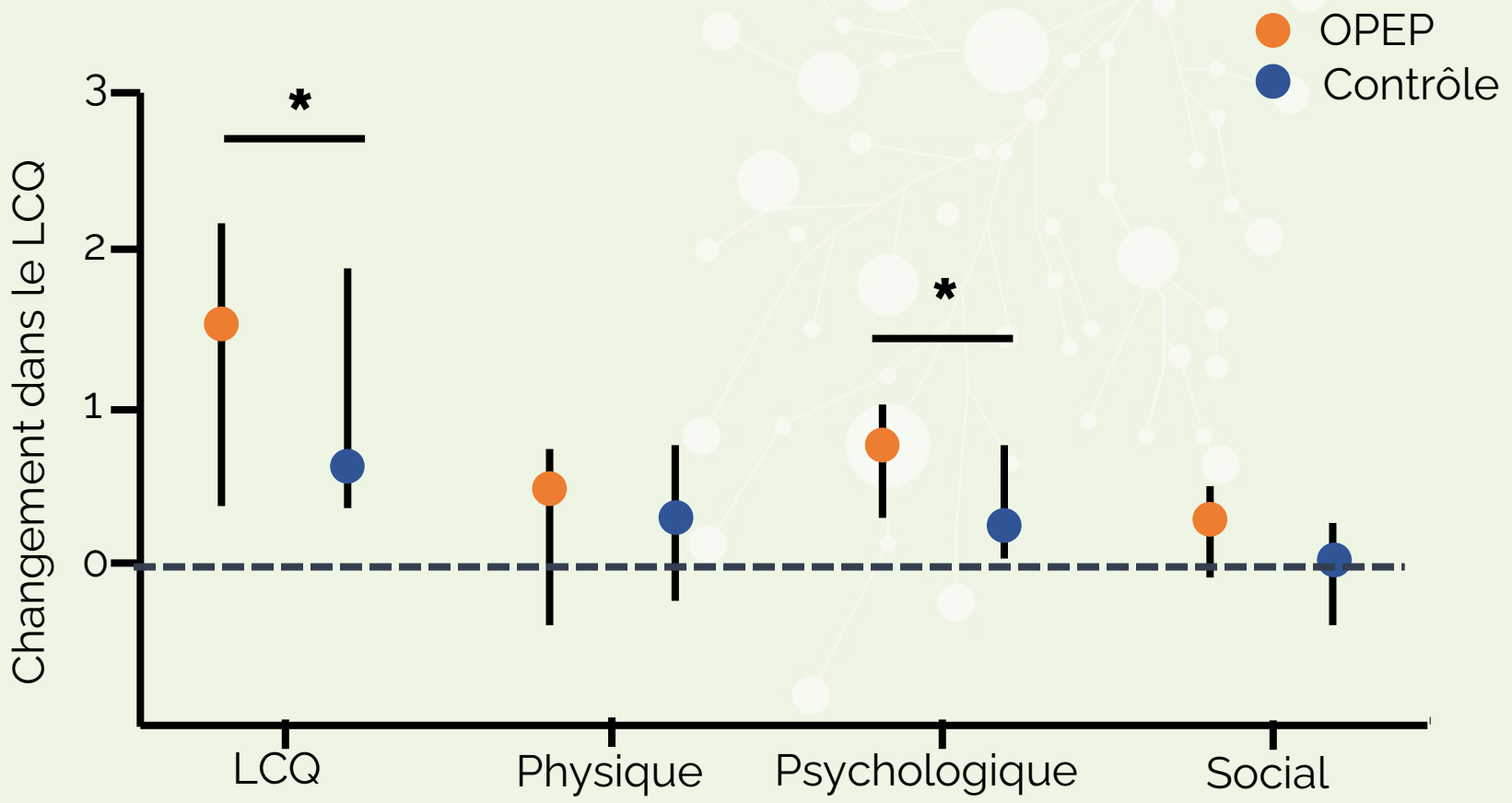
3 fois par jour
Séries de 10 répétitions suivies de 2-3 efforts de toux, renouveler les séries au besoin

Contrôle

ACBT a réaliser 3 fois par jour

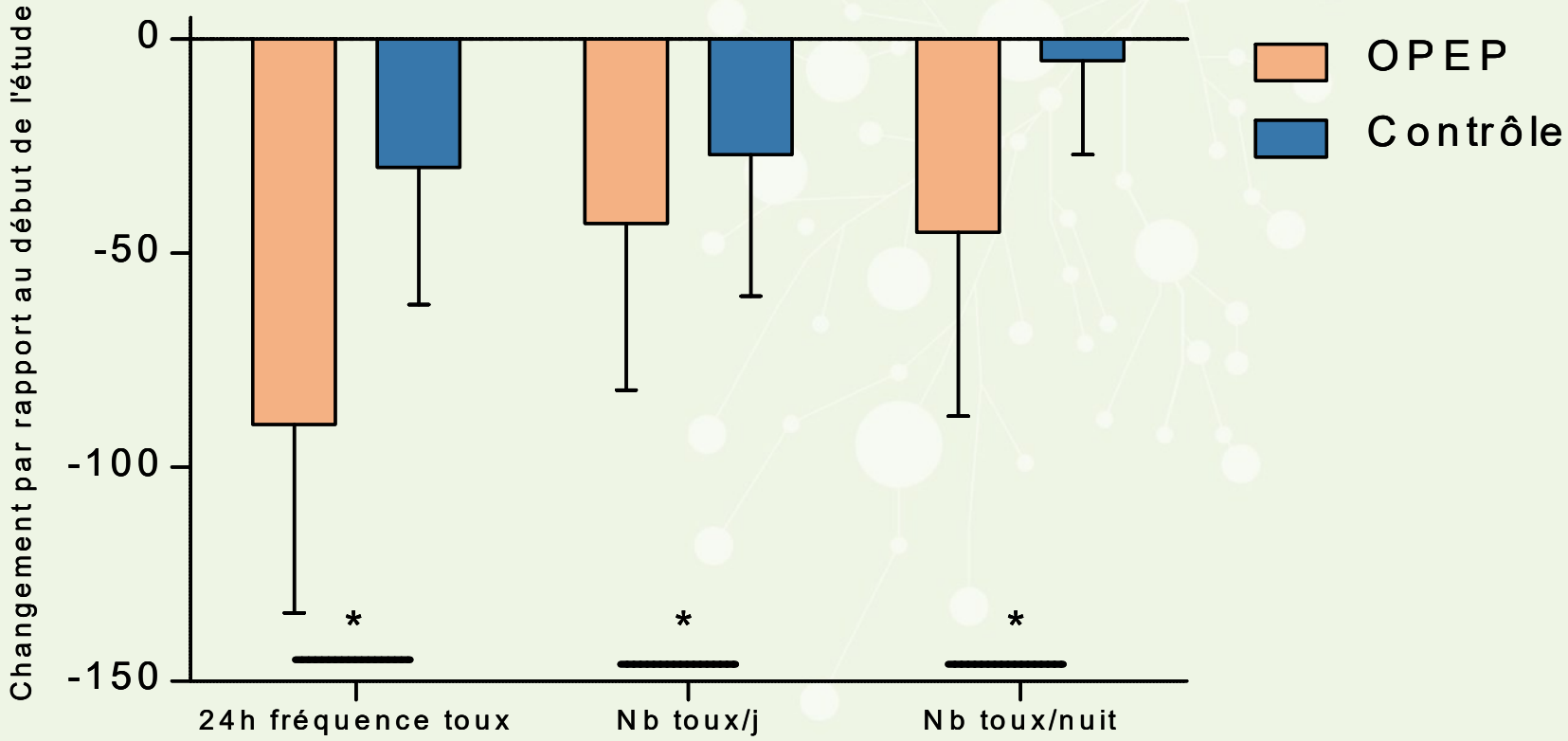
Résultats

amélioration de la qualité de vie en lien avec la toux



Résultats

diminution de la toux journalière et nocturne



Résultats

diminution des exacerbations

Intervention

32% d'exacerbation

Contrôle

54% d'exacerbation

En conclusion

- Le désencombrement bronchique dans la BPCO ne doit pas être systématique

- Mais plutôt en fonction de la clinique

BPCO phase d'exacerbation

Niveau	N Etude
I	-
II	-
IV	3

- Il n'est pas recommandé d'utiliser les TDENI chez les patients atteints de BPCO en exacerbation sévère pour améliorer la fonction pulmonaire ou réduire la durée de séjour à l'hôpital (G2C).
- Il est proposé d'y recourir pour favoriser le désencombrement bronchique des patients hypersécrétants (G2B).

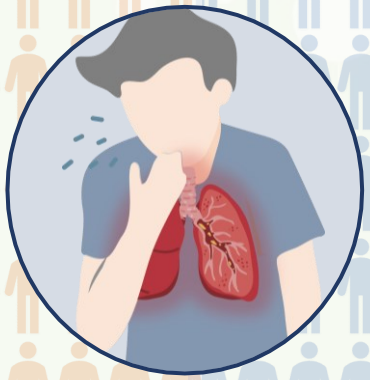
BPCO phase d'exacerbation

RESEARCH ARTICLE Open Access

Evaluation of the effectiveness of manual chest physiotherapy techniques on quality of life at six months post exacerbation of COPD (MATREX): a randomised controlled equivalence trial

Jane L Cross[1,2*], Frances Elender[1], Gary Barton[1], Allan Clark[1], Lee Shepstone[1], Annie Blyth[1], Max O Bachmann[1] and Ian Harvey[1]

372 patients
BPCO hospitalisés



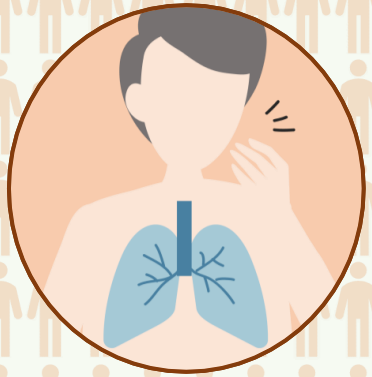
BPCO phase d'exacerbation

RESEARCH ARTICLE Open Access

Evaluation of the effectiveness of manual chest physiotherapy techniques on quality of life at six months post exacerbation of COPD (MATREX): a randomised controlled equivalence trial

Jane L Cross[1,2*], Frances Elender[1], Gary Barton[1], Allan Clark[1], Lee Shepstone[1], Annie Blyth[1], Max O Bachmann[1] and Ian Harvey[1]

Intervention



Drainage bronchique réalisé par un kiné (ACBT) avec changement de positions

Contrôle

Education au drainage et au changement de positions

BPCO phase d'exacerbation

RESEARCH ARTICLE Open Access

Evaluation of the effectiveness of manual chest physiotherapy techniques on quality of life at six months post exacerbation of COPD (MATREX): a randomised controlled equivalence trial

Jane L Cross[1,2*], Frances Elender[1], Gary Barton[1], Allan Clark[1], Lee Shepstone[1], Annie Blyth[1], Max O Bachmann[1] and Ian Harvey[1]

Nombre de jours d'hospitalisations

Essoufflement, toux et expectorations

Qualité de vie

Fin d'hospitalisation et à 6 mois

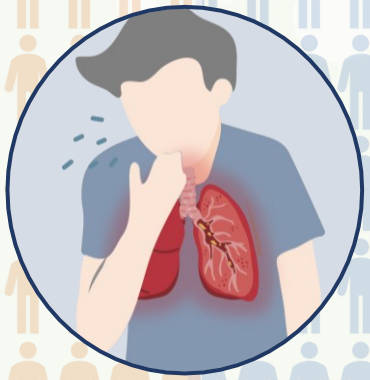
BPCO phase d'exacerbation

The effect of positive expiratory pressure (PEP) therapy on symptoms, quality of life and incidence of re-exacerbation in patients with acute exacerbations of chronic obstructive pulmonary disease: a multicentre, randomised controlled trial

Christian R Osadnik,[1,2] Christine F McDonald,[2,3] Belinda R Miller,[4] Catherine J Hill,[2,5] Ben Tarrant,[6] Ranjana Steward,[6] Caroline Chao,[5] Nicole Stodden,[5] Cristino C Oliveira.[1] Nadia Gaoliardi.[3] Anne E Holland[1,2,6]

THORAX
An International Journal Of Respiratory Medicine
Current TOC | Instructions for authors

88 patients
BPCO hospitalisés



BPCO phase d'exacerbation

The effect of positive expiratory pressure (PEP) therapy on symptoms, quality of life and incidence of re-exacerbation in patients with acute exacerbations of chronic obstructive pulmonary disease: a multicentre, randomised controlled trial

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THORAX
An International Journal Of Respiratory Medicine
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Intervention

Drainage bronchique Pep mask 10-20
Série de 10 respirations * 5
Suivi de 3 huffing
+ soins courants

Contrôle

Soins courants, marche +/- renforcement (obj 30 min/j)

The effect of positive expiratory pressure (PEP) therapy on symptoms, quality of life and incidence of re-exacerbation in patients with acute exacerbations of chronic obstructive pulmonary disease: a multicentre, randomised controlled trial

Christian R Osadnik,[1,2] Christine F McDonald,[2,3] Belinda R Miller,[4] Catherine J Hill,[2,5] Ben Tarrant,[6] Ranjana Steward,[6] Caroline Chao,[5] Nicole Stodden,[5] Cristino C Oliveira,[1] Nadia Gagliardi,[3] Anne E Holland[1,2,6]

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Nombre d'hospitalisation
Nombre d'exacerbation

Dyspnée, toux, expectorations

Capacités fonctionnelles

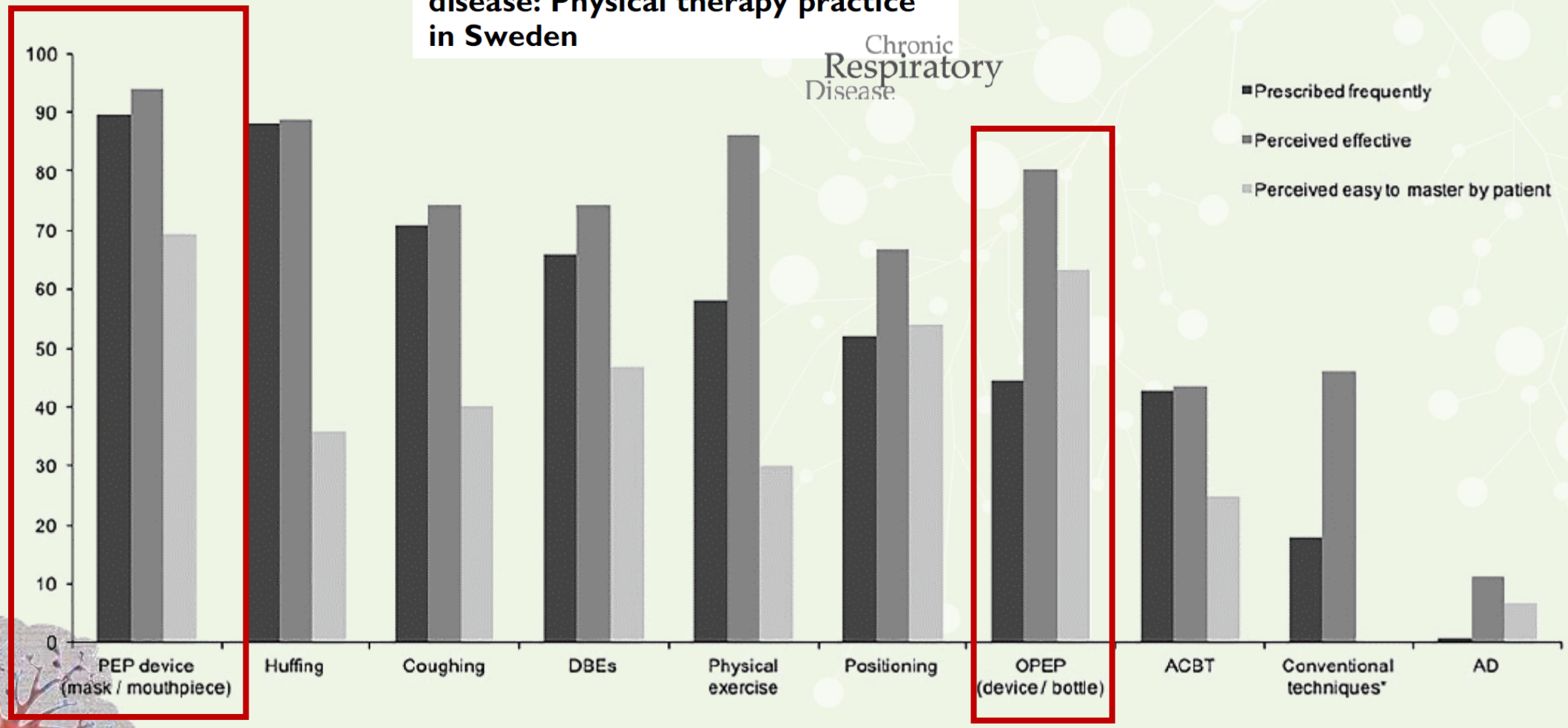
Qualité de vie

Antibiotiques

mortalité

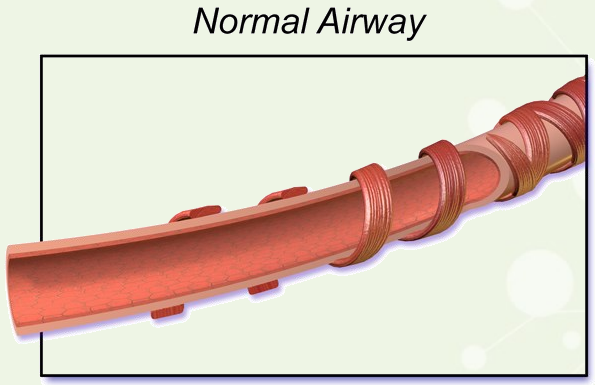
Fin d'hospitalisation et à 6 mois

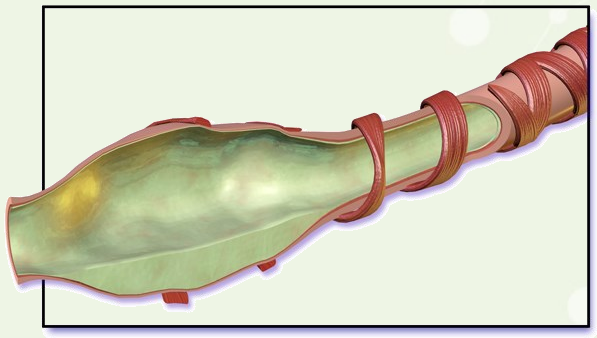
Airway clearance techniques for patients with acute exacerbations of chronic obstructive pulmonary disease: Physical therapy practice in Sweden

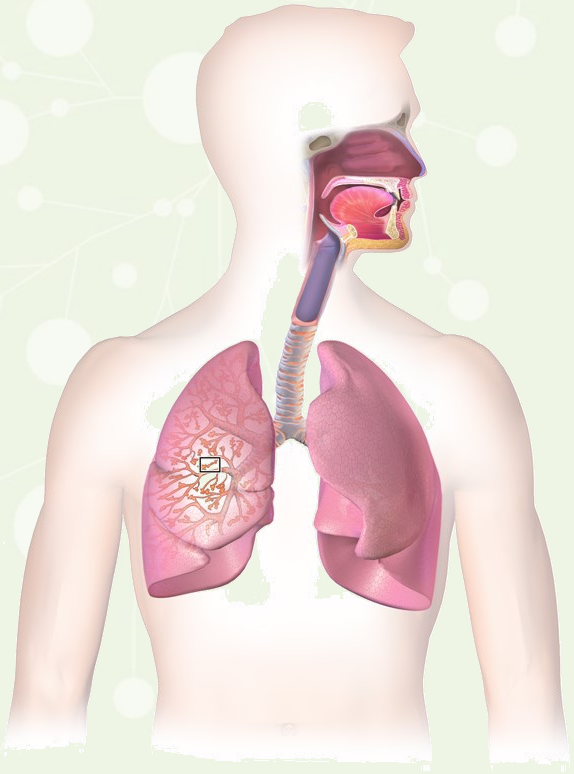


Bronchiectasie

KINÉSITHÉRAPIE RESPIRATOIRE

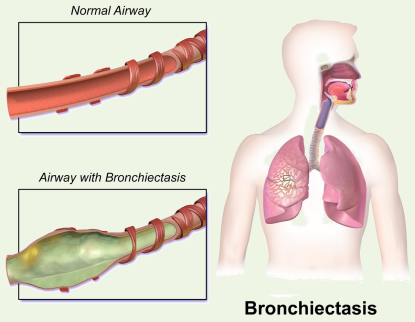






Bronchiectasis

Bronchiectasie



Niveau	N Etude
I	3
II	2
IV	2

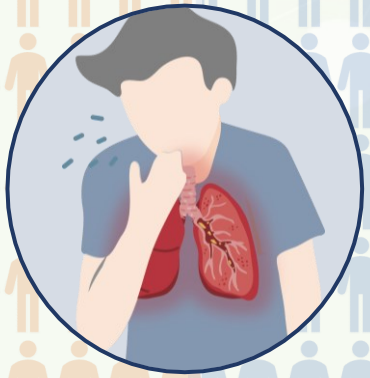
- Il est recommandé de pratiquer les TDENI régulièrement et au long cours chez les patients hypersécrétant et atteints de bronchiectasies non liées à la mucoviscidose afin d'augmenter les expectorations (G1A) et de diminuer la sévérité de la toux (G1B).
- Il est recommandé de tenir compte de la préférence du patient pour favoriser l'adhérence thérapeutique des TDENI (G1A).

EUROPEAN RESPIRATORY *journal*
FLAGSHIP SCIENTIFIC JOURNAL OF ERS

Long-term benefits of airway clearance in bronchiectasis: a randomised placebo-controlled trial

Gerard Muñoz[1,2], Javier de Gracia[3,4,5], Maria Buxó[6], Antonio Alvarez[3,4] and Montserrat Vendrell[1,3]

44 patients avec Bronchiectasies stables



65 ans, 60% VEMS
400 m TDM6

EUROPEAN RESPIRATORY *journal*
FLAGSHIP SCIENTIFIC JOURNAL OF ERS

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Gerard Muñoz[1,2], Javier de Gracia[3,4,5], Maria Buxó[6], Antonio Alvarez[3,4] and Montserrat Vendrell[1,3]

Intervention

ELTGOL 15 min/j
(30 min atteinte bilatérale)
2 fois/J
Une seule séance d'éducation

Contrôle

Etirements

Résultats

TABLE 2 Sputum volume obtained during the study

	Sputum volume mL		p-value
	ELTGOL group	Placebo group	
Baseline 24-h	20 (15–40)	15 (15–20)	0.061
Visit 2 overall 24-h	40 (23.75–60)	12.5 (0–20)	<0.001
During intervention	12.27±11.93	0	
24 h later	30 (20–45)	12.5 (0–20)	<0.001
Difference between visit 2 and baseline[+]	17.5 (10–26.25)	−5 (−11.25–0)	<0.001
Month 12 overall 24-h	35 (30–50)	15 (10–20)	<0.001
During intervention	10.83±5.21	0	
24 h later	25 (20–40)	15 (10–20)	0.001
Difference between month 12 and baseline[#]	10 (−5–25)	0 (−10–3.75)	0.015
Difference between month 12 and visit 2[¶]	−5 (−30–5)	5 (5–10)	0.019

Data are presented as mean±SD and median (interquartile range); differences are expressed as median (95% confidence interval). Unpaired t-test values of the differences in the overall 24-h sputum volume between visit 2 and baseline[+], month 12 and baseline[#], month 12 and visit 2[¶] in the ELTGOL group (p=0.001, p=0.026, p=0.09, respectively) and in the placebo group (p=0.008, p=0.106, p=0.261, respectively).

Adhérence > à 80 % pour tous les patients

Résultats

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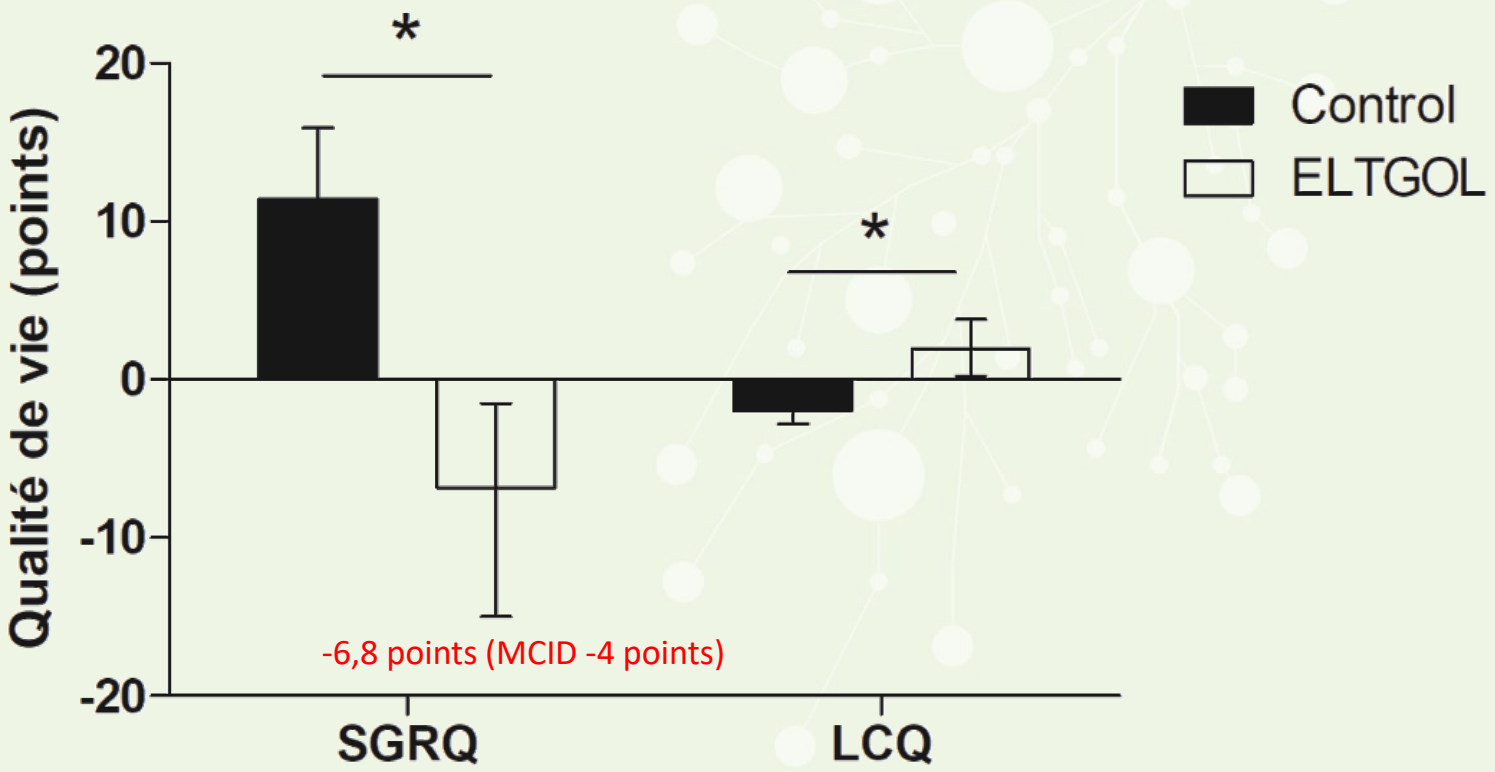
Adhérence > à 80 % pour tous les patients

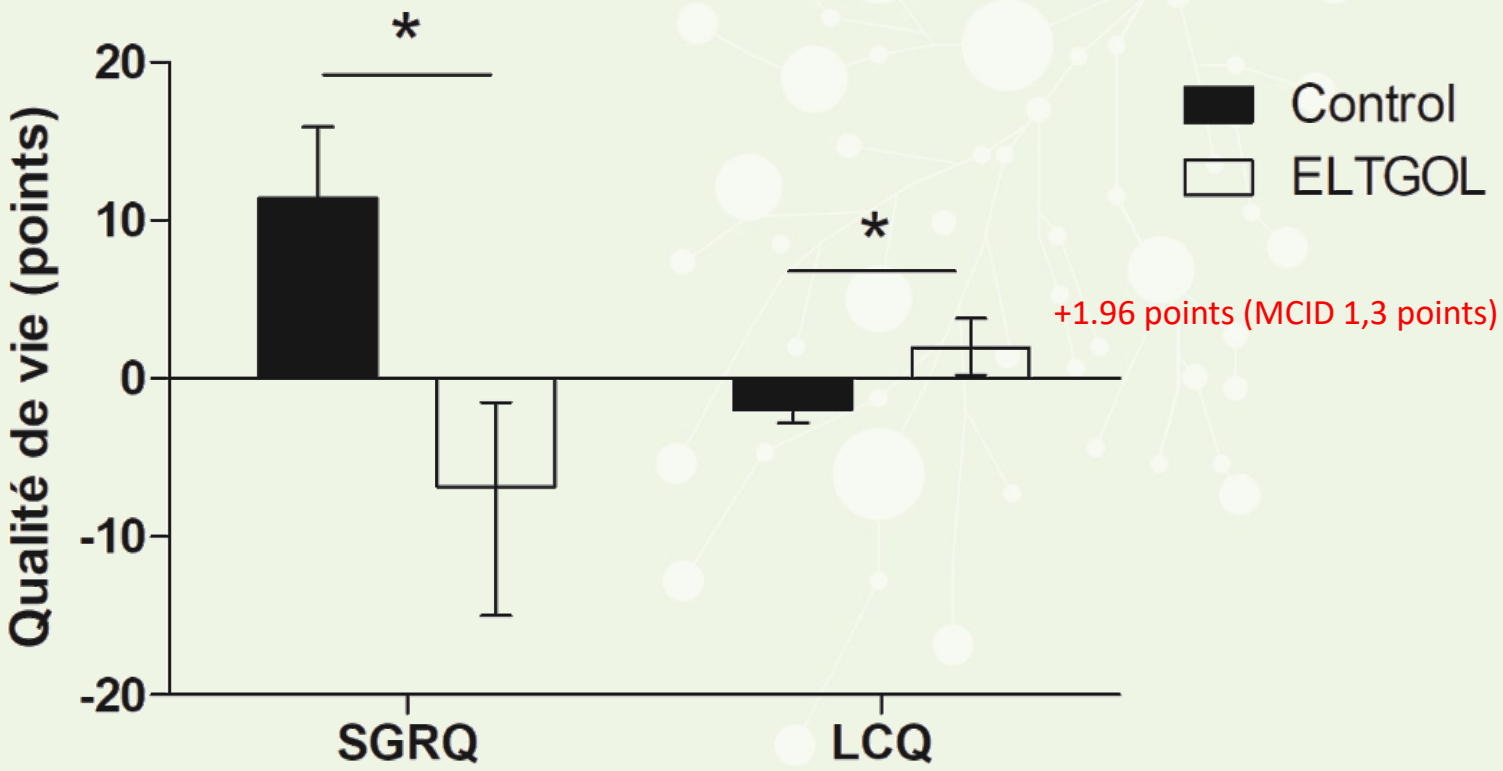
Résultats

A 12 mois



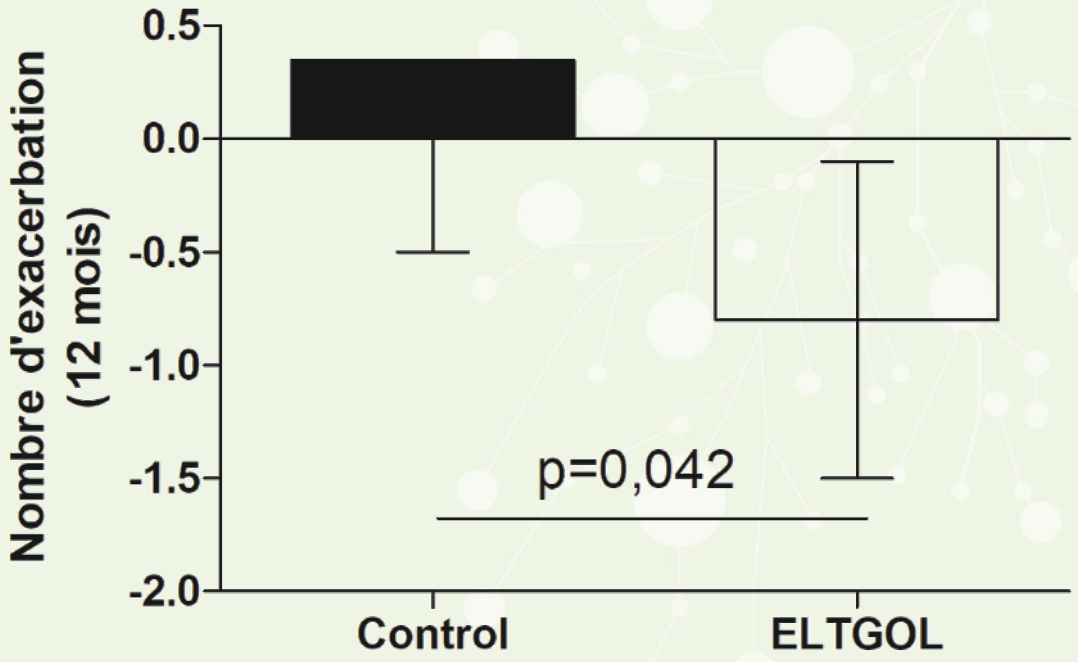
Résultats

A 12 mois



+1.96 points (MCID 1,3 points)

Résultats


Nombre d'exacerbation (12 mois)
0.5
0.0
-0.5
-1.0
-1.5
-2.0
p=0,042
Control
ELTGOL

Take home message

- L’éducation au ELTGOL avec une seule séance (et un contrôle tous les 3 mois) :
- augmente le volume d’expectoration
- améliore la qualité de vie
- diminue les exacerbations

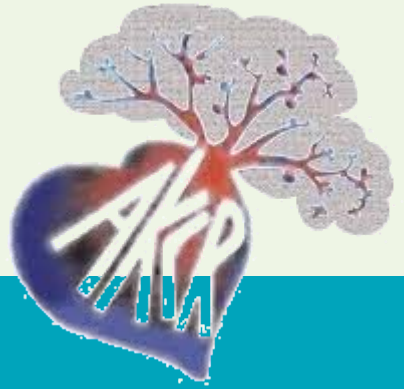
- L’adhérence à l’autodrainage a été très bonne (> à 80%)

Cochrane Library

Positive expiratory pressure therapy versus other airway clearance techniques for bronchiectasis (Review)

Authors' conclusions

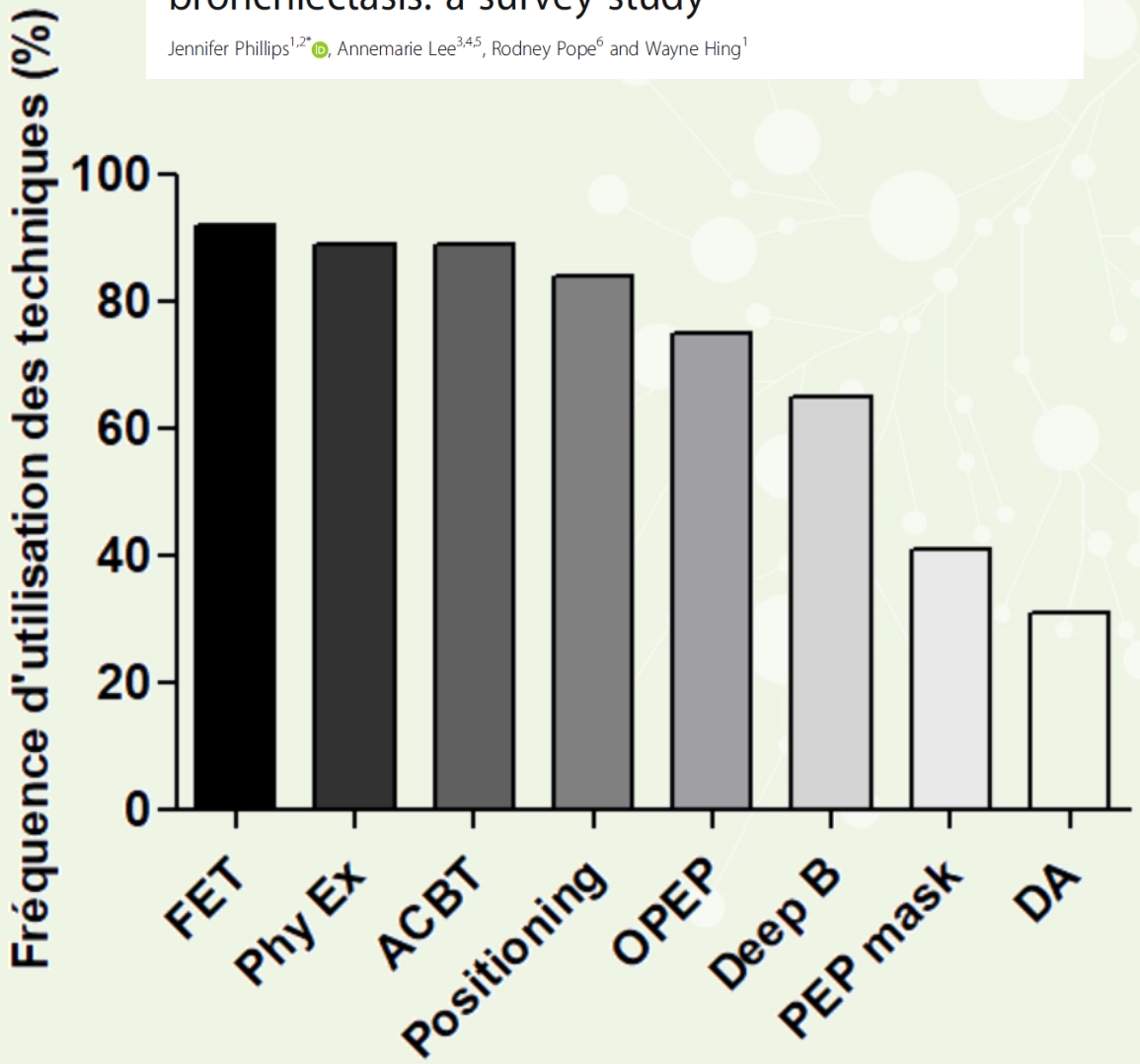
PEP therapy appears to have similar effects on HRQOL, symptoms of breathlessness, sputum expectoration, and lung volumes compared to other ACTs when prescribed within a stable clinical state or during an acute exacerbation. The number of studies and the overall quality of the evidence were both low. In view of the chronic nature of bronchiectasis, additional information is needed to establish the long-term clinical effects of PEP therapy over other ACTs for outcomes that are important to people with bronchiectasis and on clinical parameters which impact on disease progression and patient morbidity in individuals with stable bronchiectasis. In addition, the role of PEP therapy during an acute exacerbation requires further exploration. This information is necessary to provide further guidance for prescription of PEP therapy for people with bronchiectasis.



RESEARCH ARTICLE Open Access

Physiotherapists' use of airway clearance techniques during an acute exacerbation of bronchiectasis: a survey study

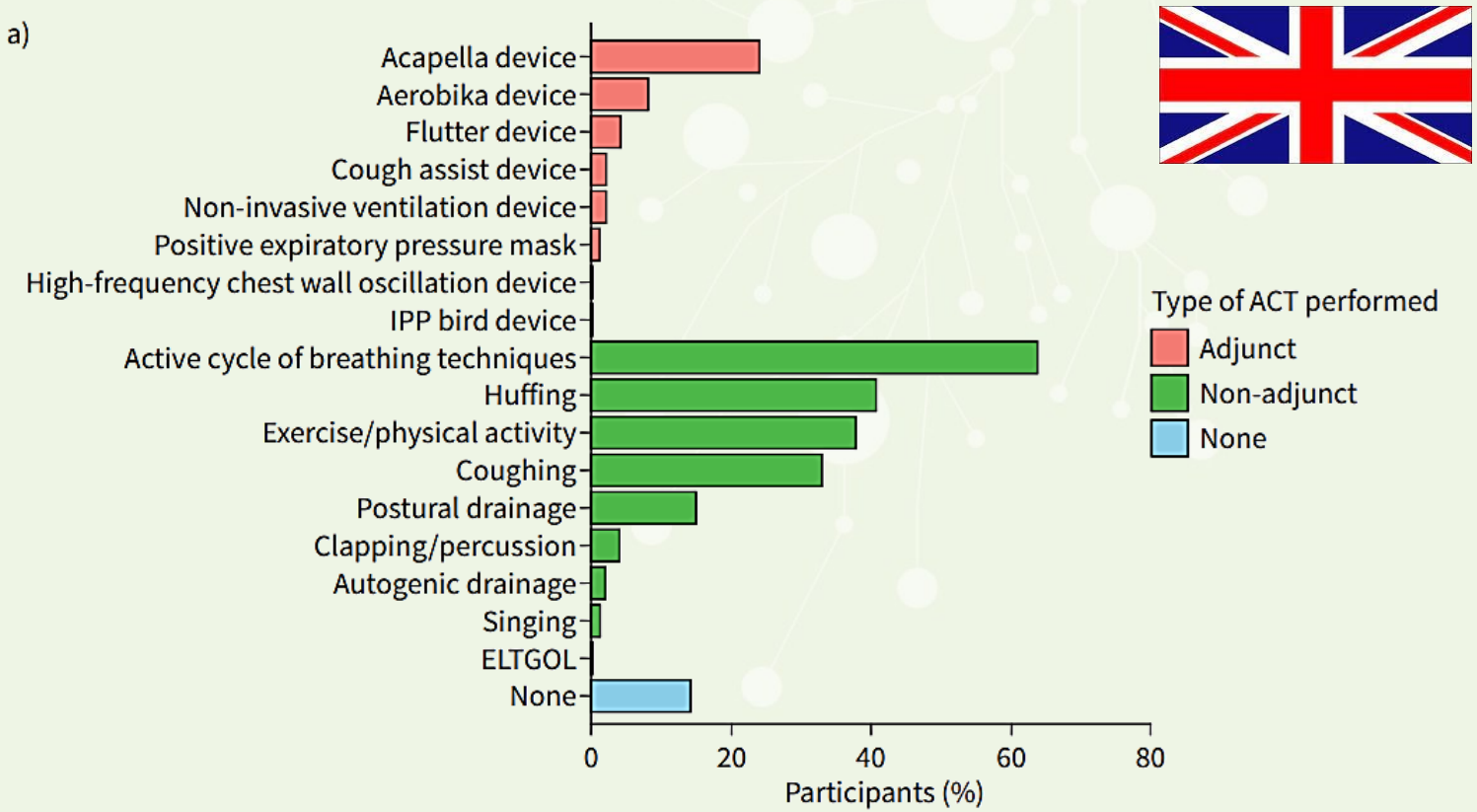
Jennifer Phillips[1,2*], Annemarie Lee[3,4,5], Rodney Pope[6] and Wayne Hing[1]



Nouvelle Zélande

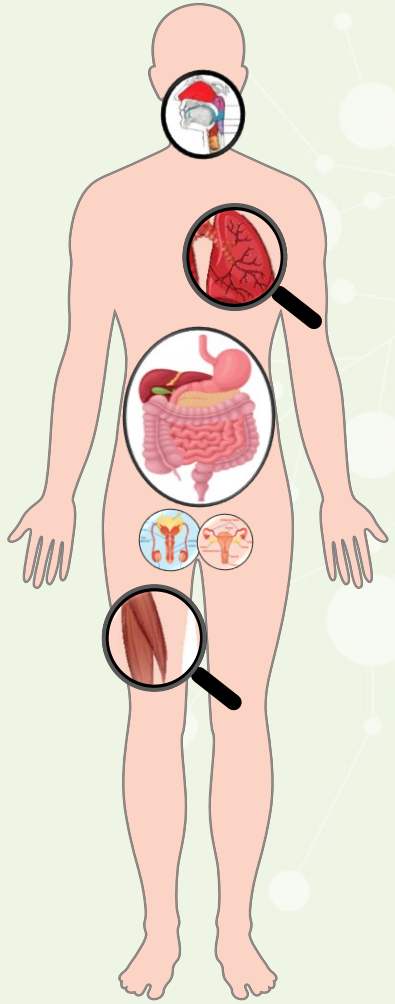
Airway clearance treatments in bronchiectasis: feasibility of linking survey results to registry data and a survey of patients' and physiotherapists' practices

Rebecca H. McLeese [1,6], Katherine O'Neill [1,6], Brenda O'Neill [2], James D. Chalmers [3], Jeanette Boyd [4], Anthony De Soyza [5], Ryan McChrystal [1], Megan L. Crichton [3] and Judy M. Bradley [1]

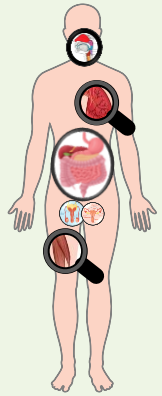


Mucoviscidose

KINÉSITHÉRAPIE RESPIRATOIRE



Mucoviscidose



Niveau	N Etude
I	1
II	3
IV	11

- Il est proposé d'appliquer les TDENI aux patients afin de favoriser l'élimination des sécrétions à court terme (G2B).
- Il n'est pas recommandé d'utiliser les TDENI afin d'améliorer les paramètres spirométriques sur le court terme (G2A) et le long terme (G2C).
- il est recommandé de tenir compte de la préférence du patient pour favoriser l'adhérence thérapeutique des TDENI (G1A).

Airway clearance techniques compared to no airway clearance techniques for cystic fibrosis (Review)

Authors' conclusions

The evidence from this review shows that ACTs may have short-term effects on increasing mucus transport in people with CF. All included studies had short-term follow-up; consequently, we were unable to draw any conclusions on the long-term effects of ACTs compared to no ACTs in people with CF.

The evidence in this review represents the use of airway clearance techniques in a CF population before widespread use of cystic fibrosis transmembrane conductance regulator (CFTR) modulators. Further research is needed to determine the effectiveness and acceptability of airway clearance in those treated with highly effective CFTR modulators.

Autogenic drainage for airway clearance in cystic fibrosis (Review)

Authors' conclusions

Autogenic drainage is a challenging technique that requires commitment from the individual. As such, this intervention merits systematic review to ensure its effectiveness for people with cystic fibrosis, particularly in an era where treatment options are changing rapidly. From the studies assessed, autogenic drainage was not found to be superior to any other form of airway clearance technique. Larger studies are required to better evaluate autogenic drainage in comparison to other airway clearance techniques in view of the relatively small number of participants in this review and the complex study designs. The studies recruited a range of participants and were not powered to assess non-inferiority. The varied length and design of the studies made the analysis of pooled data challenging.

Cochrane Library

Positive expiratory pressure physiotherapy for airway clearance in people with cystic fibrosis (Review)

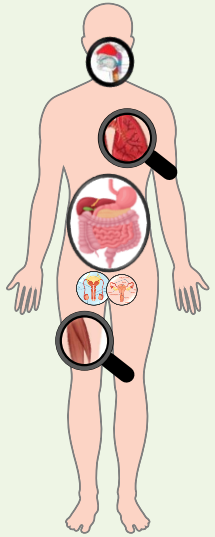
Authors' conclusions

The evidence provided by this review is of variable quality, but suggests that all techniques and devices described may have a place in the clinical treatment of people with CF.

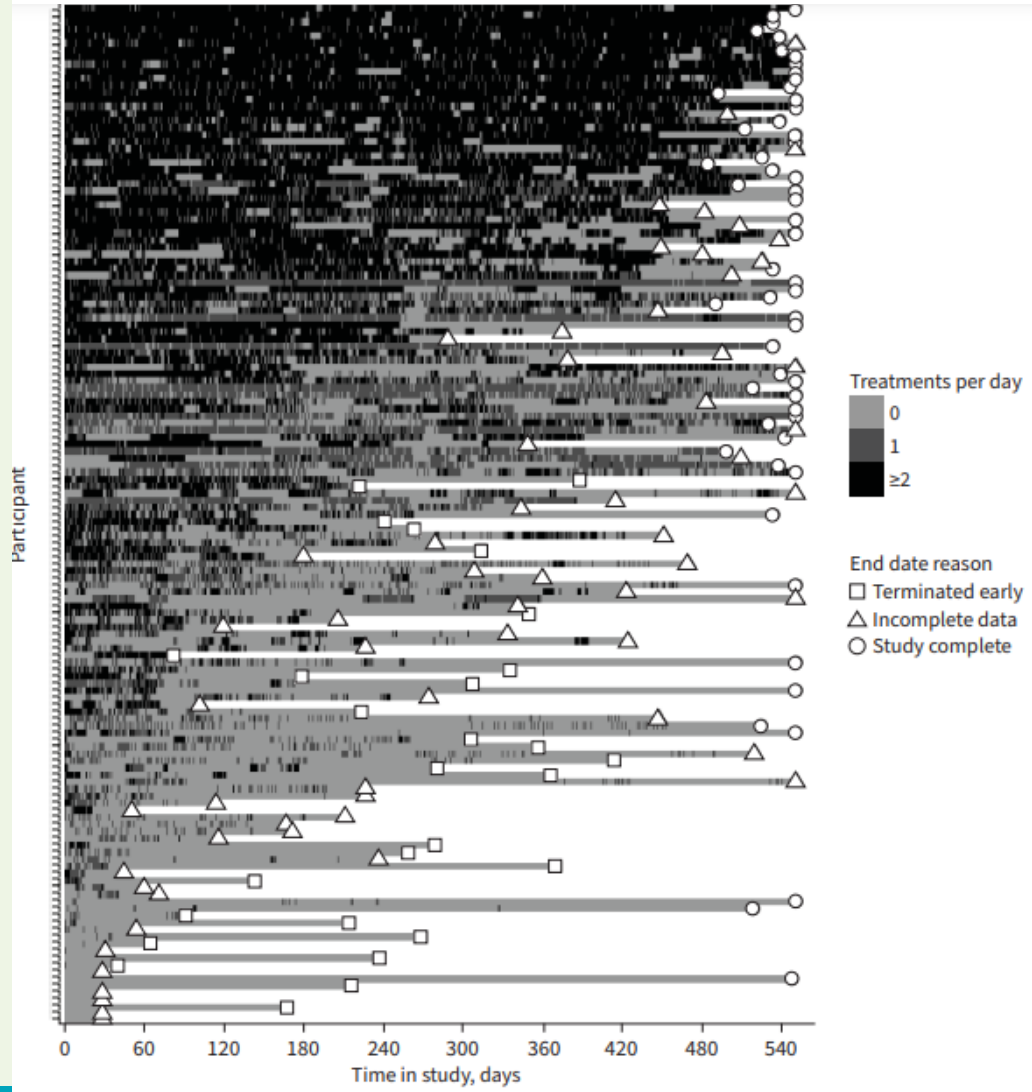
Following meta-analyses of the effects of PEP versus other airway clearance techniques on lung function and patient preference, this Cochrane Review demonstrated that there was high-quality evidence that showed a significant reduction in pulmonary exacerbations when PEP using a mask was compared with HFCWO. It is important to note that airway clearance techniques should be individualised throughout life according to developmental stages, patient preferences, pulmonary symptoms and lung function. This also applies as conditions vary between baseline function and pulmonary exacerbations.

Real-world effectiveness of airway clearance techniques in children with cystic fibrosis

Nicole Filipow [1,8], Sanja Stanojevic [2,8], Emma Raywood [1,8], Harriet Shannon [1], Gizem Tanriver [1], Kunal Kapoor [1], Helen Douglas [1,3], Gwyneth Davies [4,5], Rachel O'Connor [6], Nicky Murray [7] and Eleanor Main [1,3]



135 patients



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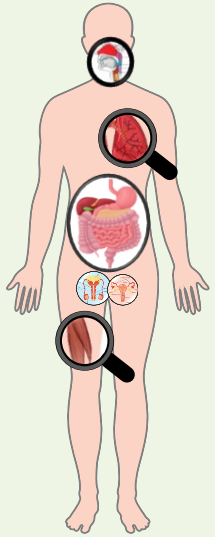
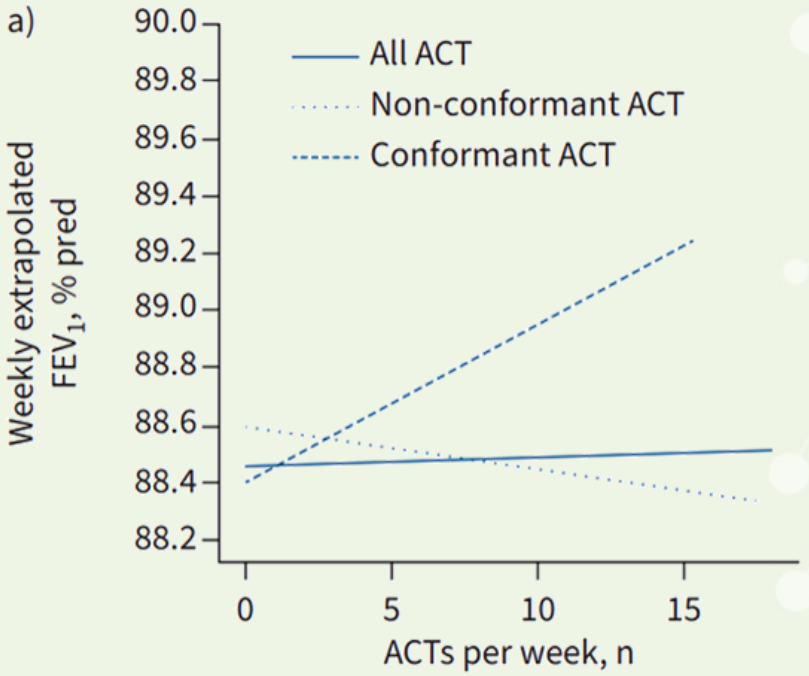
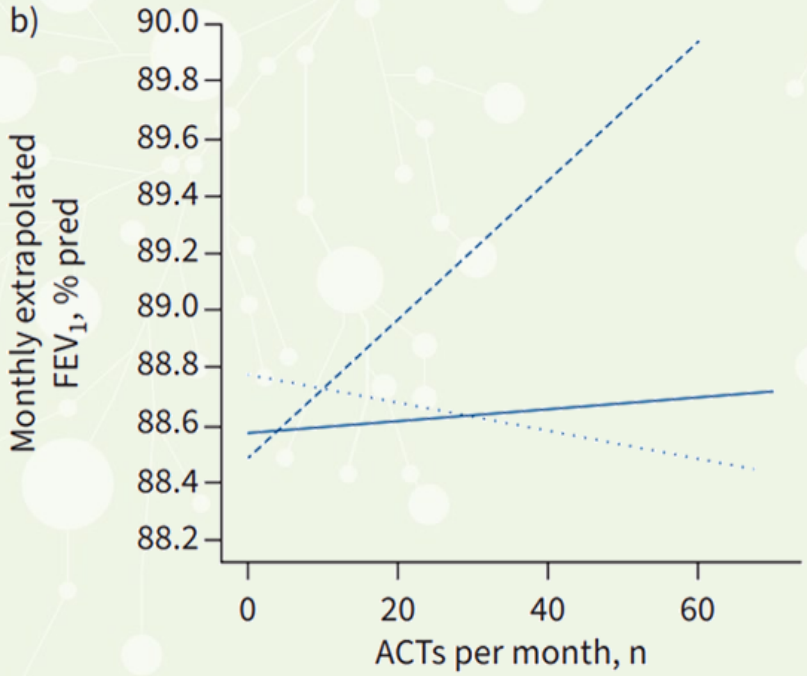
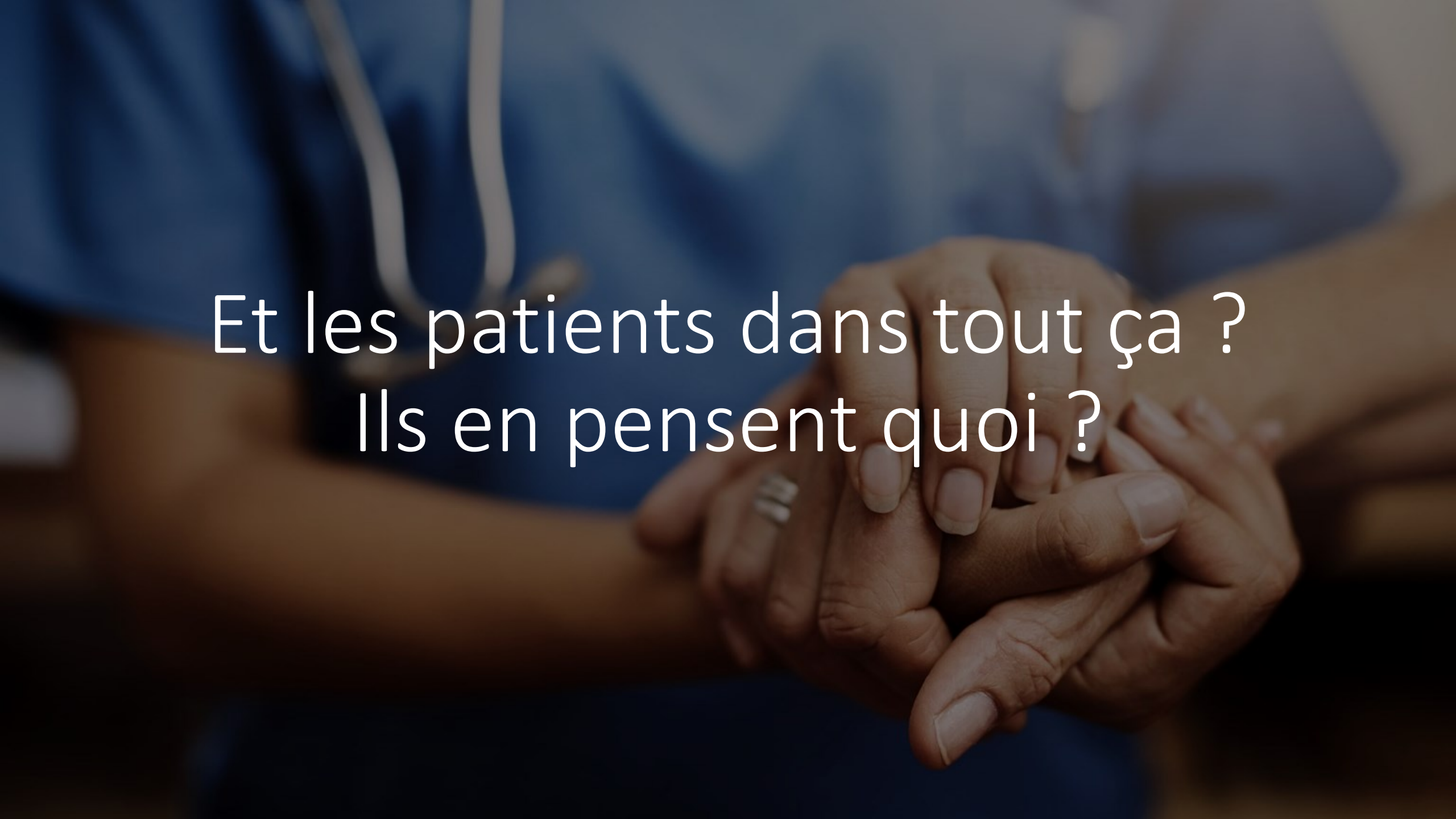


135 patients





Conformant : pression entre 5 et 25 cmh20 et temps expiratoire entre -10% à +40% du temps expiratoire normal


Et les patients dans tout ça ?
Ils en pensent quoi ?

Report

Patient perspectives of airway clearance techniques in bronchiectasis

Lisa J Franks , PT, James R Walsh , PhD, PT, Kathleen Hall , GradDipCardiothoracic Phty, MSc, PT, Julie A Adsett , PhD, PT & Norman R Morris , PhD

Received 12 Jun 2022, Accepted 13 Sep 2022, Published online: 20 Sep 2022

Cite this article https://doi.org/10.1080/09593985.2022.2126741 Check for updates

24 participants

"Main barriers included lack of time and motivation, lack of access to resources, and a lack of perceived health benefit."

Exercise training for bronchiectasis (Review)

Cochrane Library

This review provides low-certainty evidence suggesting improvement in functional exercise capacity and quality of life immediately following exercise training in people with stable bronchiectasis

Physical activity and exercise training in cystic fibrosis (Review)

Cochrane Library

Physical activity interventions for six months and longer likely improve exercise capacity when compared to no training (moderate-certainty evidence). Current evidence shows little or no effect on lung function and HRQoL (low-certainty evidence).

Effects of exercise and airway clearance (PEP) on mucus clearance in cystic fibrosis: a randomised cross-over trial

EUROPEAN RESPIRATORY *journal*
FLAGSHIP SCIENTIFIC JOURNAL OF ERS

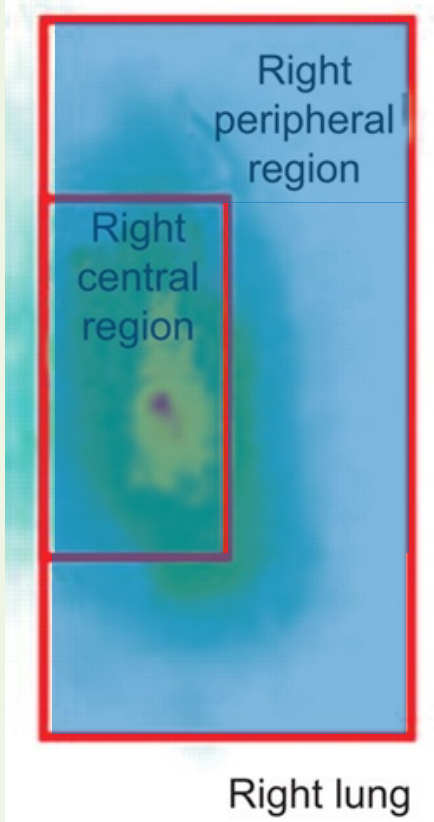
Tiffany J. Dwyer, Evangelia Daviskas, Rahizan Zainuldin, Jordan Verschuer, Stefan Eberl, Peter T.P. Bye, Jennifer A. Alison

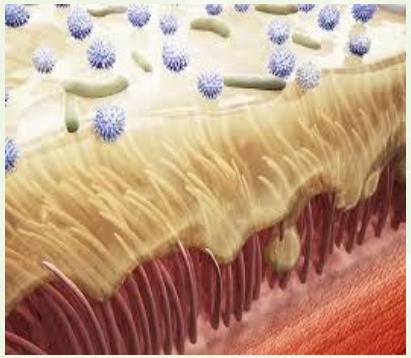
Masque PEP (20-40cmH_2O)
15 respirations profondes + Huff et toux
6 cycles (20 min d'intervention)

20 min
60% VO_2 pic

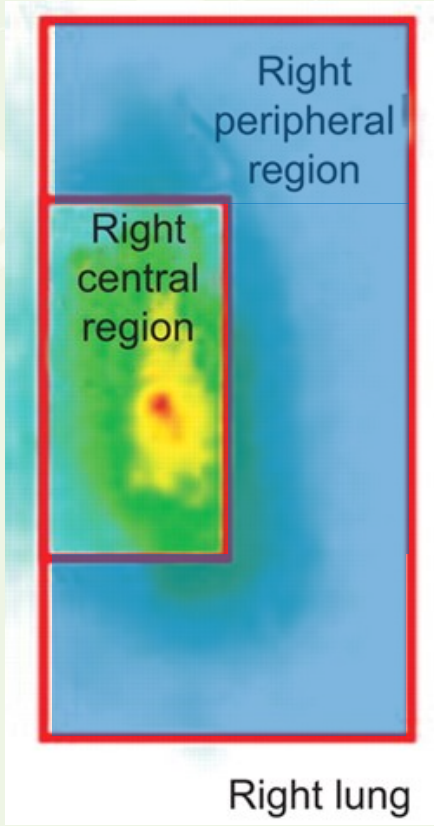
Clairance muco-ciliaire

Résultats





Clairance muco-ciliaire



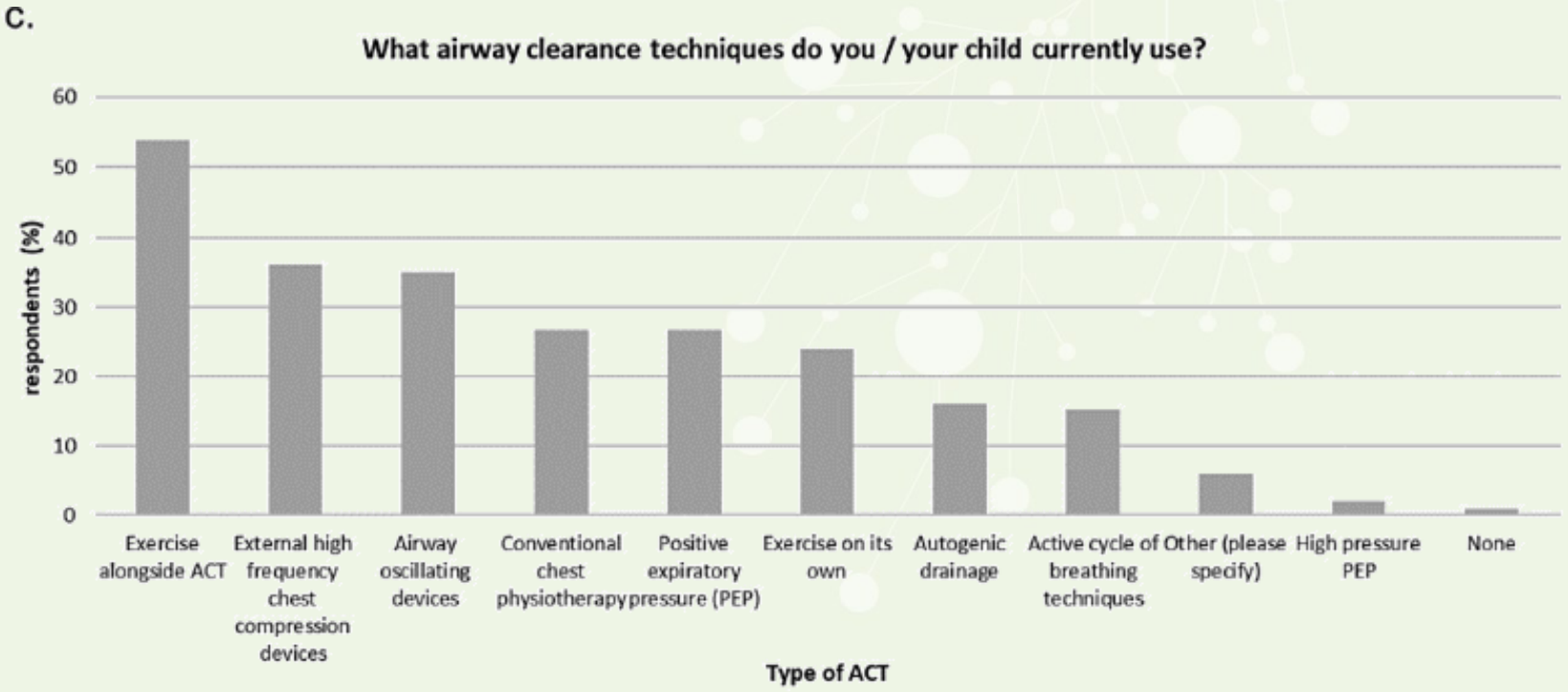
Intérêt de demander aux patients de faire un huffing et de tousser pendant l'effort

Short Communication

Can exercise replace airway clearance techniques in cystic fibrosis? A survey of patients and healthcare professionals

N.J. Rowbotham[a,*], S.J. Smith[a], G. Davies[b], T. Daniels[c], Z.C. Elliott[d], K. Gathercole[e,f], O.C. Rayner[g], A.R. Smyth[a]

488 participants



The top 10 research priorities in cystic fibrosis developed by a partnership between people with CF and healthcare providers

Original research

Exercise as a substitute for traditional airway clearance in cystic fibrosis: a systematic review

Nathan Ward,[1,2] Scott Morrow,[1] Kathy Stiller,[3] Anne E Holland[2,4,5]

This systematic review found that, based on short-term studies, exercise may have a similar effect to traditional ACTs on respiratory function and may produce a similar weight of expectorated sputum when combined with huffing/FET. It also found that treadmill exercise improves the ease of sputum expectoration compared with rest. Longer duration studies are required to determine whether exercise can be used as a substitute for traditional ACTs in the modern era of CF management.

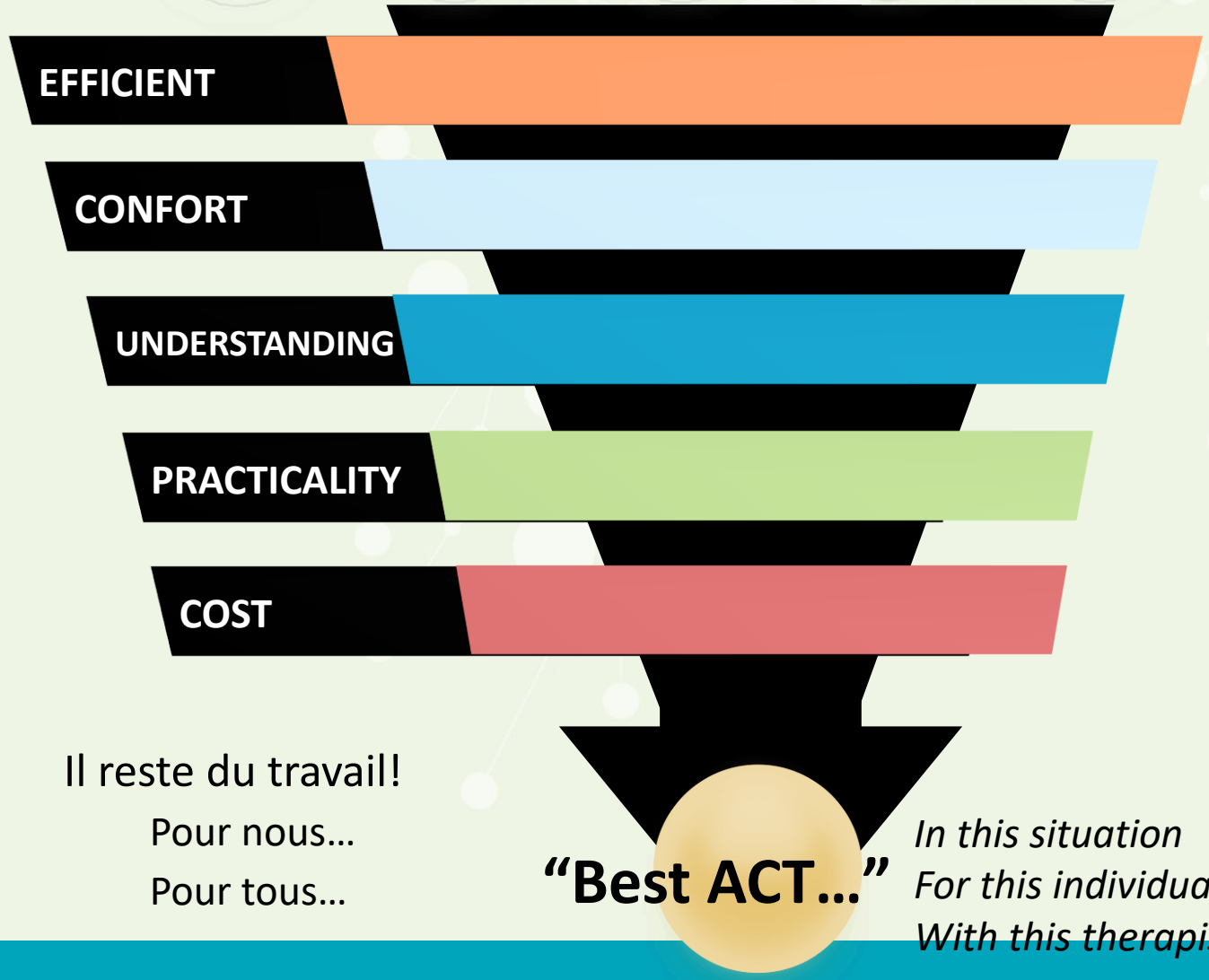
EUROPEAN RESPIRATORY JOURNAL
EDITORIAL
B. HERRERO-CORTINA ET AL.

Airway clearance techniques and exercise in people with bronchiectasis: two different coins

Beatriz Herrero-Cortina [1,2,3], Arietta Spinou [4,5], Ana Oliveira [6,7,8,9], Brenda O'Neill [10], Cristina Jácome [11], Simone Dal Corso [12,13], William Poncin [14,15,16], Gerard Muñoz [17,18], Deniz Inal-Ince [19], Victoria Alcaraz-Serrano [20,21], Gregory Reychler [14,15,16], Angela Bellofiore[22,23], Annette Posthumus[24], Patient representative[25], James D. Chalmers [26] and Annemarie L. Lee [27,28]

En conclusion

A(A)D ELTGOL (O)PEP IET ACBT



Il reste du travail!

Pour nous…

Pour tous…

“Best ACT…”

In this situation
For this individual
With this therapist

MERCI

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