

# Qu'attend-on de la kinésithérapie sous Kaftrio ?

Qu'en pensent nos voisins européens ?

# Historique de la kinésithérapie dans la mucoviscidose

Un traitement de première intention



Pr Bellon

## Protocole National de Diagnostic et de Soins (PNDS) Mucoviscidose

- Recommandation des techniques de désencombrement bronchique
- 1 à 2 séances / jour



Une kinésithérapie prévisionnelle et « sur-mesure »



# Kinésithérapie : de quoi parle-t-on ?



Obstruction nasale

SAOS

Douleurs

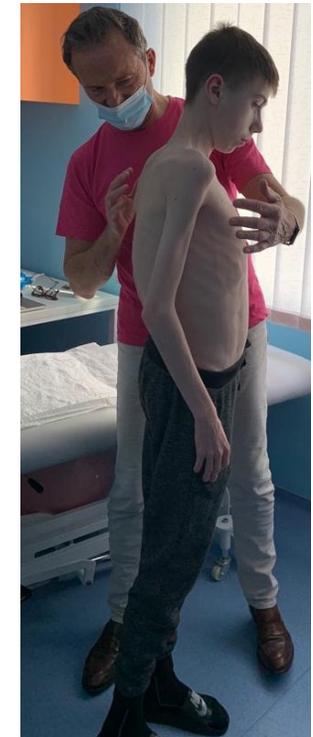
Obstruction bronchique



Ballonnements  
abdominaux

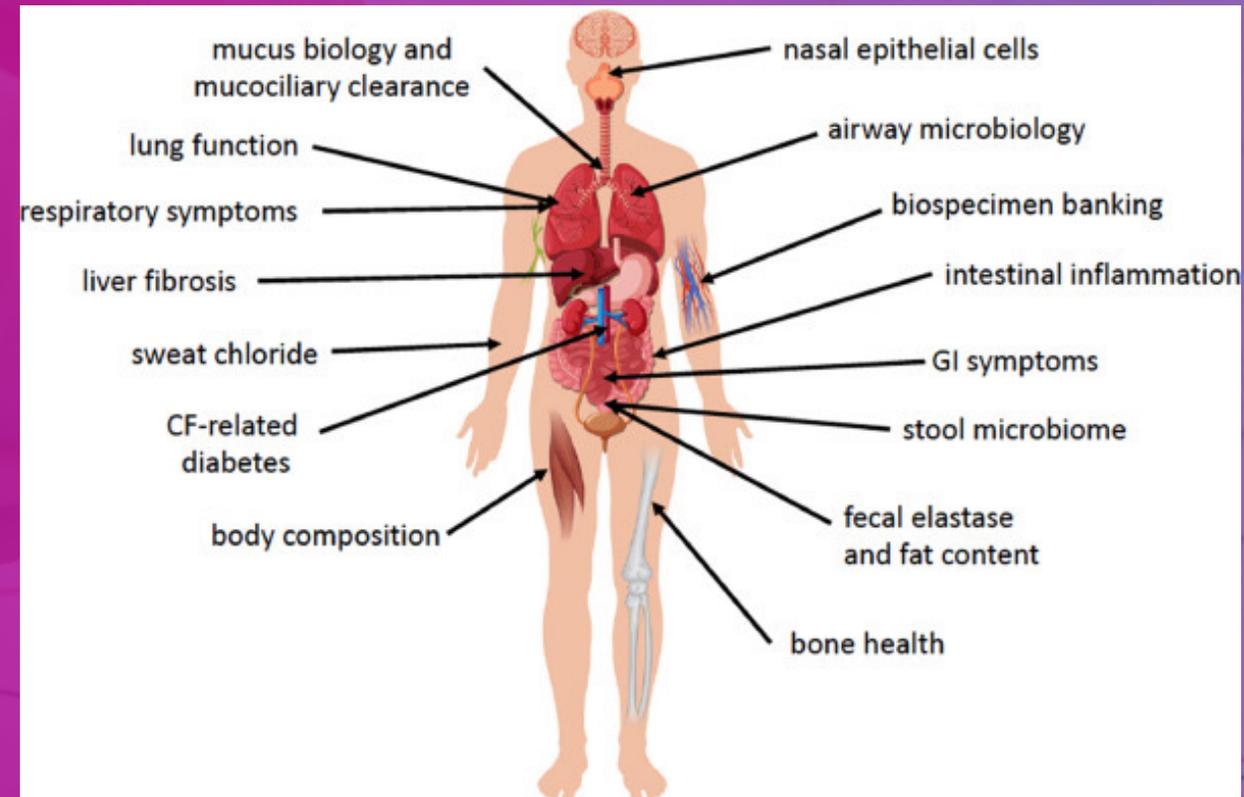
Déconditionnement

Incontinence



# Les effets de Kaftrio

Quid de l'après Kaftrio ??



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# Cas clinique n°1 : Rafaël

## Qui est-il ?

- 6 ans, en class de CP
  - Sous Kaftrio depuis 3 mois
  - Amélioration des EFR ++
- 
- Difficultés à prendre du poids
  - Déconditionnement musculaire important
  - Ballonnements abdominaux persistants
  - Encombrement nasal fréquent
- 
- Parents très demandeurs de kinésithérapie

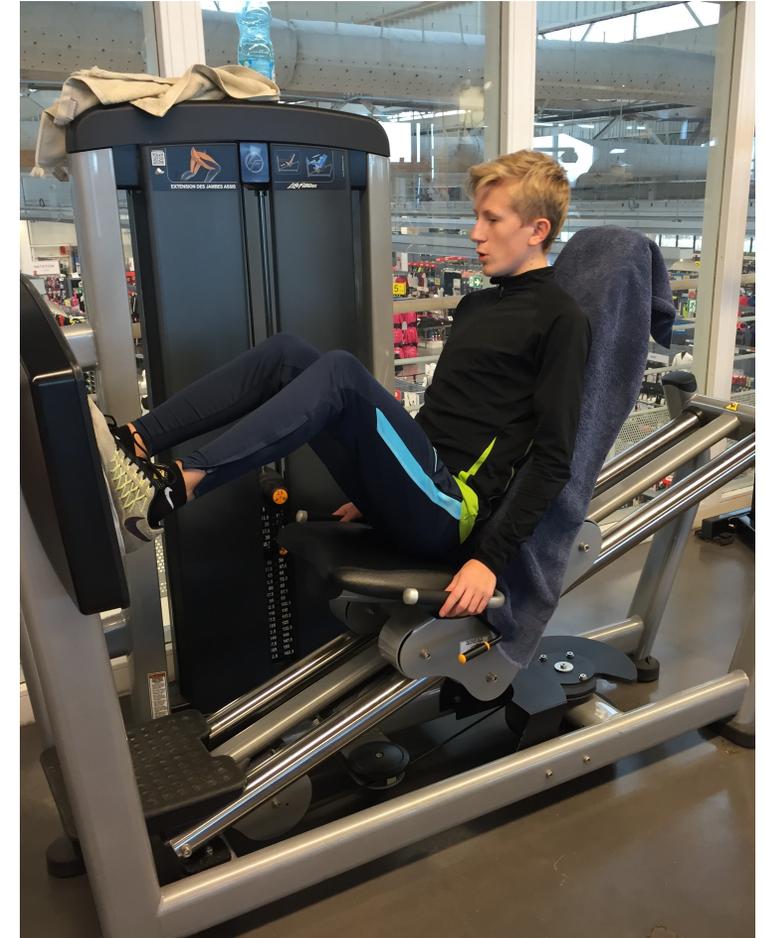


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# Cas clinique n°2 : Maxence

## Qui est-elle ?

- 19 ans, entrée en terminale
  - Sportif
  - Ne souhaite plus faire de kinésithérapie.
- 
- VEMS remonté à 75%
  - Distendu
  - Thorax muet
  - Toux persistante
  - Distance doigt-sol importante



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# Cas clinique n°3 : Mélanie



## Qui est-elle ?

- 37 ans, célibataire
- Sans activité professionnelle
- Vit chez ses parents
- Sa sœur est également atteinte de mucoviscidose et a été greffée

- 
- DDB importantes : exacerbations fréquentes
  - Incontinence urinaire
  - Douleurs tendineuses ++
  - La kinésithérapie permet de conserver un lien social. S'est construite autour de sa maladie

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# Cas clinique n°4 : Louis

## Qui est-elle ?

- 29 ans, en couple
  - BAC + 6 à l'ENA
  - Aime voyager, travaille auprès de la sécurité civile pour les risques naturels majeurs
  - Elu municipal
  - Vie sociale épanouie
- 
- Baisse d'énergie, fatigable mais entretient une activité physique régulière
  - 1 exacerbation / an
  - Si le Kaftrio lui a changé la vie, il a rangé son Simeox® : ne le ressort qu'au besoin et ne veut pas s'en séparer pour autant...
  - Se sent autonome



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# Quid de nos confrères européens ?



Qu'attend-on de la kinésithérapie sous Kaftrio ?



# L'exercice peut-il remplacer la physiothérapie thoracique pour les patients atteints de mucoviscidose ?

## Can exercise replace chest physiotherapy?

96% of people with CF exercise



48% of people with CF may drop their airway clearance techniques if they exercise



Multicenter Study > [Thorax](#). 2018 Apr;73(4):388-390. doi: 10.1136/thoraxjnl-2017-210473.

Epub 2017 Aug 4.

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

1. What are the effective ways of simplifying the treatment burden of people with Cystic Fibrosis?
2. How can we relieve gastro-intestinal (GI) symptoms, such as stomach pain, bloating and nausea in people with Cystic Fibrosis?
3. What is the best treatment for non-tuberculous mycobacteria (NTM) in people with Cystic Fibrosis (including when to start and what medication)?
4. Which therapies are effective in delaying or preventing progression of lung disease in early life in people with Cystic Fibrosis?
5. Is there a way of preventing CF related diabetes (CFRD) in people with Cystic Fibrosis?
6. What effective ways of motivation, support and technologies help people with Cystic Fibrosis improve and sustain adherence to treatment?
- 7. Can exercise replace chest physiotherapy for people with Cystic Fibrosis?**
8. Which antibiotic combinations and dosing plans should be used for Cystic Fibrosis exacerbations and should antibiotic combinations be rotated?
9. Is there a way of reducing the negative effects of antibiotics, for example resistance risk and adverse symptoms in people with Cystic Fibrosis?
10. What is the best way of eradicating *Pseudomonas aeruginosa* in people with Cystic Fibrosis?

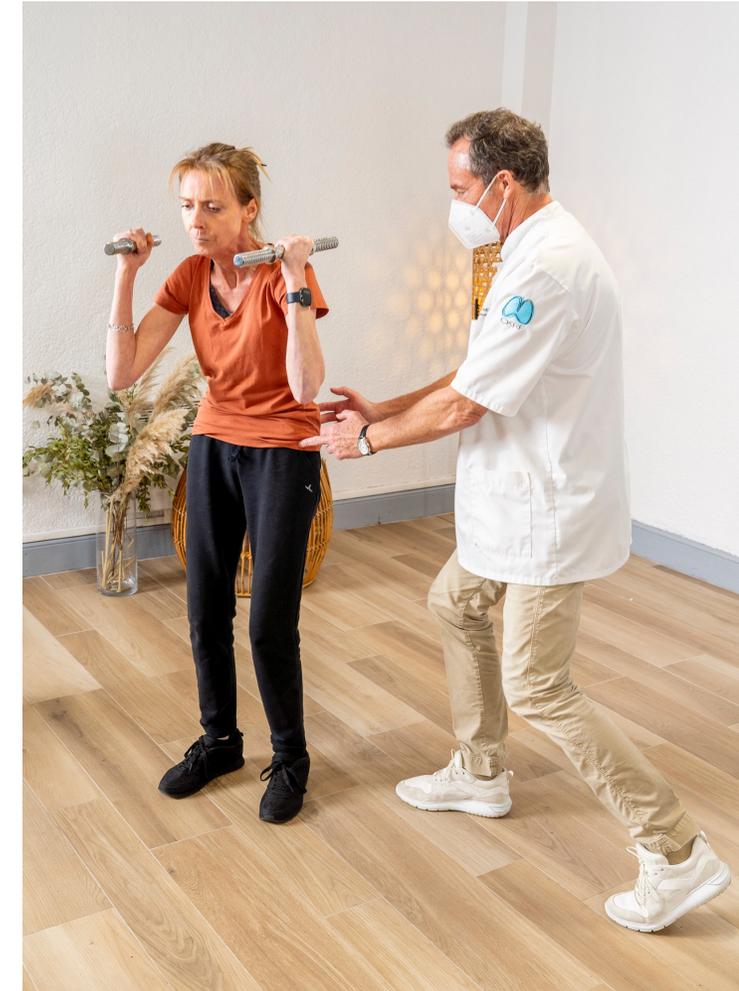
# Mucus clearance with three chest physiotherapy regimes in cystic fibrosis: a comparison between postural drainage, PEP and physical exercise

L Lannefors<sup>1</sup>, P Wollmer



- La clairance mucociliaire est aussi « efficace » avec l'exercice + FET que les autres techniques de désencombrement bronchique

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CrossMark

# Effects of exercise and airway clearance (positive expiratory pressure) on mucus clearance in cystic fibrosis: a randomised crossover trial

Tiffany J. Dwyer<sup>1,2</sup>, Evangelia Daviskas<sup>2</sup>, Rahizan Zainuldin<sup>1,3,4</sup>, Jordan Verschuer<sup>5</sup>, Stefan Eberl<sup>5</sup>, Peter T.P. Bye<sup>2,6</sup> and Jennifer A. Alison<sup>1,7</sup>

- Résultats équivalents en termes de clairance mucociliaire
- L'activité physique semblerait avoir des effets plus importants sur l'hydratation du mucus

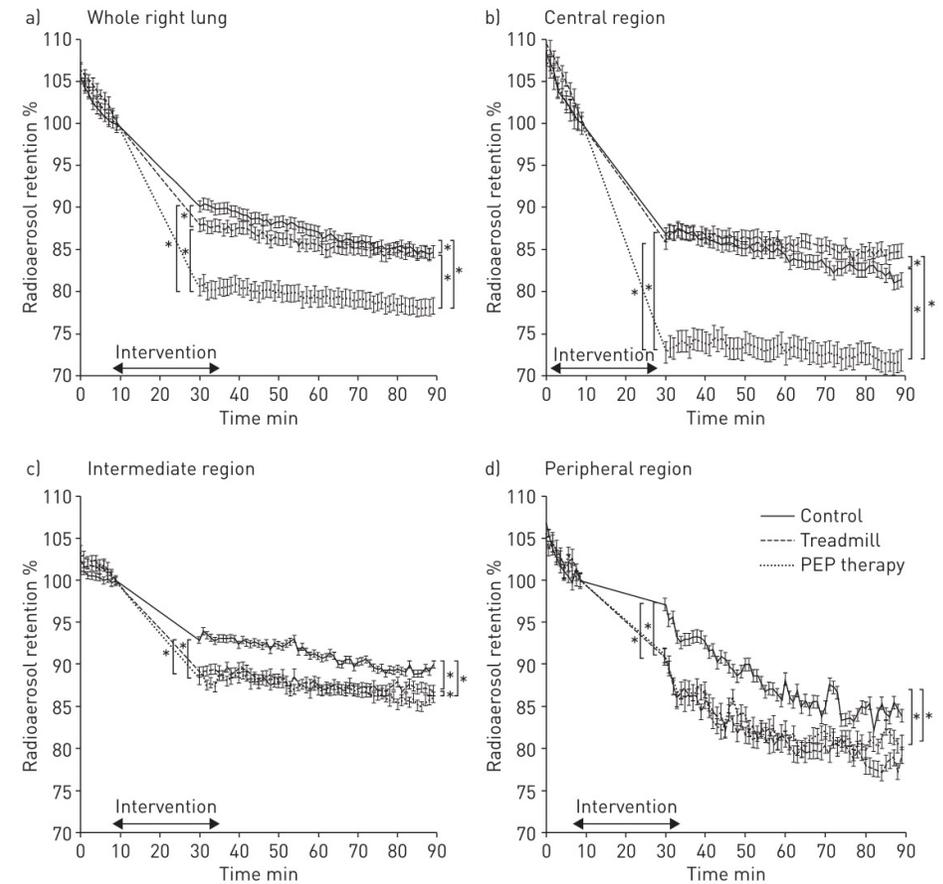
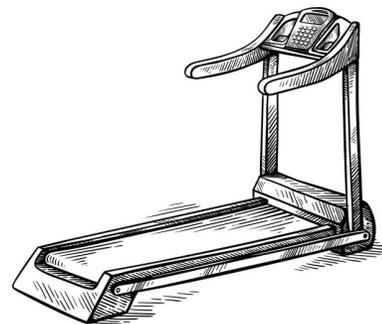
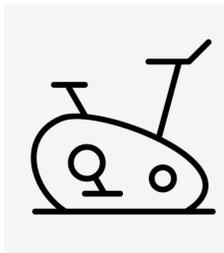


FIGURE 2 Mucus clearance scans for the control [solid line], treadmill exercise [dashed line] and positive expiratory pressure (PEP) therapy [dotted line] interventions (mean±SE), expressed as percentage of radioaerosol retention immediately before the intervention in a) whole right lung; b) central lung region; c) intermediate lung region; and d) peripheral lung region. \*: p<0.01.

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**Exercise as airway clearance therapy (ExACT) in cystic fibrosis: a UK-based e-Delphi survey of patients, caregivers and health professionals**

Zoe L. Saynor, Steve Cunningham, Lisa Morrison, Eleanor Main, Ioannis Voglatzis, Simon Reid, Don S. Urquhart

**OBJECTIVE**  
Develop consensus recommendations by a UK-based cystic fibrosis (CF) expert panel on the type, intensity and duration of exercise that could be considered equivalent to traditional airway clearance therapy

**METHODS**  
3 round iterative e-Delphi to systematically develop consensus among key expert groups from the CF community. Distributed using onlinesurveys.ac.uk (JISC) online surveys groups from UK: 4 key expert groups from UK: people with CF, caregivers (parents/partners), doctors (CF specialists), specialist physiotherapists

Round 1 was in three sections:  
1) exercise as ACT, 2) ExACT, and type and duration for ExACT.  
3) exercise intensity for ExACT with responses repeated for stable and unstable CF

Agreement ranked on a scale of 0-9 (0 total disagreement, 9 total agreement). Consensus defined as >70%

Of 83 Round 1 participants, 60 (72%) contributed to all rounds:  
24 physiotherapists (40%), 11 (18%) doctors, 15 (25%) parents/partners and 10 (17%) patients

By Round 3, 17 statements reached consensus

**60**

**CONCLUSION**  
Our UK panel agreed that ExACT could be used during times of stable CF, but this depends on the type, intensity and duration of exercise. ExACT was considered to be aerobic activity, of at least 20 minutes duration, and intense enough to elicit deep breathing. Consensus was reached that assessment breaths, coughs and huffs should accompany exercise. Our panel should accompany exercise. Our panel supported trials to investigate ExACT during times of stable disease but not pulmonary exacerbations

**RESULTS**  
Statements relating to exercise as airway clearance therapy in cystic fibrosis from the 'exercise as airway clearance' and 'exercise intensity' domains that reached overall panel consensus agreement

The right kind of exercise can loosen and move secretions in a similar way to chest physiotherapy  
Coughs and huffs must be included in exercise for it to be effective as a form of airway clearance  
Assessment breaths, coughs and huffs can be used before exercise to help see if secretions are there  
How often airway clearance should try to do something at least once a day that helps clear their airways (productive, lung function)  
People with cystic fibrosis should try to do something at least once a day that helps clear their airways (productive, lung function)  
A combination of exercise and traditional chest physiotherapy methods are important during a cystic fibrosis chest exacerbation  
People with cystic fibrosis should try to do something at least once a day that helps clear their airways (productive, lung function)  
For exercise to be used for airway clearance, the intensity must be such that the person is deep breathing during exercise

Note: This is a selection of agreed statements - see full text for comprehensive list of agreed statements

**What does ExACT look like for people with CF?**

**AIRWAY CLEARANCE**  
Chest physiotherapy has been a cornerstone of CF care for 50 years.  
People with CF should be encouraged to use chest physiotherapy.

**PURPOSE**  
Assessment breaths, coughs & huffs should be used before exercise to help see if secretions are there.

**DURATION**  
An ExACT session should be 20 minutes.  
People with CF should aim for 20 minutes of ExACT daily.

**INTENSITY**  
People with CF should aim for 20 minutes of ExACT daily.  
People with CF should aim for 20 minutes of ExACT daily.

**ASSESSMENT BREATHS, COUGHS & HUFFS**  
Assessment breaths, coughs & huffs should be used before exercise to help see if secretions are there.

**TYPES OF EXERCISE**  
Exercises include: walking, jogging, swimming, cycling, dancing, aerobics, strength training, Tai Chi, yoga, Pilates, stretching, and other low-impact activities.

**FREQUENCY**  
People with CF should aim for 20 minutes of ExACT daily.

**WHAT NEXT?**  
Clinical trials are needed to confirm if ExACT is safe and effective.  
Current consensus: ExACT can be used during times of stable disease but not pulmonary exacerbations.

If evidence were supportive, 89% would be happy for exercise to replace chest physiotherapy during stable disease

**NHS Greater Glasgow and Clyde**, **UCL**, **Northumbria University Newcastle**, **NHS Lothian**, **University of Portsmouth**, **The University of Edinburgh**, **NHS University Hospital Southampton**

Conclusion : Our UK panel agreed that ExACT could be used during times of stable CF, but this depends on the type, intensity and duration of exercise.

ExACT was considered to be aerobic activity, of at least 20 minutes duration, and intense enough to elicit deep breathing.

Consensus was reached that assessment breaths, coughs and huffs should accompany exercise.

Our panel supported trials investigate ExACT during times of stable idesease but not pulmonary exaacerbations.



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**MERCI DE VOTRE  
ATTENTION !**

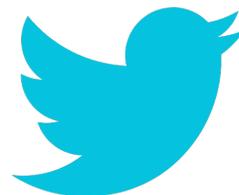
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