# La publication en kinésithérapie respiratoire

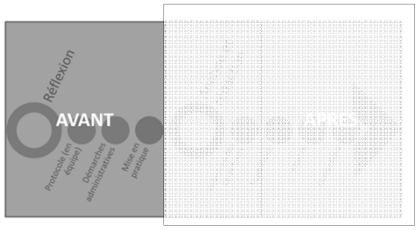
Gregory Reychler
Service de Pneumologie
Cliniques universitaires Saint-Luc
Bruxelles - Belgique


**Le langage scientifique est une langue comme une autre!!!**

Gregory.reychler@uclouvain.be

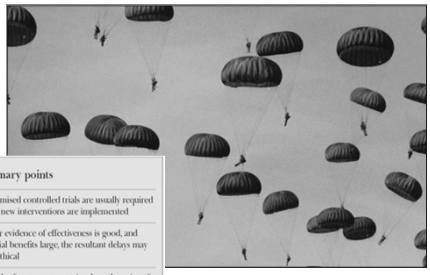
## Long cheminement…

…étalé sur plus d'un an!




**AVANT LA REDACTION**

## Intérêt?



**Summary points**

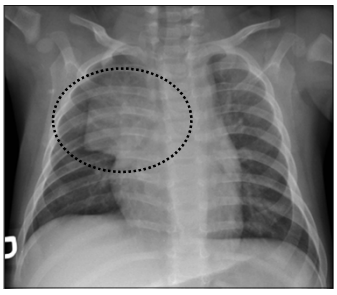
Randomised controlled trials are usually required before new interventions are implemented

If other evidence of effectiveness is good, and potential benefits large, the resultant delays may be unethical

Examples from poor countries show the price of delaying interventions

Potts M, *BMJ* 2006;333:701–3

## Connaissance approfondie du sujet



« …We see only what we look for, and we recognize only what we know… »

*Dr Merrill Sosman, 1957*

## Revue exhaustive de ce qui est connu

- Question de départ
- Choix des outcomes!!! (fct de la question) (APPEL A L'EQUIPE)
- Choix des méthodes/outils d'évaluation

## Description précise des différentes étapes de l'étude

- Rédaction ECRITE du protocole (interdiction d'en dévier)
- TOUT DOIT Y ETRE ⟹
  - Déterminer le but de l'étude et la faisabilité
  - Evaluer le nombre de sujets nécessaires
  - Rédaction précise de la méthode utilisée
  - Préciser l'intérêt clinique

**Échelle PEDro – Français**

| | | | |
|---|---|---|---|
| 1. | les critères d'éligibilité ont été précisés | non ❑ oui ❑ | où: |
| 2. | les sujets ont été répartis aléatoirement dans les groupes (pour un essai croisé, l'ordre des traitements reçus par les sujets a été attribué aléatoirement) | non ❑ oui ❑ | où: |
| 3. | la répartition a respecté une assignation secrète | non ❑ oui ❑ | où: |
| 4. | les groupes étaient similaires au début de l'étude au regard des indicateurs pronostiques les plus importants | non ❑ oui ❑ | où: |
| 5. | tous les sujets étaient "en aveugle" | non ❑ oui ❑ | où: |
| 6. | tous les thérapeutes ayant administré le traitement étaient "en aveugle" | non ❑ oui ❑ | où: |
| 7. | tous les examinateurs étaient "en aveugle" pour au moins un des critères de jugement essentiels | non ❑ oui ❑ | où: |
| 8. | les mesures, pour au moins un des critères de jugement essentiels, ont été obtenues pour plus de 85% des sujets initialement répartis dans les groupes | non ❑ oui ❑ | où: |
| 9. | tous les sujets pour lesquels les résultats étaient disponibles ont reçu le traitement ou ont suivi l'intervention contrôle conformément à leur répartition ou, quand cela n'a pas été le cas, les données d'au moins un des critères de jugement essentiels ont été analysées "en intention de traiter" | non ❑ oui ❑ | où: |
| 10. | les résultats des comparaisons statistiques intergroupes sont indiqués pour au moins un des critères de jugement essentiels | non ❑ oui ❑ | où: |
| 11. | pour au moins un des critères de jugement essentiels, l'étude indique à la fois l'estimation des effets et l'estimation de leur variabilité | non ❑ oui ❑ | où: |

http://www.pedro.org.au

**CONSORT 2010 checklist of information to include when reporting a randomised trial***

| Section/Topic | Item No | Checklist item | Reported on page No |
|---|---|---|---|
| **Title and abstract** | 1a | Identification as a randomised trial in the title | |
| | 1b | Structured summary of trial design, methods, results, and conclusions (for specific guidance see CONSORT for abstracts) | |
| **Introduction** | | | |
| Background and objectives | 2a | Scientific background and explanation of rationale | |
| | 2b | Specific objectives or hypotheses | |
| **Methods** | | | |
| Trial design | 3a | Description of trial design (such as parallel, factorial) including allocation ratio | |
| | 3b | Important changes to methods after trial commencement (such as eligibility criteria), with reasons | |
| Participants | 4a | Eligibility criteria for participants | |
| | 4b | Settings and locations where the data were collected | |
| Interventions | 5 | The interventions for each group with sufficient details to allow replication, including how and when they were actually administered | |
| Outcomes | 6a | Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed | |
| | 6b | Any changes to trial outcomes after the trial commenced, with reasons | |
| Sample size | 7a | How sample size was determined | |
| | 7b | When applicable, explanation of any interim analyses and stopping guidelines | |
| Randomisation: | | | |
| Sequence generation | 8a | Method used to generate the random allocation sequence | |
| | 8b | Type of randomisation; details of any restriction (such as blocking and block size) | |
| Allocation concealment mechanism | 9 | Mechanism used to implement the random allocation sequence (such as sequentially numbered containers), describing any steps taken to conceal the sequence until interventions were assigned | |
| Implementation | 10 | Who generated the random allocation sequence, who enrolled participants, and who assigned participants to interventions | |
| Blinding | 11a | If done, who was blinded after assignment to interventions (for example, participants, care providers, those | |

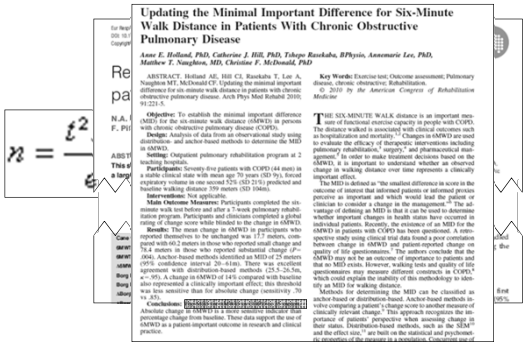
CONSORT 2010 checklist — Page 1

| | | | |
|---|---|---|---|
| | | assessing outcomes) and how | |
| | 11b | If relevant, description of the similarity of interventions | |
| Statistical methods | 12a | Statistical methods used to compare groups for primary and secondary outcomes | |
| | 12b | Methods for additional analyses, such as subgroup analyses and adjusted analyses | |
| **Results** | | | |
| Participant flow (a diagram is strongly recommended) | 13a | For each group, the numbers of participants who were randomly assigned, received intended treatment, and were analysed for the primary outcome | |
| | 13b | For each group, losses and exclusions after randomisation, together with reasons | |
| Recruitment | 14a | Dates defining the periods of recruitment and follow-up | |
| | 14b | Why the trial ended or was stopped | |
| Baseline data | 15 | A table showing baseline demographic and clinical characteristics for each group | |
| Numbers analysed | 16 | For each group, number of participants (denominator) included in each analysis and whether the analysis was by original assigned groups | |
| Outcomes and estimation | 17a | For each primary and secondary outcome, results for each group, and the estimated effect size and its precision (such as 95% confidence interval) | |
| | 17b | For binary outcomes, presentation of both absolute and relative effect sizes is recommended | |
| Ancillary analyses | 18 | Results of any other analyses performed, including subgroup analyses and adjusted analyses, distinguishing pre-specified from exploratory | |
| Harms | 19 | All important harms or unintended effects in each group (for specific guidance see CONSORT for harms) | |
| **Discussion** | | | |
| Limitations | 20 | Trial limitations, addressing sources of potential bias, imprecision, and, if relevant, multiplicity of analyses | |
| Generalisability | 21 | Generalisability (external validity, applicability) of the trial findings | |
| Interpretation | 22 | Interpretation consistent with results, balancing benefits and harms, and considering other relevant evidence | |
| **Other information** | | | |
| Registration | 23 | Registration number and name of trial registry | |
| Protocol | 24 | Where the full trial protocol can be accessed, if available | |
| Funding | 25 | Sources of funding and other support (such as supply of drugs), role of funders | |

*We strongly recommend reading this statement in conjunction with the CONSORT 2010 Explanation and Elaboration for important clarifications on all the items. If relevant, we also recommend reading CONSORT extensions for cluster randomised trials, non-inferiority and equivalence trials, non-pharmacological treatments, herbal interventions, and pragmatic trials. Additional extensions are forthcoming: for those and for up to date references relevant to this checklist, see www.consort-statement.org.

CONSORT 2010 checklist — Page 2

## Calcul de l'échantillon



**Updating the Minimal Important Difference for Six-Minute Walk Distance in Patients With Chronic Obstructive Pulmonary Disease**

*Anne E. Holland, PhD, Catherine J. Hill, PhD, Tshepo Rasekaba, BPhysio, Annemarie Lee, PhD, Matthew T. Naughton, MD, Christine F. McDonald, PhD*

ABSTRACT. Holland AE, Hill CJ, Rasekaba T, Lee A, Naughton MT, McDonald CF. Updating the minimal important difference for six-minute walk distance in patients with chronic obstructive pulmonary disease. Arch Phys Med Rehabil 2010; 91:221–5.

**Objective:** To establish the minimal important difference (MID) for the six-minute walk distance (6MWD) in persons with chronic obstructive pulmonary disease (COPD).

**Design:** Analysis of data from an observational study using distribution- and anchor-based methods to determine the MID in 6MWD.

**Setting:** Outpatient pulmonary rehabilitation program at 2 teaching hospitals.

**Participants:** Seventy-five patients with COPD (44 men) in a stable clinical state with mean age 70 years (SD 9y), forced expiratory volume in one second 52% (SD 21%) predicted and baseline 6MWD 359 meters (SD 104m).

**Intervention:** Not applicable.

**Main Outcome Measures:** Participants completed the six-minute walk test before and after a 7-week pulmonary rehabilitation program. Participants and clinicians completed a global rating of change score while blinded to the change in 6MWD.

**Results:** The mean change in 6MWD in participants who reported themselves to be unchanged was 17.7 meters, compared with 60.2 meters in those who reported small change and 78.4 meters in those who reported substantial change ($P<.004$). Anchor-based methods identified an MID of 25 meters (95% confidence interval 20–61m). There was excellent agreement with distribution-based methods (25.5–26.5m, $\kappa=.95$). A change in 6MWD of 14% compared with baseline also represented a clinically important effect; this threshold was less sensitive than for absolute change (sensitivity .70 vs .85).

**Conclusions:** Absolute change in 6MWD is a more sensitive indicator than percentage change from baseline. These data support the use of 6MWD as a patient-important outcome in research and clinical practice.

**Key Words:** Exercise test; Outcome assessment; Pulmonary disease, chronic obstructive; Rehabilitation.

© 2010 by the American Congress of Rehabilitation Medicine

THE SIX-MINUTE WALK distance is an important measure of functional exercise capacity in people with COPD. The distance walked is associated with clinical outcomes such as hospitalization and mortality.[1] Changes in 6MWD are used to evaluate the efficacy of therapeutic interventions including pulmonary rehabilitation,[2] surgery,[3] and pharmaceutical management.[4] In order to make treatment decisions based on the 6MWD, it is important to understand whether an observed change in walking distance over time represents a clinically important effect.

The MID is defined as "the smallest difference in score in the outcome of interest that informed patients or informed proxies perceive as important and which would lead the patient or clinician to consider a change in the management."[5] The advantage of defining an MID is that it can be used to determine whether important changes in health status have occurred in individual patients. Before the existence of an MID for the 6MWD in patients with COPD has been questioned. A retrospective analysis of clinical trial data found poor correlation between change in 6MWD and patient-reported change on quality of life questionnaires.[6] The authors conclude that the 6MWD may not be an outcome of importance to patients and that no MID exists. However, walking tests and quality of life questionnaires may measure different constructs in COPD,[6] which could explain the inability of this methodology to identify an MID for walking distance.

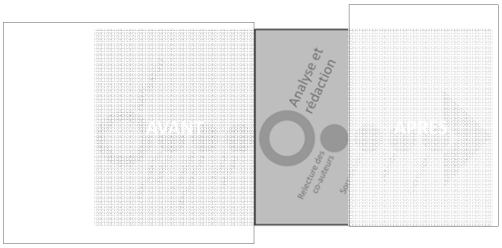
Methods for determining the MID can be classified as anchor-based or distribution-based. Anchor-based methods involve comparing a patient's change score to another measure of clinically relevant change.[5] This approach recognizes the importance of patients' perspective when assessing change in their status. Distribution-based methods, such as the SEM[7] and the effect size,[8] are built on the statistical and psychometric properties of the measure in a population. Consistent use of

## Démarches administratives et estimation du temps et du coût



ClinicalTrials.gov
A service of the U.S. National Institutes of Health

## Il n'y a plus qu'à…

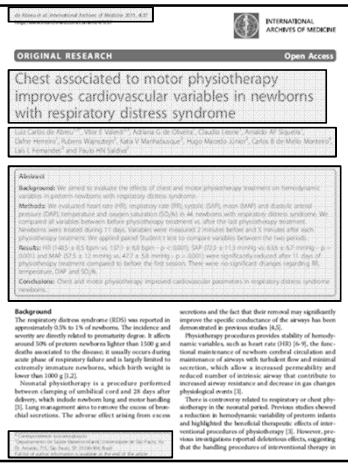



**LA REDACTION**

## Structure classique

- Titre
- Auteurs et adresse(s)
- Abstract structuré
- Corps (Structure IMRaD)
  - Introduction
  - Matériel et méthode
  - Résultats
  - Discussion
  - Conclusion
- Bibliographie

Structure conventionnelle



INTERNATIONAL ARCHIVES OF MEDICINE

ORIGINAL RESEARCH — Open Access

Chest associated to motor physiotherapy improves cardiovascular variables in newborns with respiratory distress syndrome

Abstract

Background: We aimed to evaluate the effects of chest and motor physiotherapy treatment on hemodynamic variables in preterm newborns with respiratory distress syndrome.

Methods: We evaluated heart rate (HR), respiratory rate (RR), systolic (SAP), mean (MAP) and diastolic arterial pressure (DAP), temperature and oxygen saturation ($SO_2$%) in 44 newborns with respiratory distress syndrome. We compared all variables between before physiotherapy treatment vs. after the last physiotherapy treatment. Newborns were treated during 11 days. Variables were measured 2 minutes before and 5 minutes after each physiotherapy treatment. We applied paired Student t test to compare variables between the two periods.

Results: HR (148.5 ± 8.5 bpm vs. 137.1 ± 6.8 bpm - p < 0.001), SAP (72.3 ± 11.3 mmHg vs. 63.6 ± 6.7 mmHg - p = 0.001) and MAP (57.5 ± 12 mmHg vs. 47.7 ± 5.8 mmHg - p = 0.001) were significantly reduced after 11 days of physiotherapy treatment compared to before the first session. There were no significant changes regarding RR, temperature, DAP and $SO_2$%.

Conclusions: Chest and motor physiotherapy improved cardiovascular parameters in respiratory distress syndrome newborns.

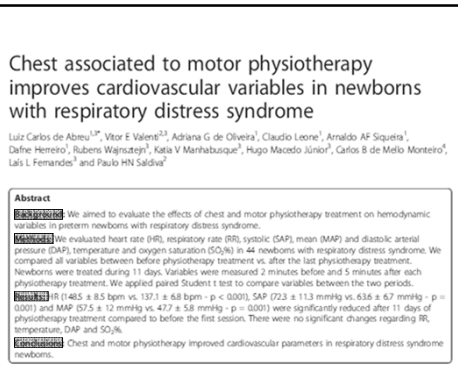
Background

The respiratory distress syndrome (RDS) was reported in approximately 0.3% to 1% of newborns. The incidence and severity are directly related to prematurity degree. It affects around 50% of preterm newborns lighter than 1500 g and deaths associated to the disease, it usually occurs during acute phase of respiratory failure and is largely limited to extremely immature newborns, which birth weight is lower than 1000 g [1,2].

Neonatal physiotherapy is a procedure performed between clamping of umbilical cord and 28 days after delivery, which include newborn lung and motor handling [3]. Lung management aims to remove the excess of bronchial secretions. The adverse effect arising from excess secretions and the fact that their removal may significantly improve the specific conductance of the airways has been demonstrated in previous studies [4,5].

Physiotherapy procedures provides stability of hemodynamic variables, such as heart rate (HR) [6-9], the functional maintenance of newborn cerebral circulation and maintenance of airways with turbulent flow and minimal secretion, which allow a increased permeability and reduced number of intrinsic airway that contribute to increased airway resistance and decrease in gas changes physiological events [3].

There is controverse related to respiratory or chest physiotherapy in the neonatal period. Previous studies showed a reduction in hemodynamic variability of preterm infants and highlighted the beneficial therapeutic effects of interventional procedures of physiotherapy [3]. However, previous investigations reported deleterious effects, suggesting that the handling procedures of interventional therapy in



Chest associated to motor physiotherapy improves cardiovascular variables in newborns with respiratory distress syndrome

Luiz Carlos de Abreu[1,3*], Vitor E Valenti[2,3], Adriana G de Oliveira[1], Claudio Leone[1], Arnaldo AF Siqueira[1], Dafne Herreiro[1], Rubens Wajnsztejn[3], Katia V Manhabusque[3], Hugo Macedo Júnior[3], Carlos B de Mello Monteiro[4], Laís L Fernandes[3] and Paulo HN Saldiva[2]

Abstract

Background: We aimed to evaluate the effects of chest and motor physiotherapy treatment on hemodynamic variables in preterm newborns with respiratory distress syndrome.

Methods: We evaluated heart rate (HR), respiratory rate (RR), systolic (SAP), mean (MAP) and diastolic arterial pressure (DAP), temperature and oxygen saturation ($SO_2$%) in 44 newborns with respiratory distress syndrome. We compared all variables between before physiotherapy treatment vs. after the last physiotherapy treatment. Newborns were treated during 11 days. Variables were measured 2 minutes before and 5 minutes after each physiotherapy treatment. We applied paired Student t test to compare variables between the two periods.

Results: HR (148.5 ± 8.5 bpm vs. 137.1 ± 6.8 bpm - p < 0.001), SAP (72.3 ± 11.3 mmHg vs. 63.6 ± 6.7 mmHg - p = 0.001) and MAP (57.5 ± 12 mmHg vs. 47.7 ± 5.8 mmHg - p = 0.001) were significantly reduced after 11 days of physiotherapy treatment compared to before the first session. There were no significant changes regarding RR, temperature, DAP and $SO_2$%.

Conclusions: Chest and motor physiotherapy improved cardiovascular parameters in respiratory distress syndrome newborns.

Pertinence du titre

Lecture rapide (Conclusions – Méthode – Résultats)

# Introduction


**Inspiratory Muscle Strength and Endurance in Children and Adolescents with Cystic Fibrosis**

Cystic fibrosis is a disease characterized by progressive loss of pulmonary function, with obstruction of the airways caused by abnormal production of mucus and by the presence of chronic inflammation and recurring infections.[1] Respiratory muscle strength has been much evaluated in these subjects, but studies are still contradictory.[2] Some authors report that strength may be within normality or even increased, suggesting a muscle training effect in response to airway obstruction and chronic coughing.[3,4] On the other hand, authors who demonstrate a diminished strength associate muscle weakness with hyperinflation and malnutrition,[5] suggesting that these subjects are not able to maintain muscle strength at advanced stages of the disease.[6]

Although measuring maximum static pressures supplies information about strength, it does not quantify inspiratory muscle endurance.[7] Evidence shows that the evaluation of muscle endurance may be more relevant than strength in subjects with chronic obstructive pulmonary disease,[8,9] since endurance is the capacity of a muscle or a muscle group to sustain a given task over time and is directly related to muscle fatigue.[10] However, few studies have evaluated inspiratory muscle endurance in subjects with cystic fibrosis, and these have shown contradictory results, just as for muscle strength. One previous study showed an apparent increase of endurance due to the adaptation of the muscles to the chronic stress of ventilating against a load generated by airway obstruction.[11] On the other hand, there is evidence that endurance may be diminished independent of nutritional status, the presence of airway obstruction, pulmonary hyperinflation, respiratory muscle strength, or maximum exercise capacity[12-14] and may be a major parameter to evaluate dyspnea in subjects with cystic fibrosis.[15] The individuals with cystic fibrosis who have a reduced capacity to contract the respiratory muscles become more susceptible to muscle fatigue with a limitation in the ability to carry out prolonged activities or tasks. However, the degree of inspiratory muscle endurance impairment and how that impairment is associated with important lung function parameters in children and adolescents with cystic fibrosis remain poorly understood.

*Pseudomonas aeruginosa* is the most common pathogen in cystic fibrosis lung disease and is associated with gradual decline of pulmonary status in children and young adults.[16] Once infection is established, there is an accelerated decline in lung function, quality of life, and survival.[14,15] Furthermore, chronic *P. aeruginosa* infection has been related to decreased maximum inspiratory pressure ($P_{I,max}$) and is probably an independent predictor of respiratory muscle compromise in cystic fibrosis,[14] although its relation to muscle endurance remains unclear.

The aim of our study was to evaluate muscle strength and inspiratory muscle endurance in children and adolescents with cystic fibrosis and to compare them with age–matched healthy controls. The role of *P. aeruginosa* and lung function compromise was assessed, and we further examined possible associations of strength and endurance with other pulmonary function parameters, such as $FEV_1$, total lung capacity, residual volume (RV), and airway resistance. A better understanding of inspiratory muscle strength and endurance could contribute to the development of earlier preventive measures and help in the therapeutic intervention processes in cystic fibrosis.

Respiratory Care 2016 vol. 61 no. 2 184-191

Généralité : CF = obstructive

Contradictions sur la force des patients CF

Endurance est meilleure que force dans les maladies respiratoires
Peu d'études dans CF même si la physiopathologie suggère une diminution

Ps a joue un rôle sur les EFR et force. Endurance?

But : mesurer force et endurance et évaluer influence du Ps a chez CF

# Objectifs de l'étude

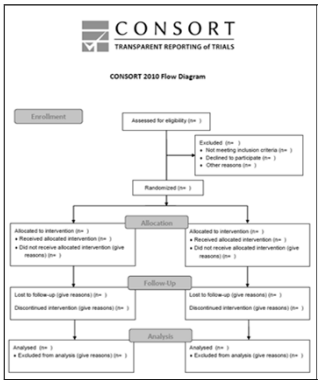
- Deux types
  - Objectif principal
    - Identifié sans ambiguïté
    - Le nombre de sujets nécessaires sera calculé pour répondre à l'objectif principal
    - La définition de l'objectif doit donner des précisions sur la forme clinique de la maladie évaluée et sur le critère utilisé pour mesurer l'objectif (critère de jugement).
  - Objectifs secondaires
    - Facultatifs
    - Clairement identifiés en tant que tels.

# Méthode

- Sujets
  - Ethique OK
  - Où
  - Inclusion
  - Exclusion
- Design (RCT, cross-over…, timing...)
- Outcomes (Quoi et comment)
- Intervention (Quoi et comment)
- Statistiques (Quoi et pourquoi)

# Résultats

- Uniquement des résultats!!!!
- Jamais de redondance
- Présentation simple et ordonnée en fonction des objectifs/méthode
- Premièrement, le recrutement. Ensuite la population. Enfin les effets




# Exprimer correctement les résultats

**Table 1 Demographic and clinical characteristics of study subjects**

| | SSc-ILD (n = 83) | |
|---|---|---|
| Male | 17 (20) | |
| Mean (SD) age (years) | 49.5 (11.5) | |
| White, n (%) | 66 (80) | |
| Smoking status, n (%) | | |
| Current | 9 (11) | |
| Former | 32 (39) | |
| Never | 42 (50) | |
| Pulmonary physiology | | |
| Rest FVC (%) | 70.9 (21.4) | 73 (52–89) |
| Rest $T_{LCO}$ (%) | 70.4 (22.7) | 72 (41–89) |
| Surgical biopsy, n (%) | 17 (20) | |
| UIP | 6 (35) | |
| NSIP | 4 (24) | |
| ESHL | 4 (24) | |
| Other | 3 (17) | |
| Exercise variables | | |
| Oxygenation | | |
| Baseline $SpO_2$ | 93.8 (2.6) | 94 (93–96) |
| Baseline $SaO_2$ | 92.3 (2.5) | 93 (91–94) |
| Baseline $PaO_2$ | 71.0 (9.9) | 71 (64–78) |
| Max exercise $SpO_2$ | 91.4 (5.8) | 93 (89–96) |
| Max exercise $SaO_2$ | 89.9 (6.0) | 92 (87–94) |
| Max exercise $PaO_2$ | 70.2 (17.2) | 69 (56–83) |
| Exercise capacity | | |
| $V_{O_2}$max (l/min) | 1.0 (0.4) | 0.9 (0.7–1.3) |
| $V_{O_2}$max (%) | 56.1 (17.2) | 56 (44–65) |
| Work (Watts) | 83.8 (34.2) | 75 (60–100) |
| Work (%) | 62.8 (19.2) | 63 (38–72) |

Data presented as n (%), mean (SD) or median (interquartile range).
FVC, percentage predicted forced vital capacity; ESHL, end stage honeycomb lung; NSIP, non-specific interstitial pneumonia; $Pa_{O_2}$, arterial oxygen tension; $Spo_2$, peripheral oxygen saturation; $Sa_{O_2}$, arterial blood saturation; SSc-ILD, fibrosing interstitial lung disease related to systemic sclerosis; $T_{LCO}$, percentage predicted lung carbon monoxide transfer factor; UIP, usual interstitial pneumonia; $V_{O_2}$max, maximum oxygen uptake.

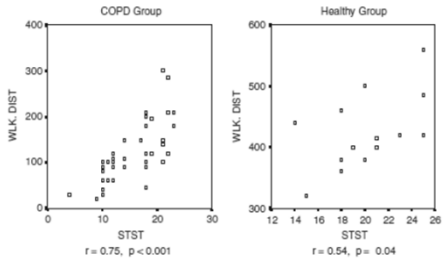



**Figure 1** Relationship between the 6min walking distance and result of STST in healthy and COPD groups.

## Graphiques

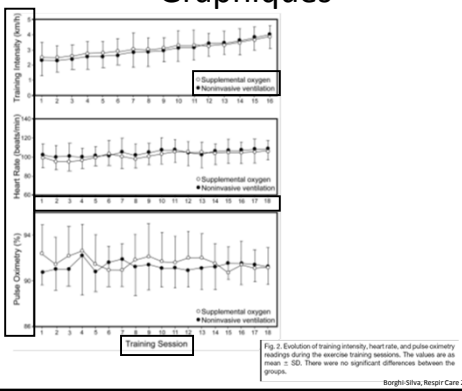
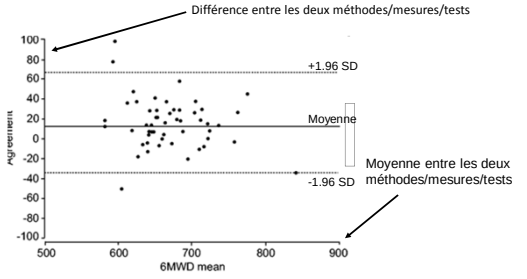



Fig. 2. Evolution of training intensity, heart rate, and pulse oximetry readings during the exercise training sessions. The values are as mean ± SD. There were no significant differences between the groups.

Borghi-Silva, Respir Care 2010;55(7):885– 894

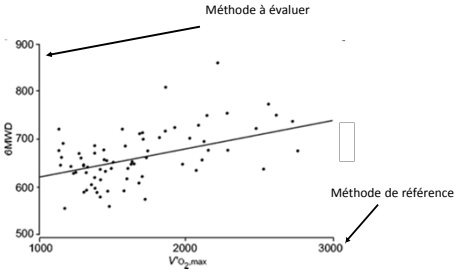
## Reproductibilité : Bland-Altman




Bland-Altman plot of agreement of 6-min walk distance (6MWD) between two tests. The bias (mean difference between the two paired means) was 15 m (-- ---) and the limit of agreement (------) was between -35 and 65 m

Li, Eur Respir J 2005; 25:1057-1060

## Validité : corrélation




Relationship between 6-min walk distance (6MWD) and maximum oxygen consumption (V'O2,max) (r = 0.44, p<0.0001)

Li, Eur Respir J 2005; 25:1057-1060

ARCHIVOS DE BRONCONEUMOLOGIA

www.archbronconeumol.org

Original Article

Antibiotic therapy and Effects of Respiratory Physiotherapy Techniques Cystic Fibrosis Patients Treated for Acute Lung Exacerbation: an Experimental Study

Camila Isabel da Silva Santos[a,*], Maria Angela Gonçalves de Oliveira Ribeiro[b], André Moreno Morcillo[c], Antônio Fernando Ribeiro[c] and José Dirceu Ribeiro[c]

**Table 2**
Mean and standard deviation of the HR, RF, $SpO_2$ and lung function parameters in hospitalisation and following discharge from hospital after intravenous antibiotics and respiratory physiotherapy

| | Hospitalisation | | Discharge | | |
|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | P value |
| HR (bpm) | 109.0 | 22.5 | 99.6 | 20.6 | 0.055 |
| RF (rpm) | 27.6 | 8.1 | 22.5 | 5.0 | 0.003 |
| $SpO_2$ (%) | 92.4 | 4.9 | 94.6 | 2.3 | 0.006 |
| $FEV_1$ (%) | 44.7 | 21.6 | 50.0 | 22.6 | 0.021 |
| FVC (%) | 61.7 | 21.3 | 67.3 | 24.5 | 0.080 |
| $FEF_{25-75\%}$ (%) | 26.3 | 20.4 | 31.1 | 22.0 | 0.247 |
| PEF (%) | 56.2 | 25.8 | 66.0 | 26.0 | 0.006 |
| IC (%) | 63.3 | 21.2 | 68.1 | 21.7 | 0.129 |
| SVC (%) | 62.4 | 20.7 | 67.6 | 21.4 | 0.098 |
| MVV (%) | 53.5 | 29.4 | 59.3 | 26.8 | 0.065 |
| ERV (%) | 62.8 | 31.1 | 68.9 | 45.5 | 0.586 |

ERV: expiratory reserve volume; $FEF_{25-75\%}$: forced expiratory flow 25-75%; $FEV_1$: forced expiratory volume in one second; FVC: forced vital capacity; IC: inhalation capacity; MVV: maximum voluntary ventilation; p: probability of the Wilcoxon test; PEF: peak expiratory flow; $SpO_2$: oxygen saturation; SVC: slow vital capacity; (%), predictable percentage.

## Discussion

- Mise en avant des résultats principaux et ce qu'on en tire comme conclusion
- Observations précédentes étayant les différences/similitudes au niveau des résultats sur base de la littérature
- Implications cliniques
- Limitations
- Pistes pour le futur
- Conclusion générale

## Signification
## Statistique vs clinique

*"Although it is tempting to equate statistical significance with clinical importance, critical readers should avoid this temptation. To be clinically important requires a substantial change in an outcome that matters. Statistically significant changes, however, can be observed with trivial outcomes. And because statistical significance is powerfully influenced by the number of observations, statistically significant changes can be observed with trivial (small) changes in important outcomes. Large studies can be significant without being clinically important and small studies may be important without being significant."*

*(Effective Clinical Practice, July/August 2001, ACP)*

## Bibliographie

- Référence (uniformité!!!) selon un style précis
  - Article

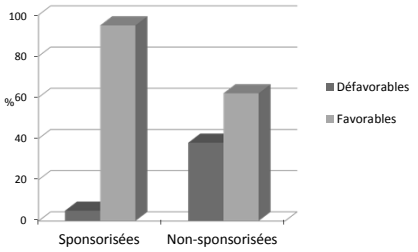
    Vega KJ, Pina I, Krevsky B. Heart transplantation is associated with an increased risk for pancreatobiliary disease. Ann Intern Med 1996;124(11): 980-3.
  - Book

    Ringsven MK, Bond D. Gerontology and leadership skills for nurses. 2nd ed. Albany (NY): Delmar Publishers; 1996.
  - Chapitre

    Phillips SJ, Whisnant JP. Hypertension and stroke. In: Laragh JH, Brenner BM, editors. Hypertension: pathophysiology, diagnosis, and management. 2nd ed. New York: Raven Press; 1995. p. 465-78.

## Conflits d'intérêt

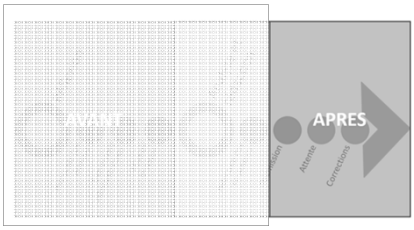
- Méta-analyse – 44 articles – Oncologie
- Evaluation économique des produits




Friedberg M et al. JAMA 1999;282:1453-1457

## Titre

- En dernier lieu!
- *Cough Augmentation in Subjects With Duchenne Muscular Dystrophy: Comparison of Air Stacking via a Resuscitator Bag Versus Mechanical Ventilation*
- *Air Stacking via a Resuscitator Bag Versus Mechanical Ventilation Improves Cough in Subjects With Duchenne Muscular Dystrophy*
- *Comparison of Air Stacking via a Resuscitator Bag Versus Mechanical Ventilation in Subjects With Duchenne Muscular Dystrophy*




**APRES LA REDACTION**


**CHOISIR LE JOURNAL ET LE PUBLIC**

***IMPACT FACTOR***

***nombre de citations /nombre d'articles publiés***

***(sur une période de référence de deux ans)***

**Diverses influences**

- Nombre de parutions
- Nombre d'articles par numéro
- Fréquence des Review
- Type de lectorat (spécialité)

http://www.citefactor.org/journal-impact-factor-list-2014.html

Addition of motivational interventions to exercise and traditional Physiotherapy: a review and meta-analysis

*N. McGrane, R. Galvin, T. Cusack, E. Stokes*

Kinésithérapie la revue

Physiotherapy

- Population francophone : 220 millions
- Population anglophone : 800 millions

$$\frac{\text{Nombre de citations}}{\text{Nombre d'articles}} = IF = \frac{\text{Nombre de citations}}{\text{Nombre d'articles}}$$

# Qu'est-ce qui va être le plus cité?

Review

**Recent advances in the management of cystic fibrosis**

Jane C Davies,[1,2] Anne-Marie Elborn,[2] Christopher Orchard[3]

**ABSTRACT**

Cystic fibrosis is a disease that still causes a reduced life expectancy. It is a common inherited, multi-system affected individual with often a combination of multiple oral and inhaled medications, as well as physiotherapy, required on a daily basis. In this article, we look at an overview of the pathogenesis, how this might lead to therapies, all in the aim of increasing life expectancy and reducing treatment burden.

**BACKGROUND**

Cystic fibrosis (CF) affects over 8000 people in the UK and an estimated 100 000 globally. Prognosis has improved greatly over the last few decades, but patients still have a reduced life expectancy and a huge treatment burden. This review focuses on treatment developments for CF lung disease over the last 5 years. It describes the pathogenesis of the disease pathogenesis (which can be read in more detail in[1]) and highlight areas at which new drugs are being targeted.

**CF PATHOGENESIS**

CF is caused by a defect in the CF transmembrane

Infection and inflammation start early and become chronic; accumulation of DNA and actin released from dead neutrophils increases the viscosity of mucus and impairs clearance. Proteases and other inflammatory cell products, while possibly being responsible for limiting the infection to the airways, lead to airway wall inflammation, remodelling, and ultimately to destruction of lung tissue. Despite currently available treatments, around 90% of patients will die of respiratory failure unless they receive a lung transplant.

**TREATMENT STRATEGIES**

New treatment strategies target multiple steps in the CF pathway, including (a) gene therapy, (b) CFTR protein modulation, (c) rehydration of the airway surface and/or mucolytics, (d) anti-inflammatories and (e) anti-infective agents.

**CFTR gene therapy**

Since the discovery of the CFTR gene, numerous attempts have been made to reverse the basic defect by gene transfer. In vitro experiments demonstrated successful restoration of ion transport with either modified viral vectors or synthetic gene transfer techniques, but achieving similar success in the

*Research Article*

**Supplementation with Red Palm Oil Increases β-Carotene and Vitamin A Blood Levels in Patients with Cystic Fibrosis**

Olaf Sommerburg,[1,2] Silke De Spirt,[3] Annett Mattern,[1] Cornelia Joachim,[1] Claus-Dieter Langhans,[4] Kalsaibhi Nesaretnam,[5] Werner Siems,[6] Wilhelm Stahl,[3] and Marcus A. Mall[1,2]

[1]*Division of Pediatric Pulmonology & Allergy and Cystic Fibrosis Centre, Department of Pediatrics III, Children's Hospital, University of Heidelberg, Im Neuenheimer Feld 430, 69120 Heidelberg, Germany*

[2]*Translational Lung Research Centre Heidelberg (TLRC), Member of the German Centre for Lung Research (DZL), Im Neuenheimer Feld 350, 69120 Heidelberg, Germany*

[3]*Institute of Biochemistry and Molecular Biology I, Faculty of Medicine, Heinrich-Heine University Duesseldorf, Universitätsstrasse 1, 40225 Duesseldorf, Germany*

[4]*Division of Metabolic Diseases and Newborn Screening Centre, Department of Paediatrics I, Children's Hospital, University of Heidelberg, Im Neuenheimer Feld 430, 69120 Heidelberg, Germany*

[5]*Product Development and Advisory Services, Malaysian Palm Oil Board (MPOB), 6 Persiaran Institusi, Bandar Baru Bangi, 43000 Kajang, Selangor, Malaysia*

[6]*Research Institute of Physiotherapy and Gerontology, EuroMed Institute of Medical Education, Hindenburgring 12a, 38667 Bad Harzburg, Germany*


**Your Submission YRMED-D-16-00018**

ees.yrmed.0.36d5a9.6e11bf78@eesmail.elsevier.com de la part de Respiratory Medicine Editorial Office" <respiratory

Vous avez transféré ce message le 24/01/2016 08:23.
Les sauts de ligne en surnombre de ce message ont été supprimés.

Envoyé : dim. 24/01/2016 04:47
À : REYCHLER Grégory

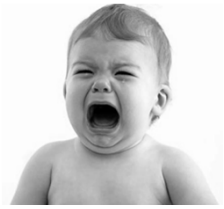
Manuscript Title: One minute sit-to-stand test as an alternative to 6MWT in COPD patients Respiratory Medicine

Dear Dr. Reychler,

Respiratory Medicine receives an increasing number of high quality papers for review. This forces us to make strict priorities regarding profile and content. Even though your paper contains some interesting data, I am sorry to tell you that your paper, after an initial editorial review, did not reach sufficient rating for to be recommended for publication. We would like to see this technique applied to a greater number and broader range of COPD patients.

Thank you for considering Respiratory Medicine as a forum for your work even though I had to turn this paper down.

Yours sincerely



**Respiratory Care - Decision on Manuscript ID RC-04547**

onbehalfof+dhess+aarc.org@manuscriptcentral.com de la part de dhess@aarc.org

Envoyé : dim. 22/11/2015 12:18
À : REYCHLER Grégory
Cc : sara.moore@aarc.org

Message Respiratory-Care-Reference-Format.pdf (17 Ko)

22-Nov-2015

Dear Dr. Reychler:

Manuscript ID RC-04547 entitled "Reproducibility of the sputum color evaluation depends on the category of caregivers" has been evaluated by 3 external consultants, whose comments are included at the bottom of this letter.

The manuscript cannot be accepted for publication in its current form, but potentially could be if satisfactorily revised, dealing with the concerns raised by the reviewers. Can you address the reviewers' concerns in a revised manuscript?

As suggested by the reviewers, the Discussion section could be improved.

To revise your paper, click the link below and it will take you to the first page for creating your revised submission.

Please provide 2 versions of the revised text files: one clean (no changes indicated) and one in which the changes are highlighted either via the Track Changes function in Microsoft Word, or by using a different color of text to show the changes.

Because we are trying to facilitate timely publication of manuscripts, your revised manuscript should be uploaded as soon as possible. After 6 months, the file will be closed and any subsequent submission will be treated as a new manuscript.

**Reviewer: 1**

Comments to the Author
In spite of apparently correct methodology followed and also, the importance of the issue in order to make decisions in clinical practice, I miss a better discussion in this section.

Authors repeated results section and aldo explain more about results in a section that is not adequate.

I miss a comparison with other studies and also recomendations or solutions to the trouble they encountered.

In adittion it will be OK to present data about the samples you analized, and about the patients they belonged, I mean, we don´t now the diagnosis of these patients and definetly, if the randomization in sample selection worked.

**Reviewer: 2**

Comments to the Author
It is an interesting manuscript that reveals discrepancies at one point we usually think in clinical practice as is the appearance of bronchial secretions.

**Reviewer: 3**

Comments to the Author
This is a well structured study raising awareness to some inconsistencies in medical practice based on a small sample size and a single assessment tool.

I have asked the editor to make a judgment whether sputum analysis has been used as a single diagnostic tool to make clinical decisions? The authors need to present a case to persuade readers that in clinical practice this is used on its own and that this study therefore replicates a "real" clinical setting. Then there might be a good case to raise the theme of unreliability of health professional's opinions in relation to sputum colour.

In terms of areas for improvement of this paper there is a single area but I understant there is considerable work and re-analysis involved and hence I woudl suggest this is a major revision: 18 health professionals data (3 from each area) is considerably limited data to draw any significant non-qualitative conclusions. Further data should be collected with a view of drawing any meaningful conclusions about inter-rater reliability amongst health professionals. At the moment the small sample size only allows speculative observations but lacks power for any significant statistical analyses.

Reviewer(s)' Comments to Author:
Reviewer: 1

Comments to the Author
In spite of interesting topic presented in this work, not enough statistical power can be asure due mainly to the small sample size. Further studies will be required to ensure it.

Reviewer: 2

Comments to the Author
I am satisfied with the authors' responses and believe the paper could be published in its current improved version.
Congratulations!

**Respiratory Care - Decision on Manuscript ID RC-04547.R1**

onbehalfof+dhess+aarc.org@manuscriptcentral.com de la part de dhess@aarc.org

Vous avez transféré ce message le 28/12/2015 18:17.

Envoyé : lun. 28/12/2015 18:14
À : REYCHLER Grégory
Cc : sara.moore@aarc.org; branson@aarc.org; gail.drescher@aarc.org

Dear Dr. Reychler:

Thank you for revising and resubmitting your manuscript entitled "Reproducibility of the sputum color evaluation depends on the category of caregivers." I am satisfied with the changes, and am therefore pleased to accept it for publication in Respiratory Care.

Your paper will be scheduled for the next available issue of the Journal. We try to publish papers as soon as possible after they are accepted, but in some cases we experience a backlog of 6 to 9 months between acceptance and publication. You will receive page proof prior to final publication.

In the meantime, your paper will be uploaded as an Epub (paper in press) and will appear in PubMed. It typically requires several months for papers to complete the production process prior to ePub.

Please note that by this email notifying you that we have accepted your paper, copyright is automatically transferred to


http://judo-la-salvetat-colomiers.over-blog.fr/