15es JOURNÉES FRANCOPHONES Alvéole

GROUPE HOSPITALIER DU HAVRE

ERPHAN
Équipe de recherche paramédicale sur le handicap neuromoteur

UVSQ université PARIS-SACLAY

Le réentrainement à l'effort avec ventilation à haut débit nasal est-il plus efficace ?

Guillaume PRIEUR, MKDE, PhD

Contre

alvéole
OSEZ UN SOUFFLE NOUVEAU
Groupe de travail de la SPLF pour Exercice et Réhabilitation Respiratoire

SPLF
Société de Pneumologie de Langue Française

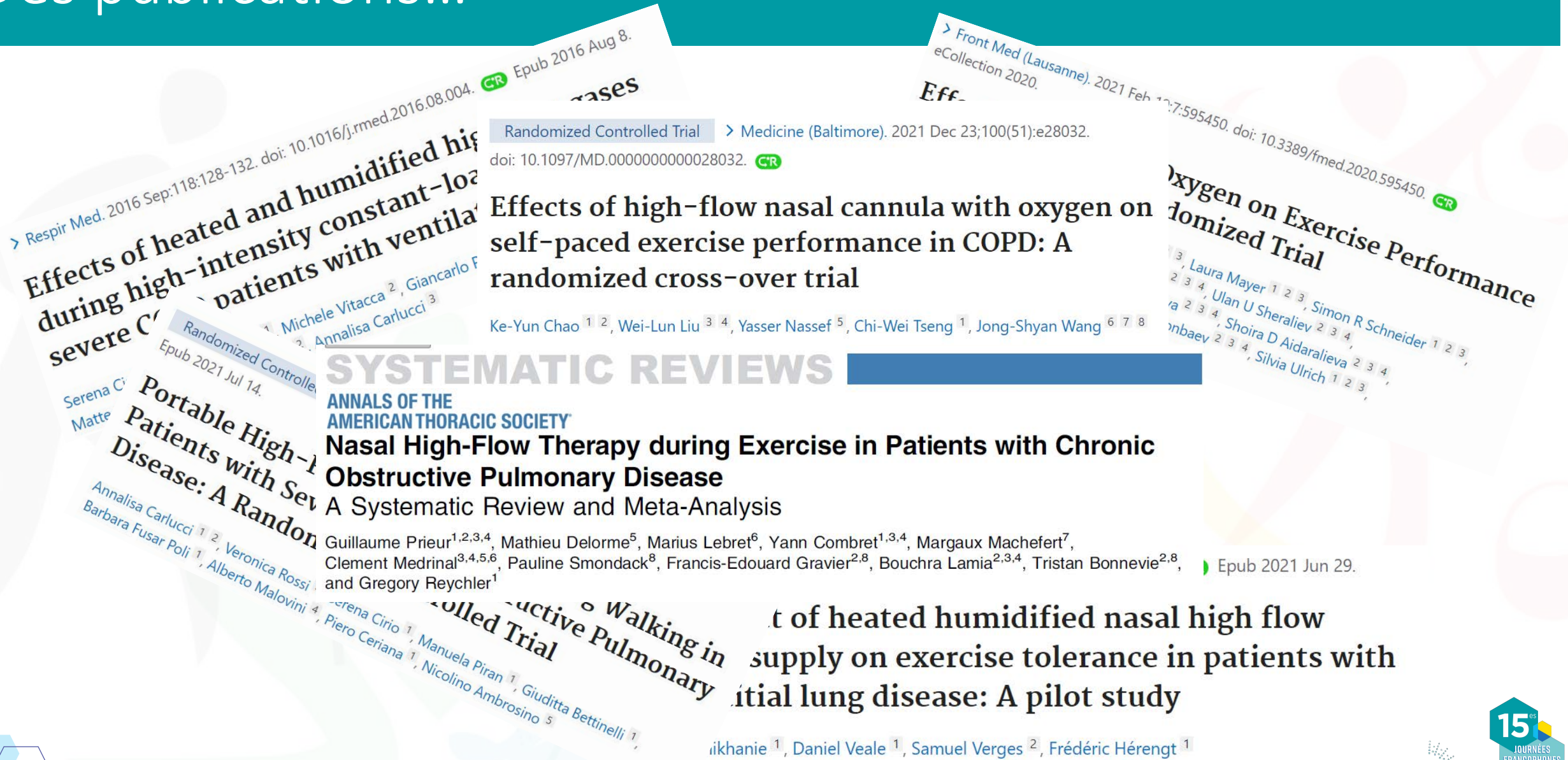
Liens d’intérêts

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

Aucun conflit d’intérêt en relation avec la présentation

Le haut débit nasal à l'effort….

Des publications…

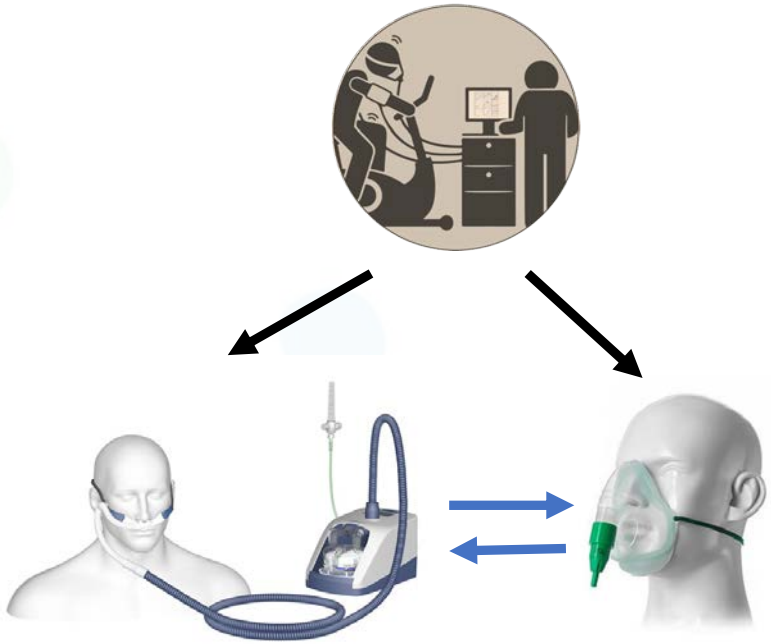


Un peu d'histoire

respiratory MEDICINE

Effects of heated and humidified high flow gases during high-intensity constant-load exercise on severe COPD patients with ventilatory limitation

Serena Cirio [a], Manuela Piran [a], Michele Vitacca [b], Giancarlo Piaggi [a], Piero Ceriana [a], Matteo Prazzoli [a], Mara Paneroni [b], Annalisa Carlucci [a, *]



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VEMS 35 %
Débit 58,5 L/min
Iso FiO_2 (41 ± 36%)

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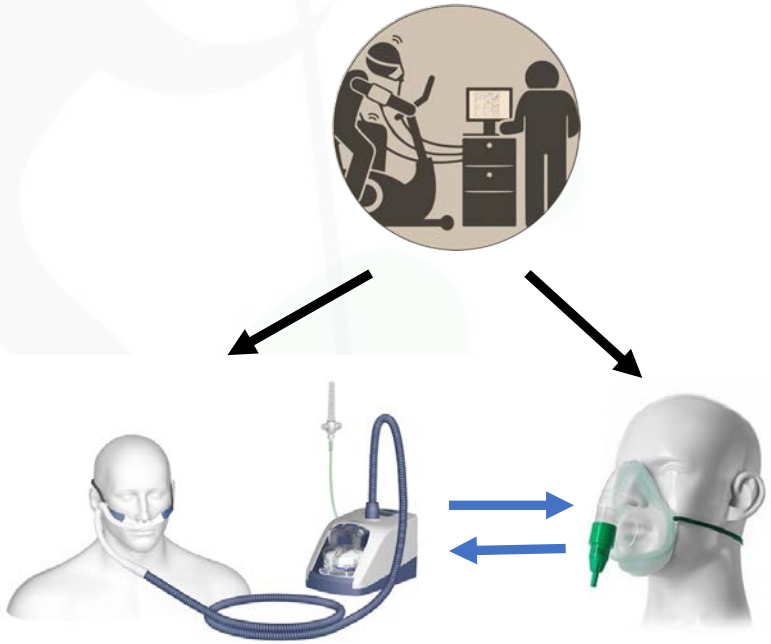

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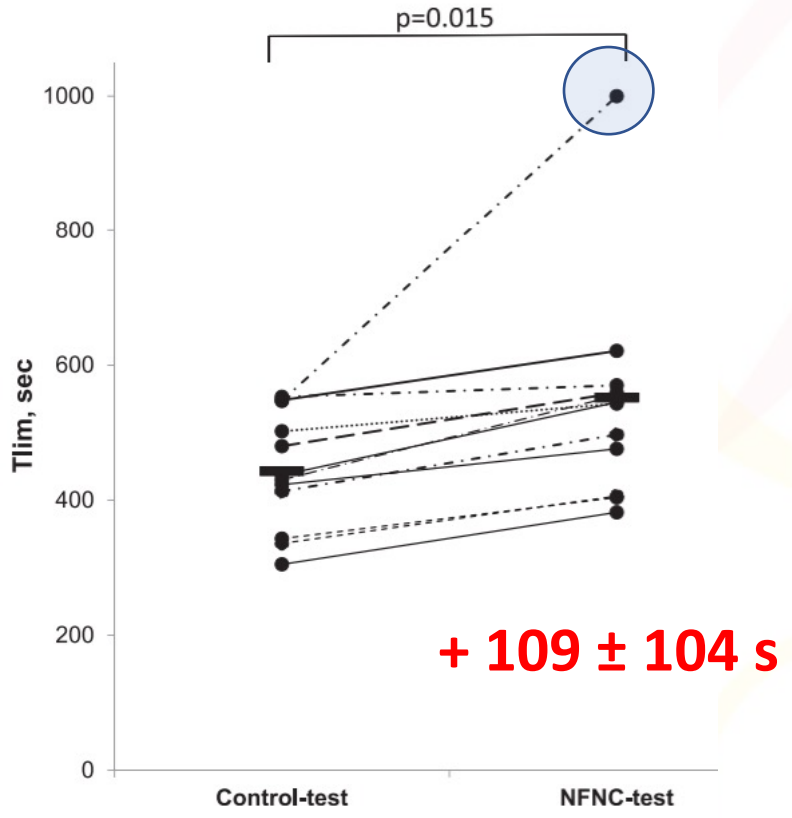

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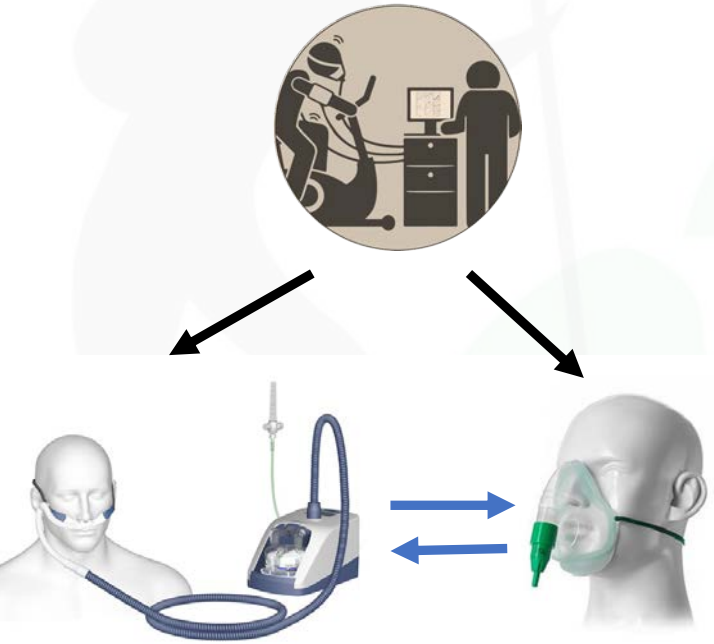

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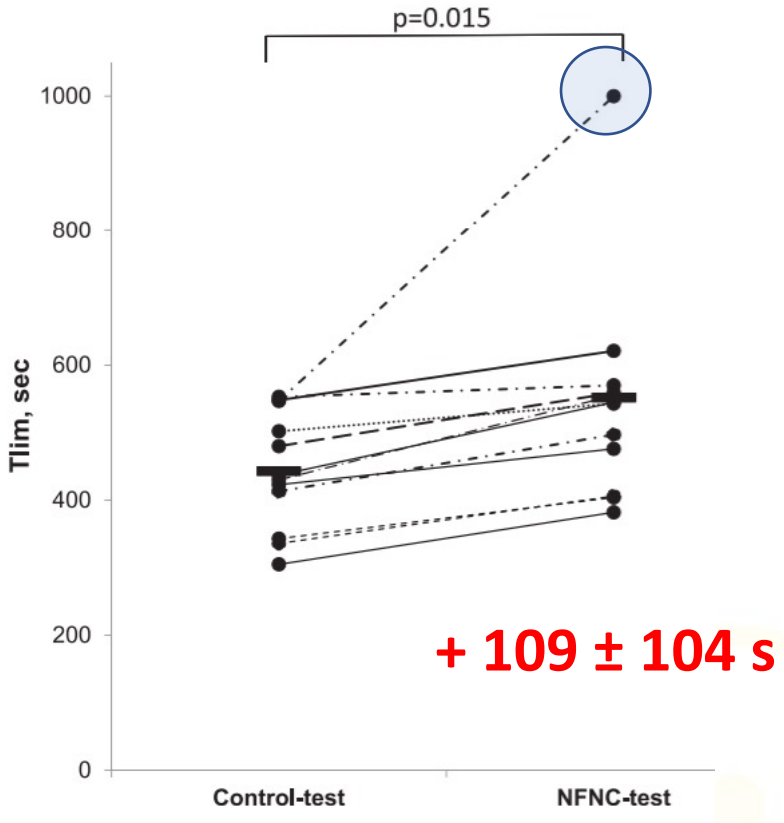

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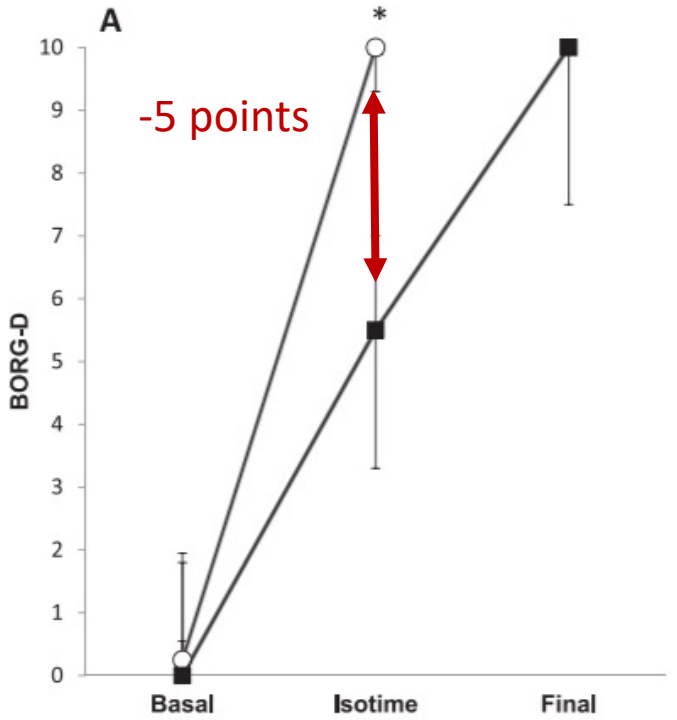

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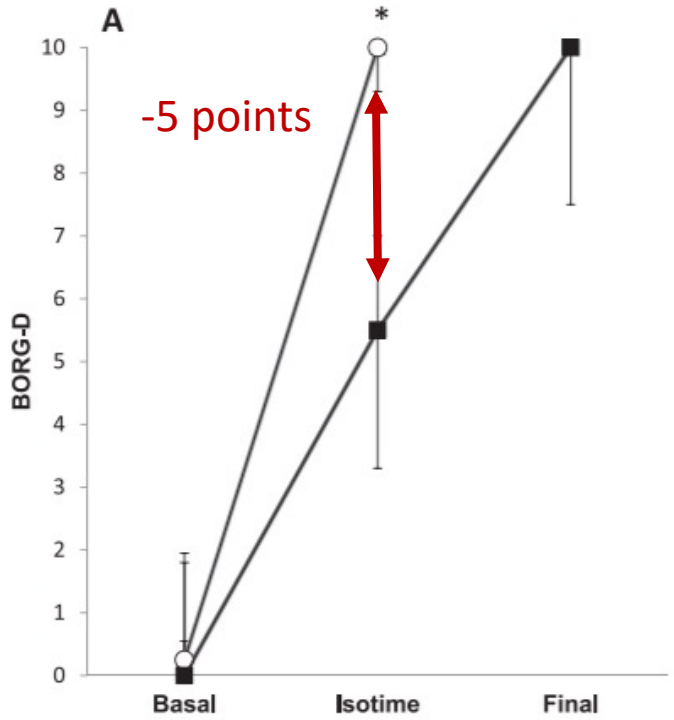
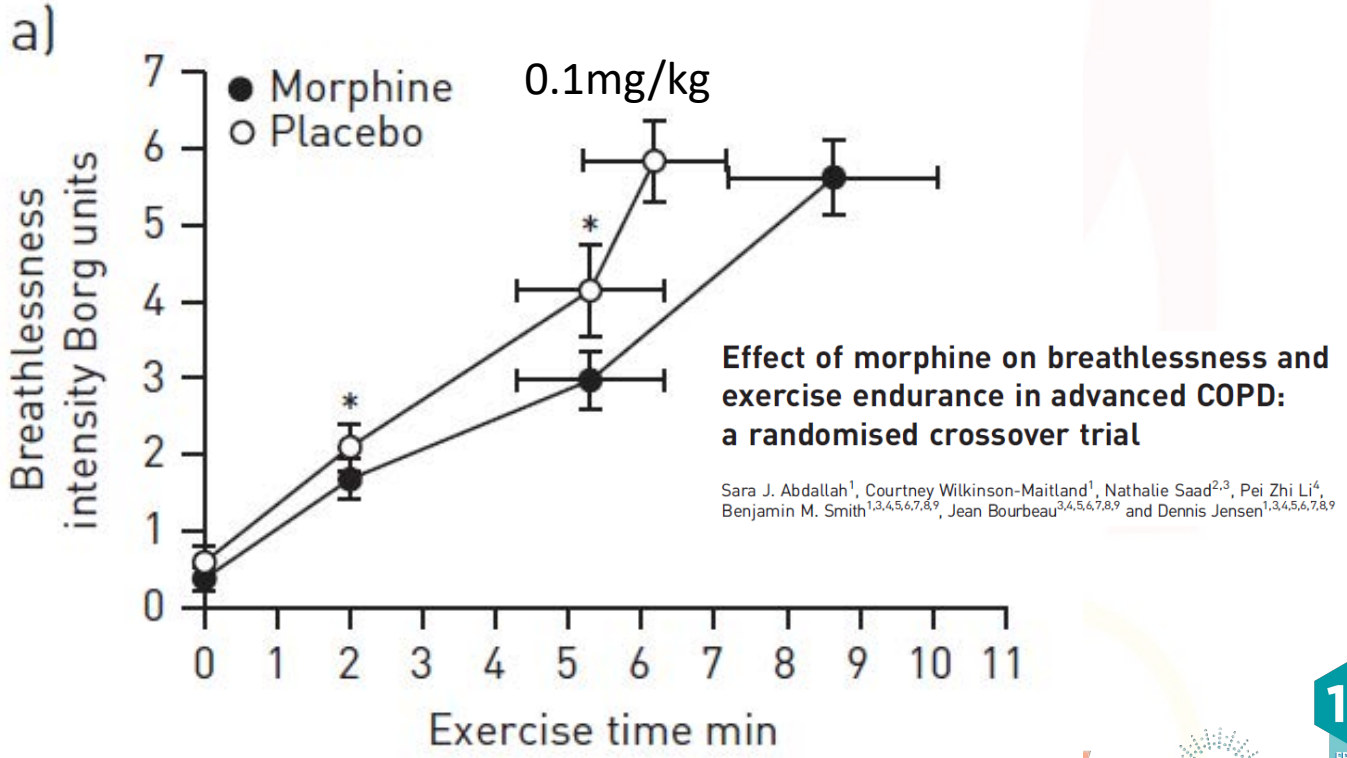




Effect of morphine on breathlessness and exercise endurance in advanced COPD: a randomised crossover trial

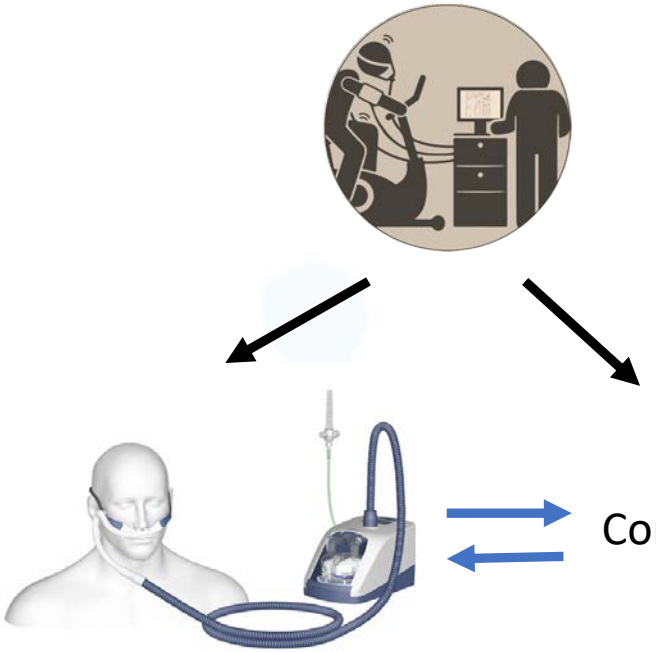
Sara J. Abdallah[1], Courtney Wilkinson-Maitland[1], Nathalie Saad[2,3], Pei Zhi Li[4], Benjamin M. Smith[1,3,4,5,6,7,8,9], Jean Bourbeau[3,4,5,6,7,8,9] and Dennis Jensen[1,3,4,5,6,7,8,9]

On a vérifié par nous même

Respirology

Nasal high flow does not improve exercise tolerance in COPD patients recovering from acute exacerbation: A randomized crossover study

GUILLAUME PRIEUR,[1,2,3,4] CLEMENT MEDRINAL,[2,3,4] YANN COMBRET,[1,5] ELISE DUPUIS LOZERON,[6] TRISTAN BONNEVIE,[2,7] FRANCIS-EDOUARD GRAVIER,[2,7] JEAN QUIEFFIN,[3,4] BOUCHRA LAMIA,[2,3,4] JEAN-CHRISTIAN BOREL[8,9] AND GREGORY REYCHLER[1,10]



Condition habituelle

19 patients BPCO post-exacerbation

VEMS 28 %

Débit 60 L/min

SpO_2 > 90 %

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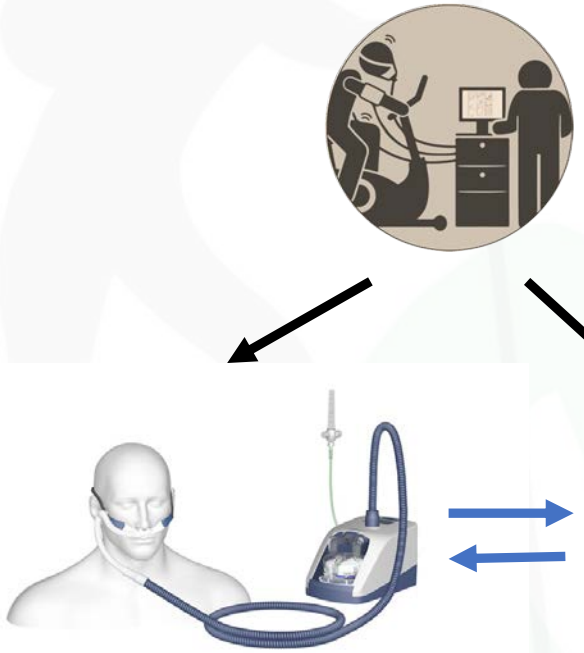

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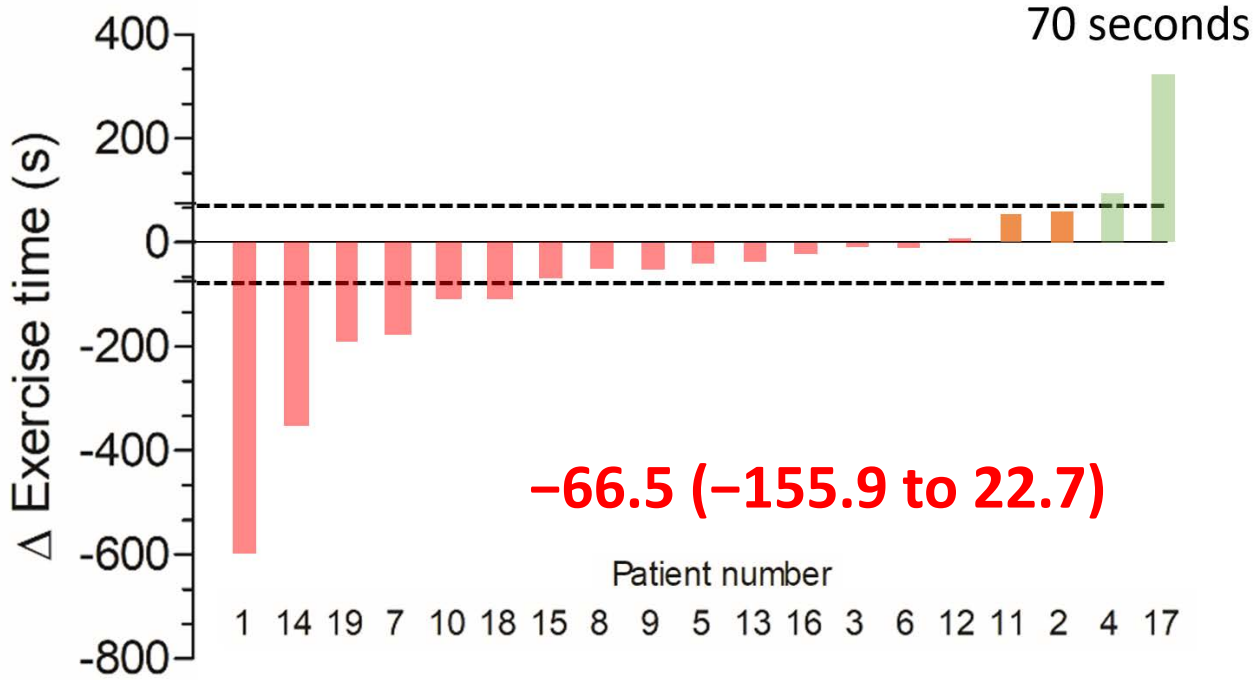

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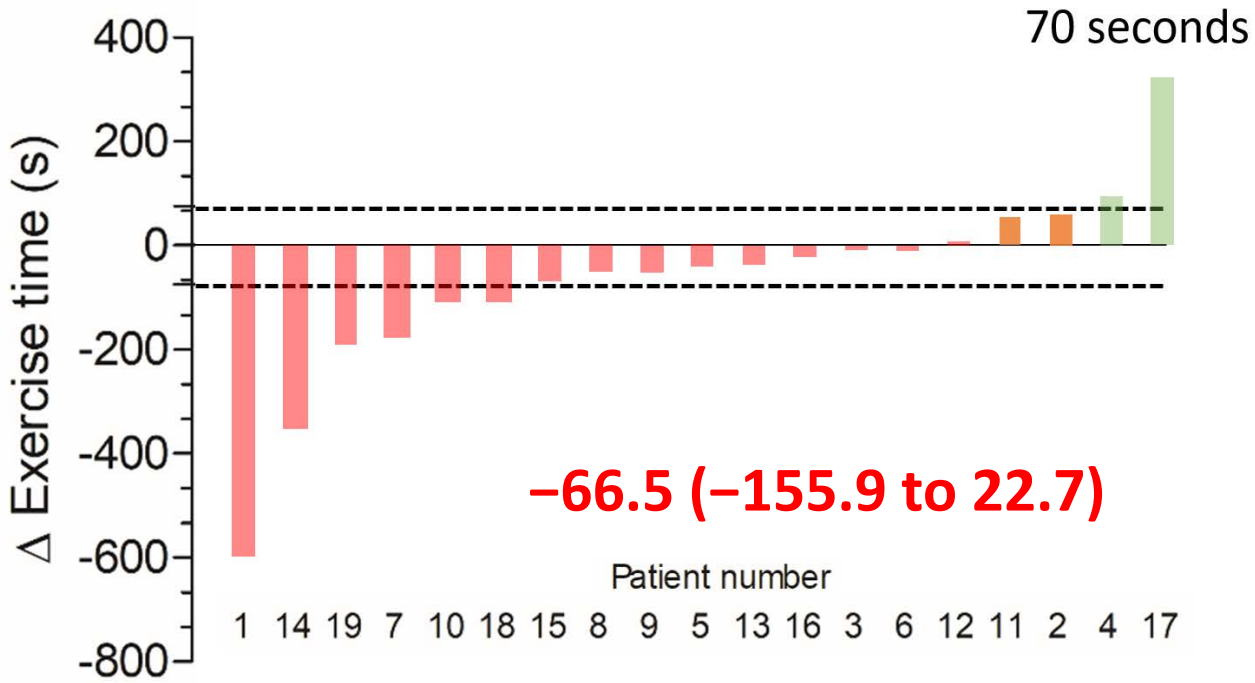

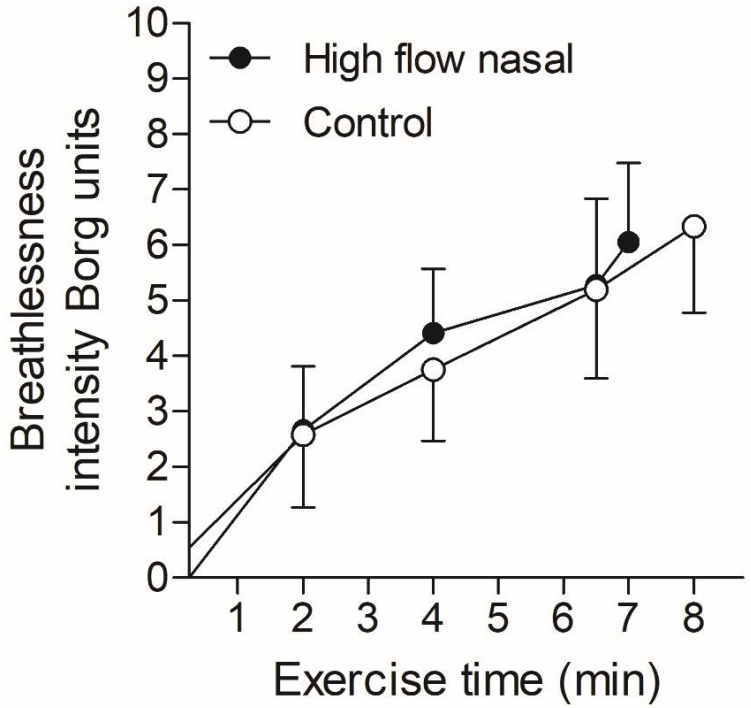

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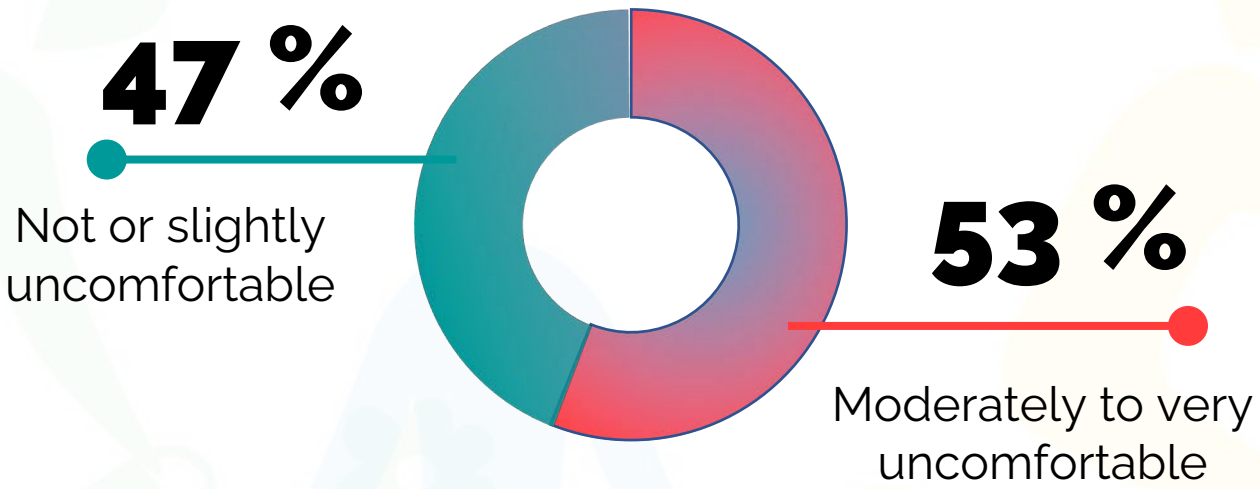
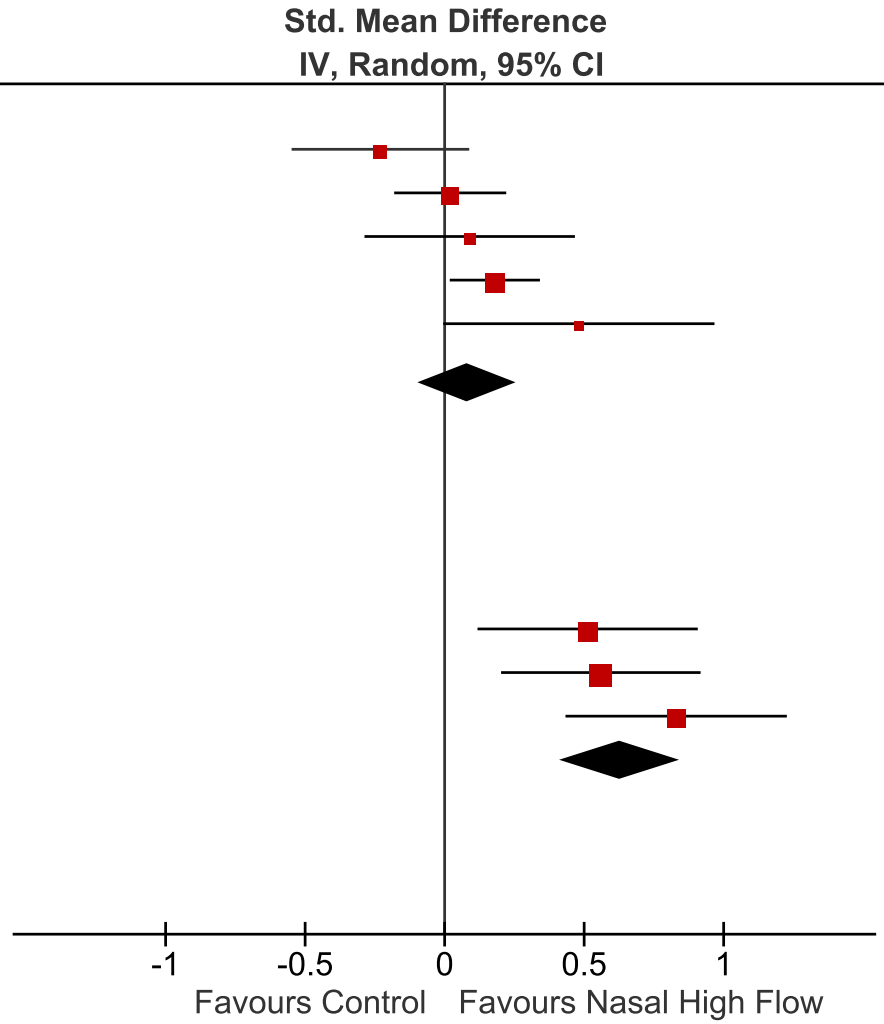


Que se passe-t-il ?

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference IV, Random, 95% CI
1.12.1 Usual condition (room air or conventional oxygen)				
Prieur 2020	-0.23	0.16	17.6%	-0.23 [-0.54, 0.08]
Kelly 2018	0.02	0.1	27.2%	0.02 [-0.18, 0.22]
Sanguanwong 2020	0.09	0.19	14.2%	0.09 [-0.28, 0.46]
Bitos 2020	0.18	0.08	31.1%	0.18 [0.02, 0.34]
Chen 2021	0.4813	0.2456	9.9%	0.48 [-0.00, 0.96]
Subtotal (95% CI)			**100.0%**	**0.08 [-0.09, 0.25]**
Heterogeneity: Tau² = 0.02; Chi² = 8.29, df = 4 (P = 0.08); I² = 52%				
Test for overall effect: Z = 0.92 (P = 0.36)				
1.12.2 Venturi-Mask				
Rossi 2018	0.5127	0.199	31.1%	0.51 [0.12, 0.90]
Dell'Era 2019	0.56	0.18	38.0%	0.56 [0.21, 0.91]
Cirio 2016	0.83	0.2	30.8%	0.83 [0.44, 1.22]
Subtotal (95% CI)			**100.0%**	**0.63 [0.41, 0.85]**
Heterogeneity: Tau² = 0.00; Chi² = 1.50, df = 2 (P = 0.47); I² = 0%				
Test for overall effect: Z = 5.66 (P < 0.00001)				



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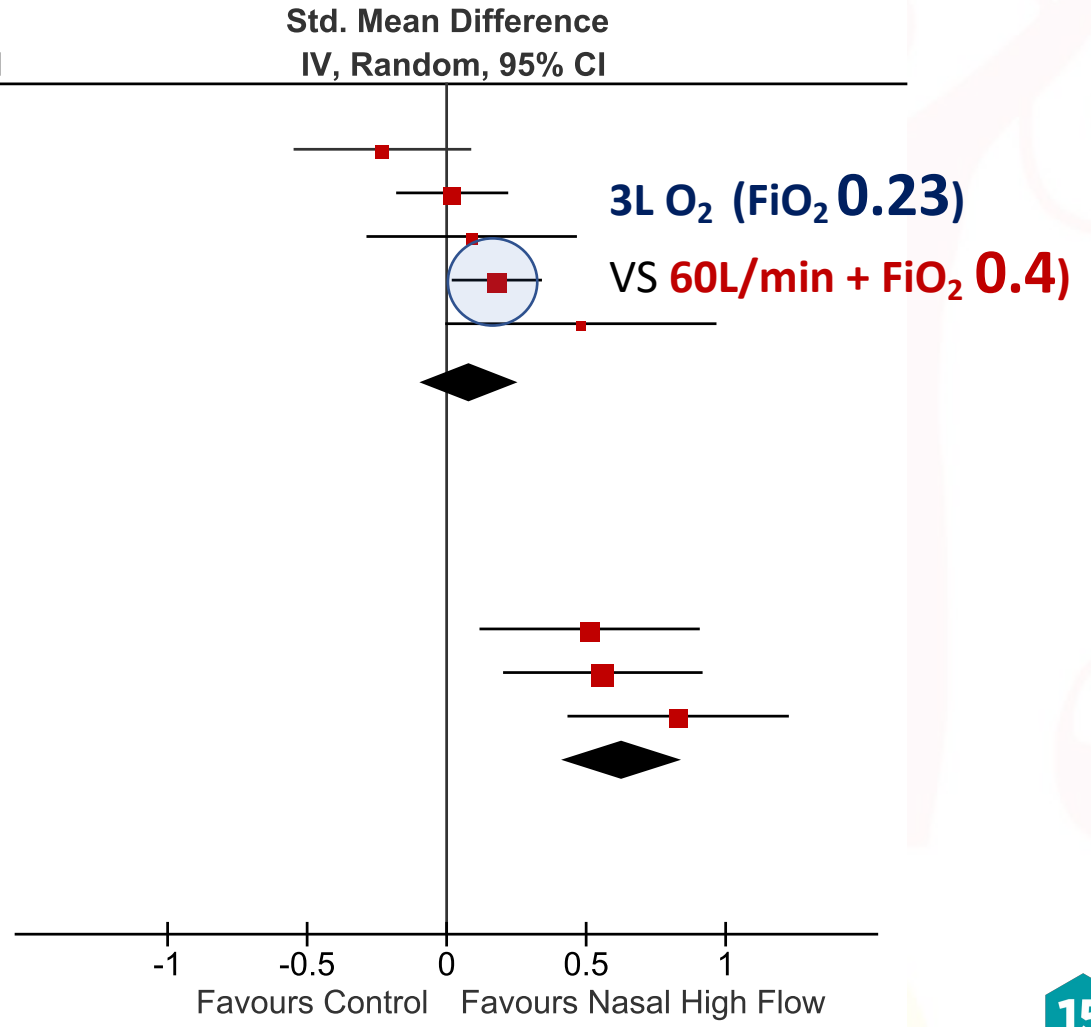

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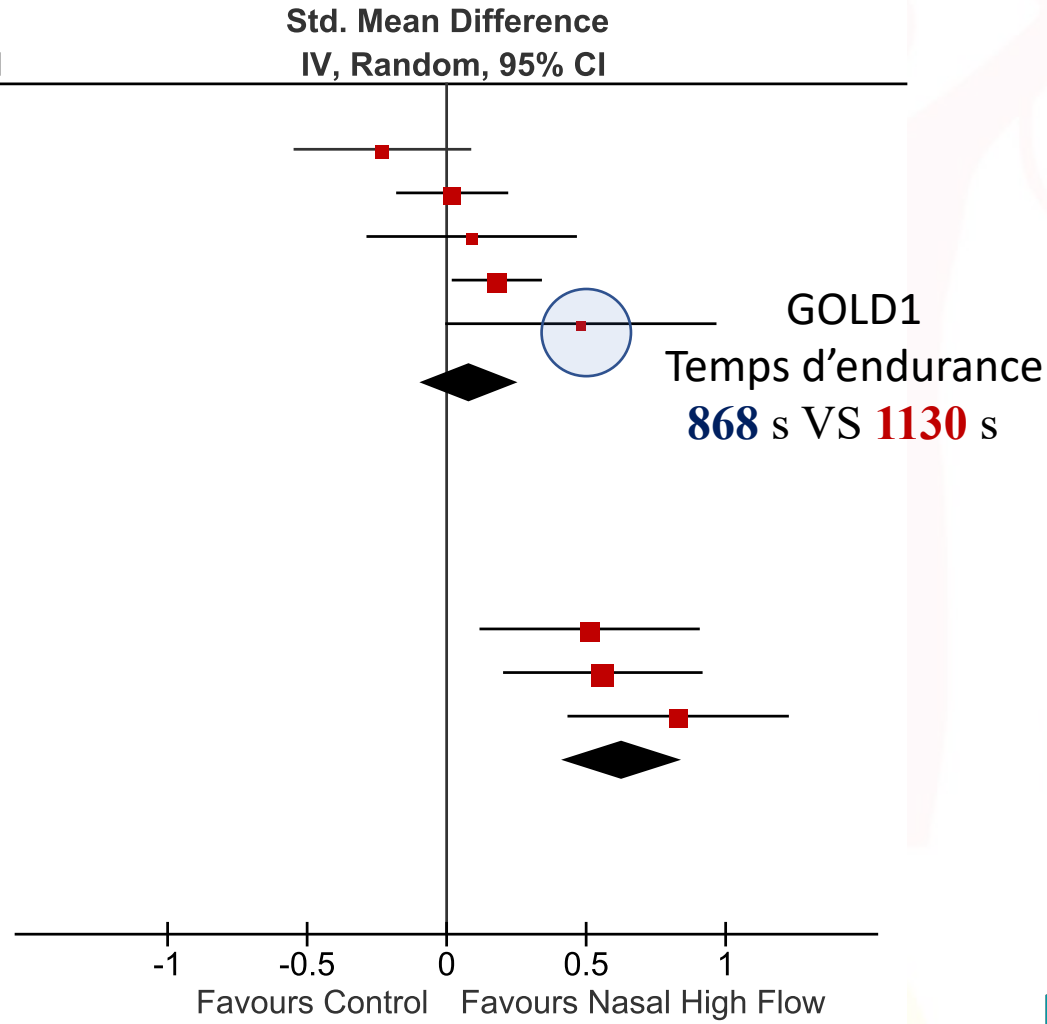

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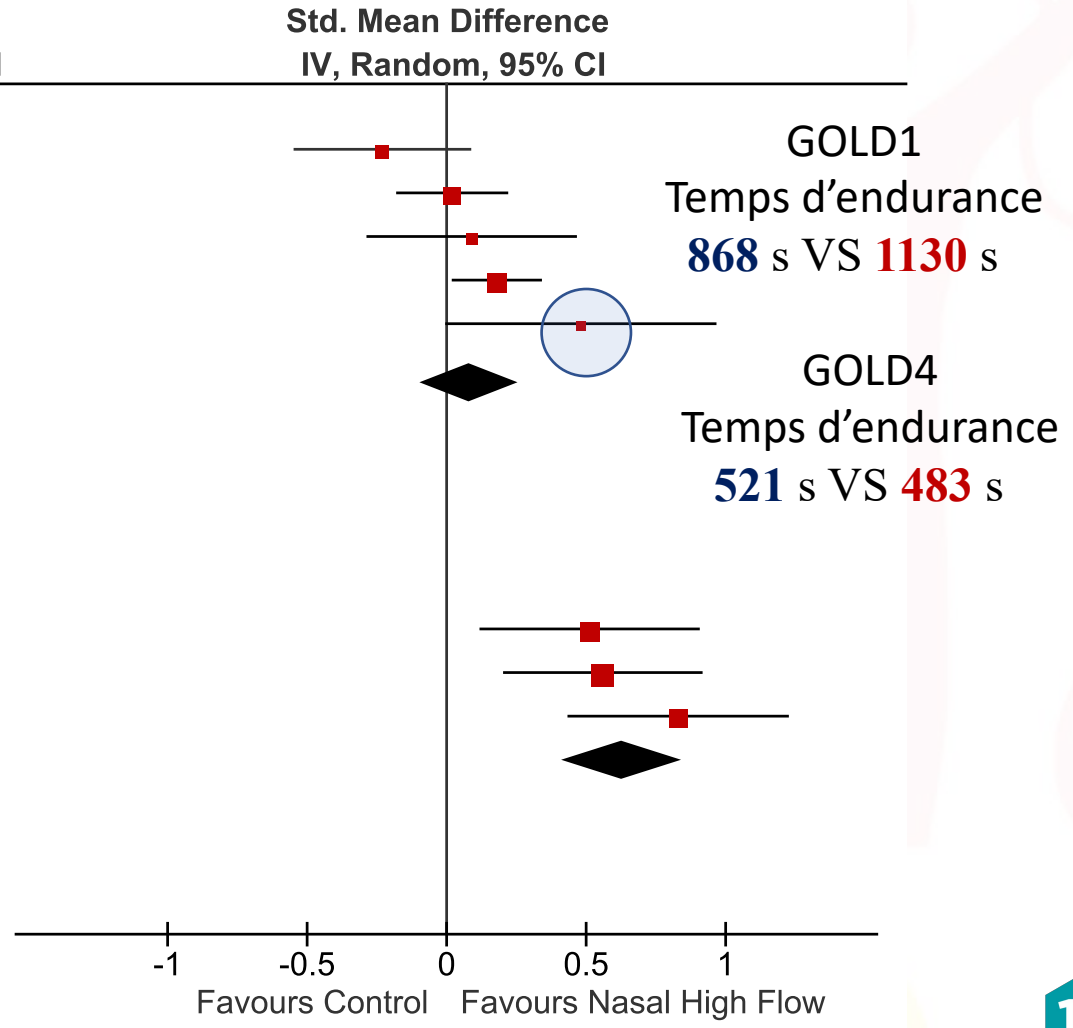

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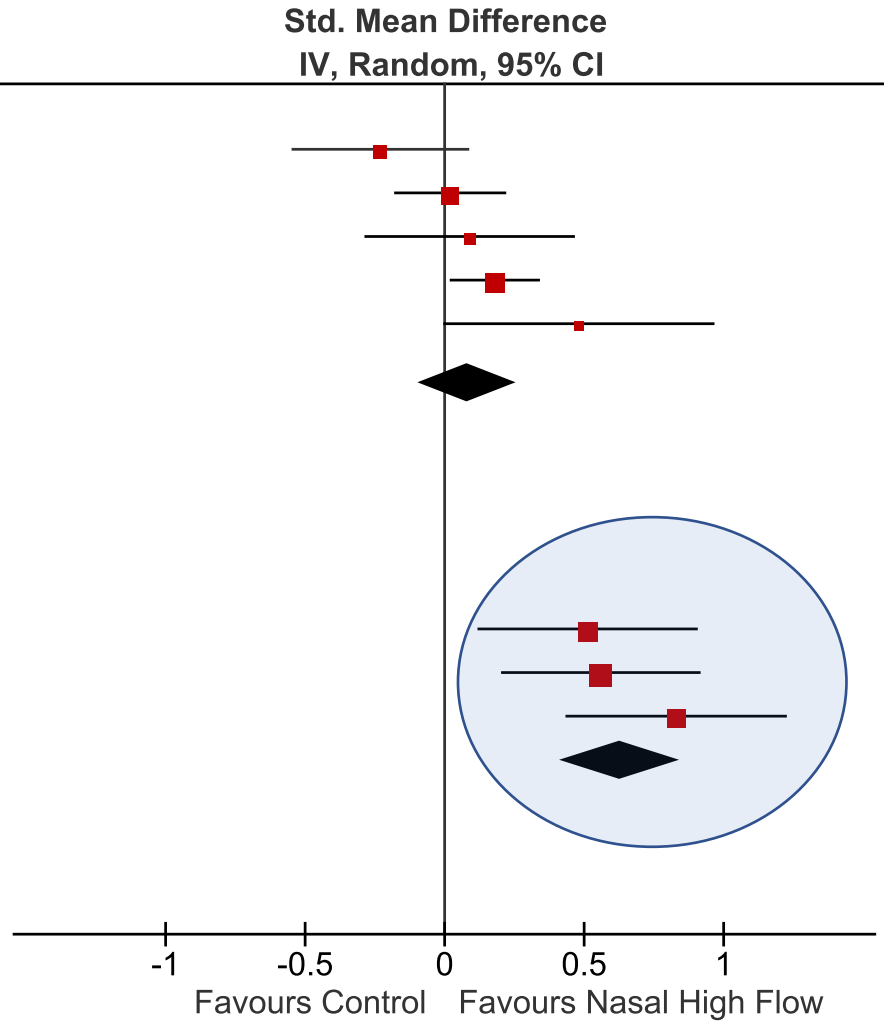

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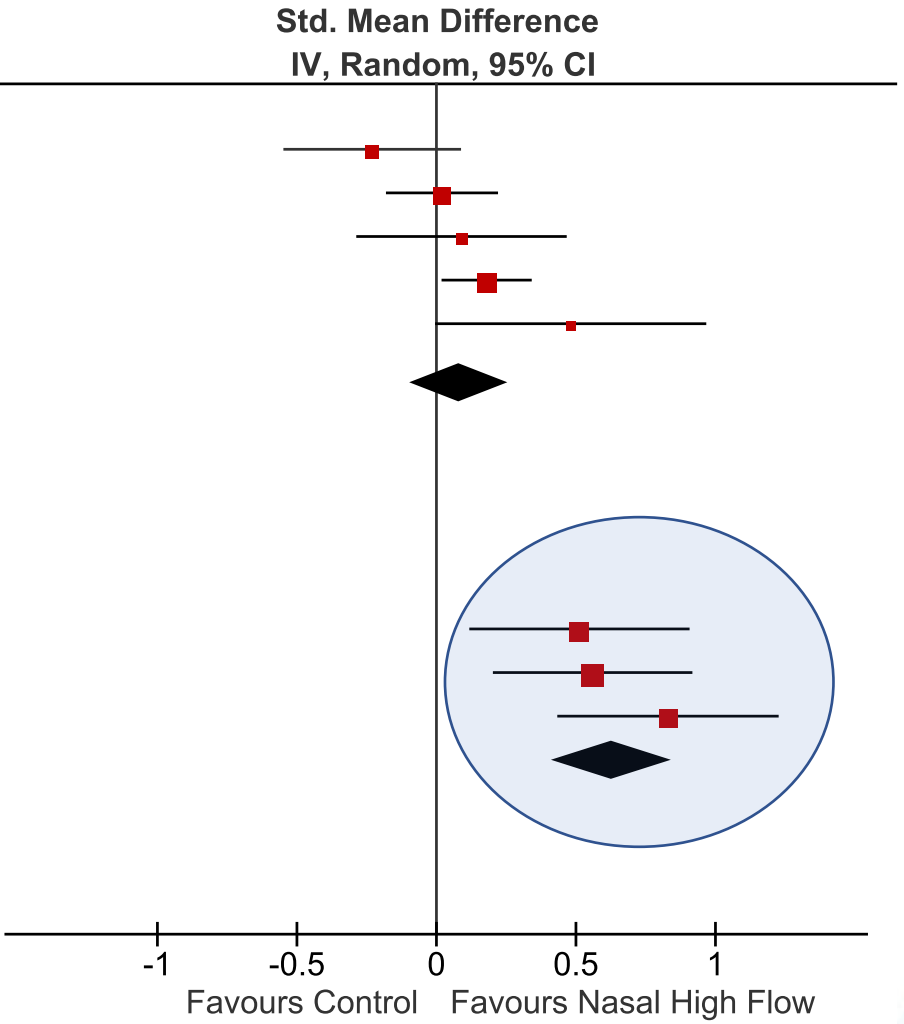
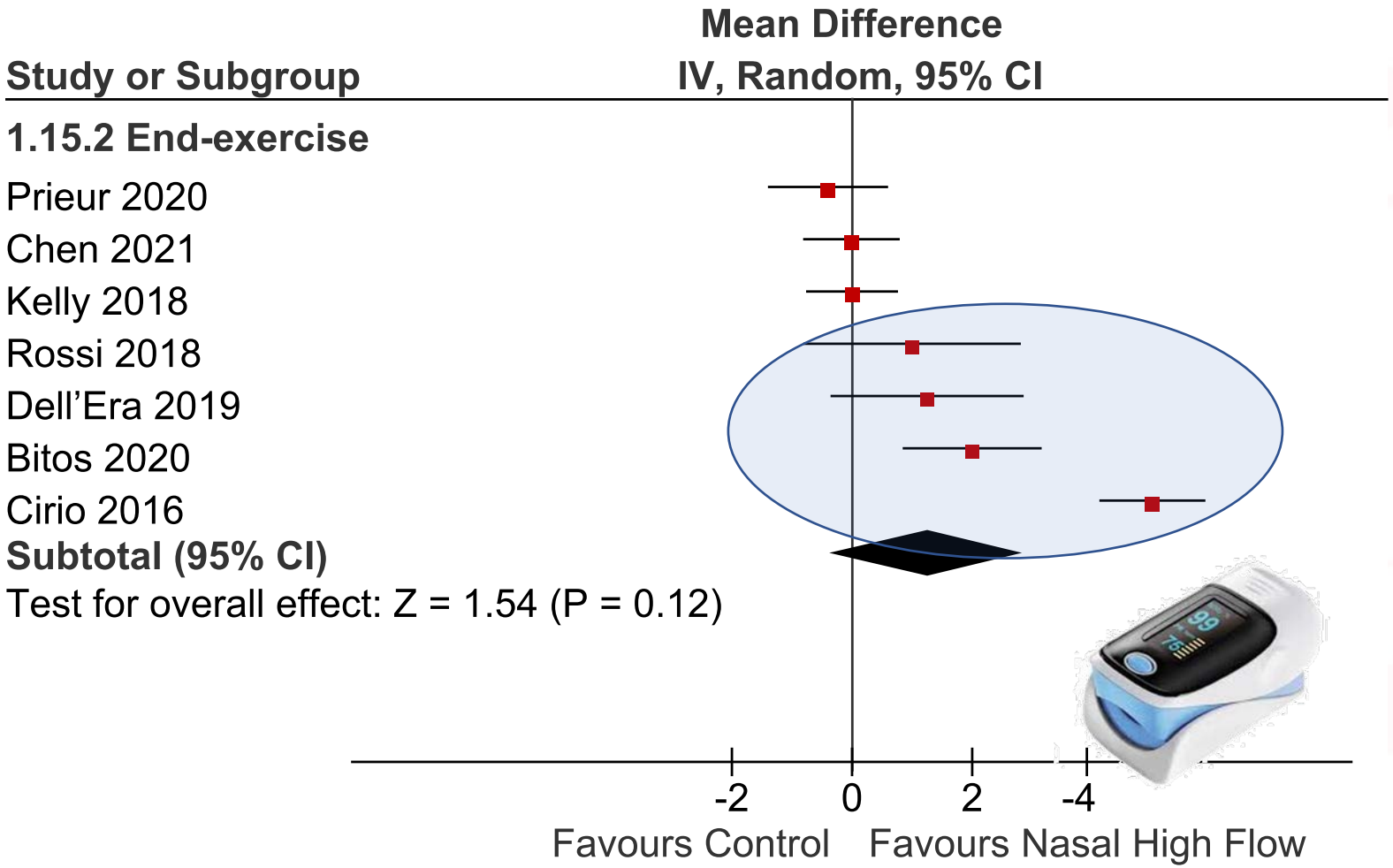




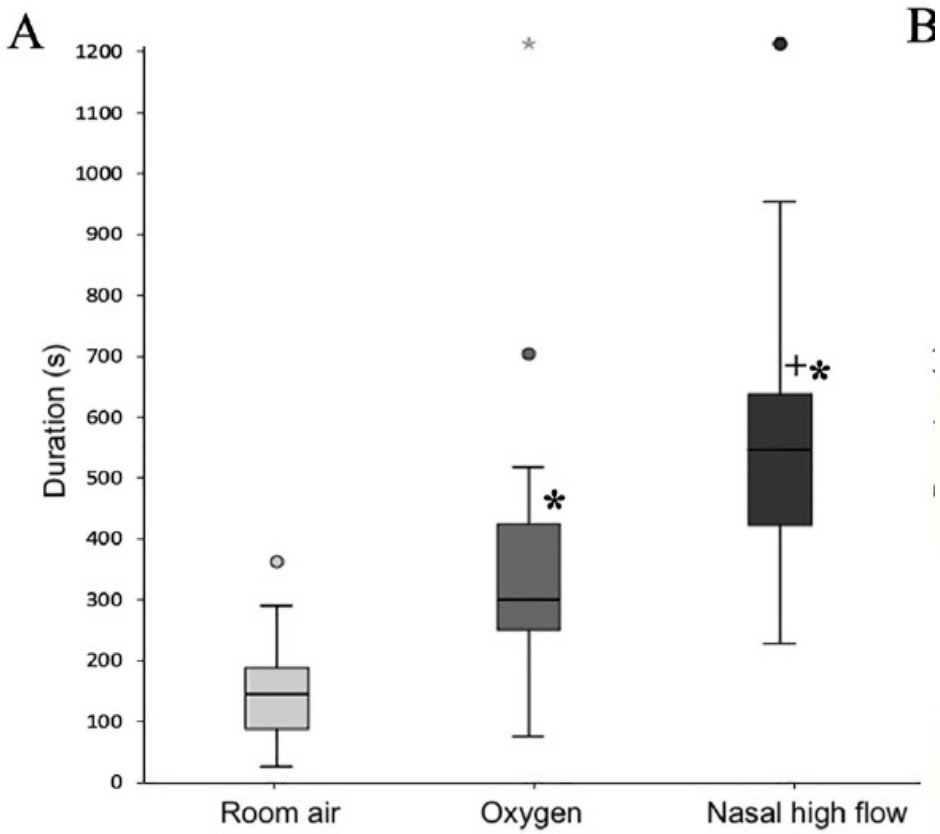
Merci Frédéric !

Original Research

The effect of heated humidified nasal high flow oxygen supply on exercise tolerance in patients with interstitial lung disease: A pilot study

Yara Al Chikhanie [a,b], Daniel Veale [a,b], Samuel Verges [b,1,*], Frédéric Hérengt [a,b,1]

[a] *Cardiopulmonary Rehabilitation Centre Dieulefit Santé, Dieulefit, Rhône-Alpes, France*
[b] *HP2 Laboratory, INSERM U1042, Grenoble Alps University, Grenoble, France*



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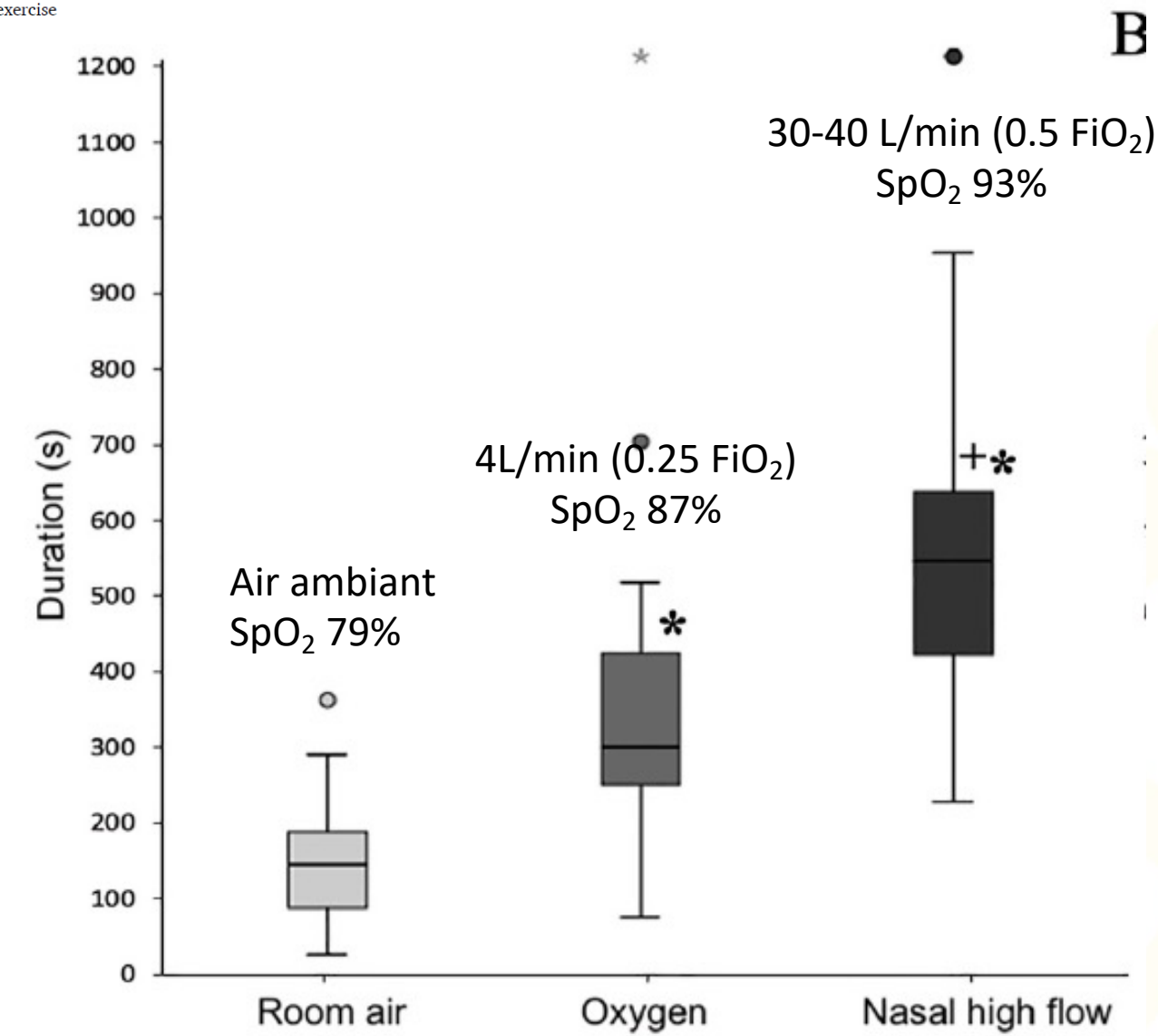

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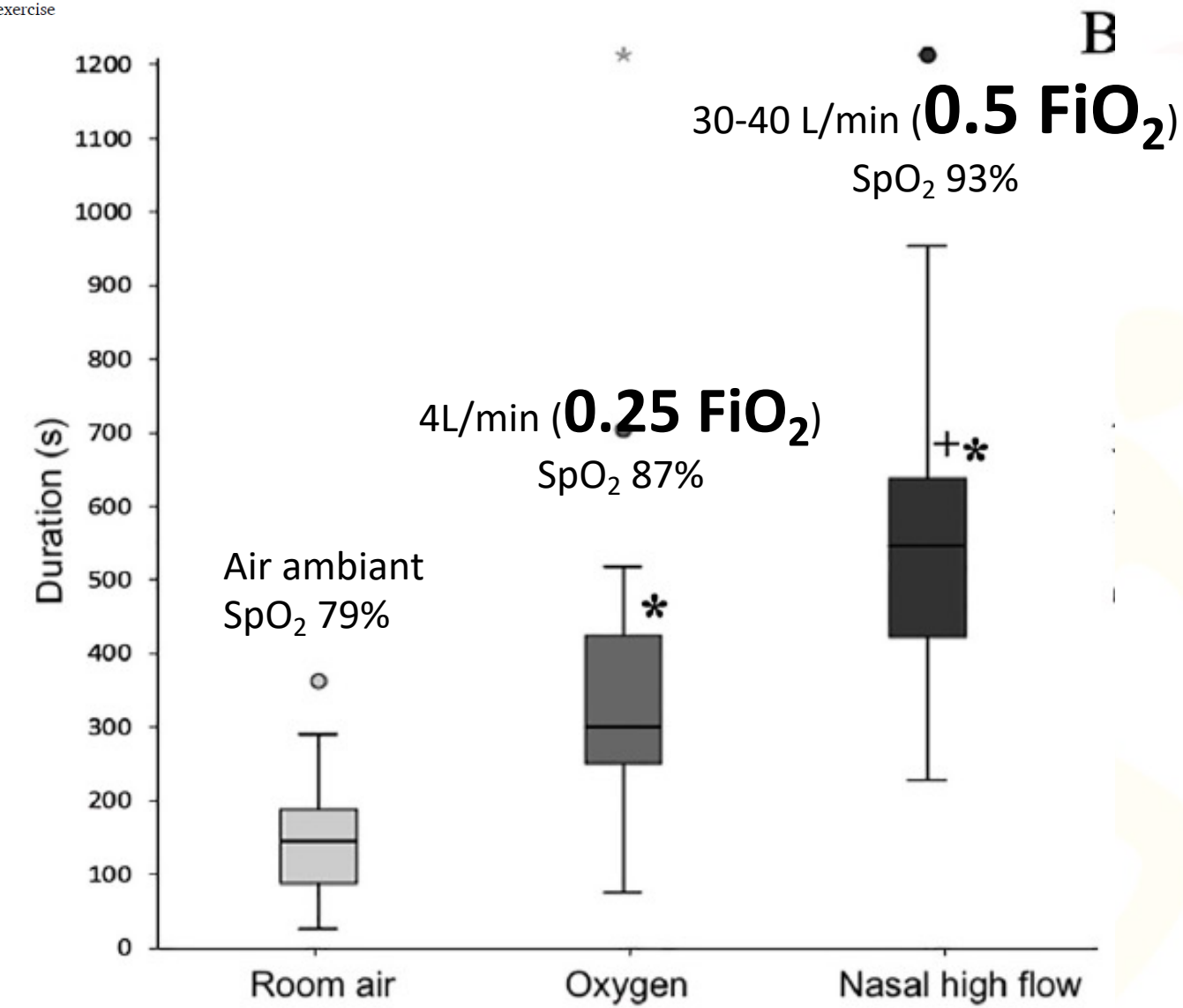


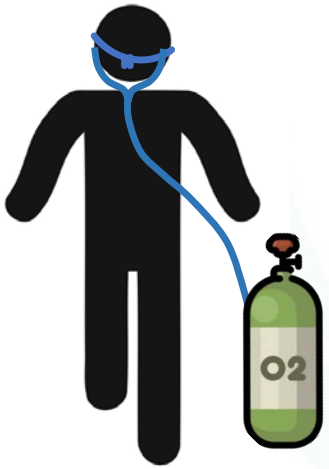
Que se passe-t-il ?

Automated O_2 Titration Alone or With High-Flow Nasal Cannula During Walking Exercise in Chronic Lung Diseases

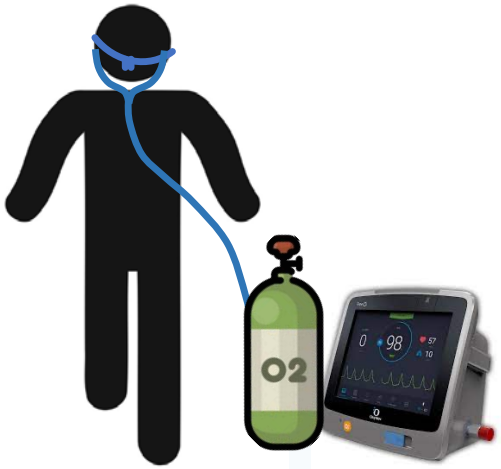
Felix-Antoine Vézina, Pierre-Alexandre Bouchard, Émilie Breton-Gagnon, Geneviève Dion, Damien Viglino, Pascalin Roy, Lara Bilodeau, Steeve Provencher, Marie-Hélène Denault, Didier Saey, François Lellouche, and François Maltais

30 patients IRCO

Endurance Shuttle walk test



Oxygène (2.3 ± 0.6 L/min)



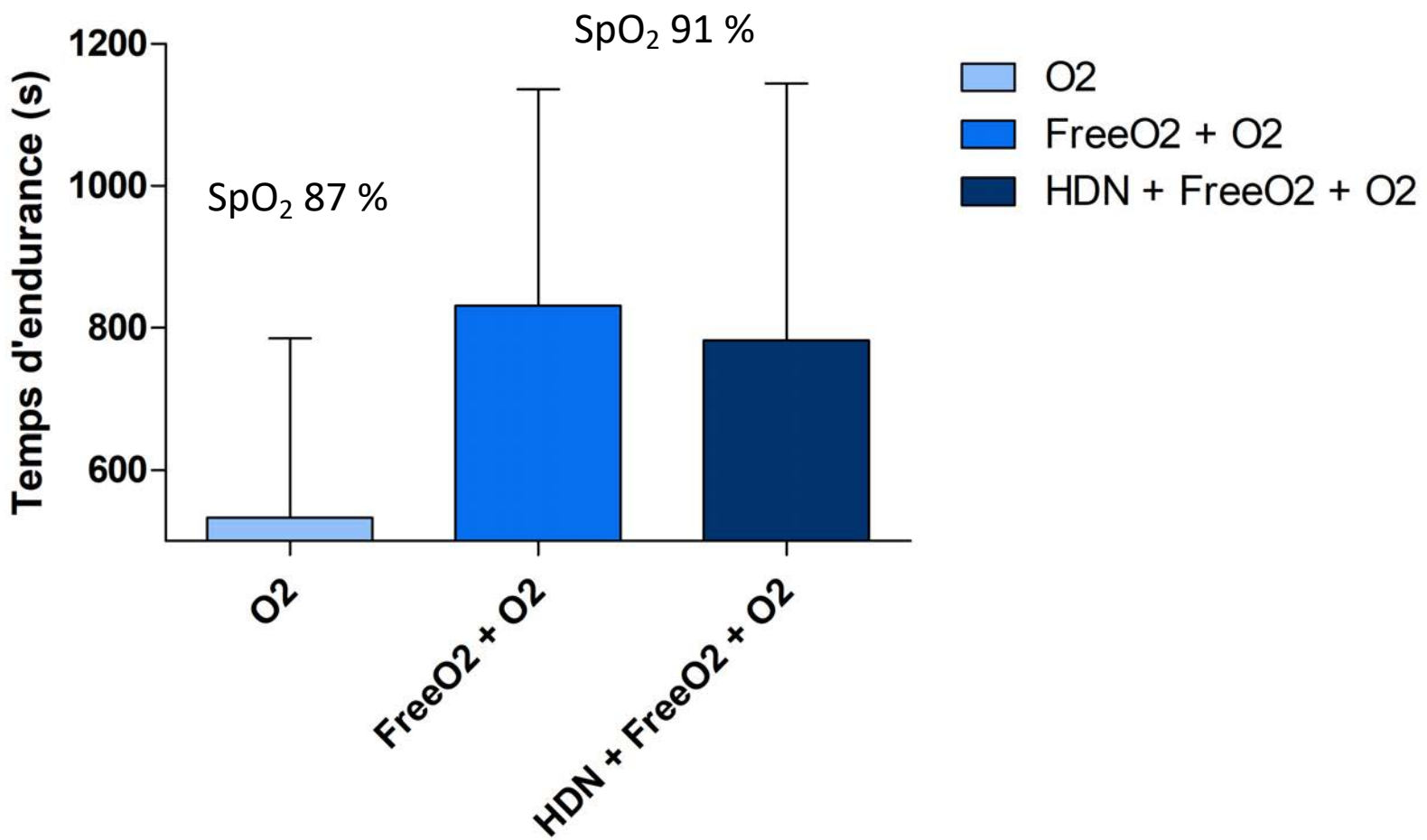
FreeO_2 + O_2 (9.7 ± 3.8 L/min)

HFN + FreeO_2 + O_2 (10.9 ± 4.8L/min)

Que se passe-t-il ?

Automated O_2 Titration Alone or With High-Flow Nasal Cannula During Walking Exercise in Chronic Lung Diseases

Felix-Antoine Vézina, Pierre-Alexandre Bouchard, Émilie Breton-Gagnon, Geneviève Dion, Damien Viglino, Pascalin Roy, Lara Bilodeau, Steeve Provencher, Marie-Hélène Denault, Didier Saey, François Lellouche, and François Maltais



En résumé

patients reported better comfort with HFNO. Patients on LTOT showed a significantly lower improvement in 6MWT between control test and HFNO test than patients without the LTOT (7.01 ± 21.9 vs. 33.1 ± 33.3, respectively).

Carlucci, Respiration 2021

En résumé

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Carlucci, Respiration 2021

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Carlucci, Respiration 2021

Pour augmenter l'endurance des patients, pas besoin de s'encombrer, **tournez le manomètre** !

L'intérêt du haut débit nasal à l'effort peut se discuter pour des patients ayant des besoins très élevés en oxygène à l'effort (humidification de l'O_2)

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