

## Evaluation of non invasive positive pressure ventilation combined to nebulization on lung deposition measured by urinary excretion of amikacin.

Clinical studies investigated the feasibility and the effectiveness of coupling aerosol therapy with non invasive positive pressure ventilation (NIPPV) in patient with respiratory diseases. The results show that bronchodilators administered either via a nebulizer or a metered-dose inhaler (MDI) placed in-line may provide greater and faster improvements in respiratory load and respiratory symptoms than delivered during unassisted spontaneous breathing. Clinical efficiency of inhaled therapy during NIPPV depends on the amount of drugs reaching the lungs. So far, there is insufficient evidence to either guide the choice of aerosol device and the type of ventilators used for efficient treatment in patients receiving NIPPV. The aim of this study is to compare lung deposition of amikacin delivered by a vibrating mesh nebulizer used alone or coupled to a single limb circuit NIPPV device.

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### PhD student

Jean-Bernard Michotte, HESAV

### Director of thesis

Grégory Reyckler,  
Docteur en kinésithérapie,  
Service de Pneumologie, Cliniques  
Universitaires Saint-Luc - UCL

### Faculty /institute

Université Catholique de Louvain  
Faculté des Sciences de la Motricité  
Education physique, Kinésithérapie et  
réadaptation