



The Simeox technology offers healthcare professionals and their patients suffering from obstructive respiratory pathologies a solution during their bronchial decongestion sessions.

By changing the physical properties of mucus, Simeox helps mobilise secretions and transport them for disposal



The Simeox technology

- ▶ 1. Decreased secretion viscosity
- ▶ 2. Improved mucus transport for disposal
- ▶ 3. A succession of passive expirations for distal tract disorders
- ▶ 4. Ergonomics suitable for autonomous use initially or in addition to the physiotherapist's intervention

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The Simeox medical device delivers a vibrating signal to the patient's bronchial tree. It acts on rheology and the bronchial mucus structure to liquefy and transport it.

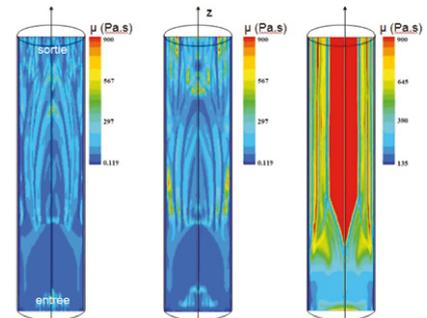
The main criterion of performance is the type of signal. Simeox automatically generates the optimum signal.

Secondary criteria are influenced by the patient's actions:

- 1. Strength of the intra-pulmonary low pressure
- 2. Expiratory time
- 3. Deep inspiration

Its session is accompanied by a biofeedback interface.

The signal produced by Simeox is a succession of low pressure points, which return to atmospheric pressure.

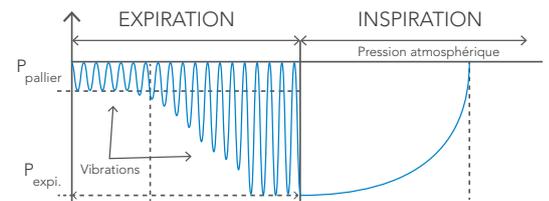


Influence of Simeox on mucus viscosity (maximum viscosity in red, minimum viscosity in blue)

Achieving passive expirations with a bronchial tree that remains at atmospheric pressure prevents physiological airway collapse, which is a major obstacle to decongestion.

Mucus is transported from the distal tract to the proximal tract for disposal.

The Simeox technology is based on interaction between the bronchial mucus and air. To eliminate stagnant mucus and mucus plugs, it is imperative to send air to these areas. Inspiration techniques are taught by professional health experts.



The original principle of Simeox is to combine:

Expiratory assistance to increase the expiratory time. Expiration is provided by the machine, so it is passive, avoiding physiological airway collapse, which is an obstacle to airway decongestion. This prolonged expiration probably reaches the peripheral airways, which are the "target" of the decongestion work.

Its direct action on the viscoelastic properties of mucus, which no other physical device offers, is its most innovative feature.

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