

DIAGNOSTIC

lungflute[®]

for Hospitals & Clinics

Fast, Reliable, Innovative
Secretion Mobilisation



Diagnostic Lung Flute[®]

The Lung Flute[®] is designed to be an alternative to hypertonic saline in the collection of diagnostic sputum samples for respiratory diseases such as cystic fibrosis, pneumonia, lung cancer, tuberculosis and asthma.

Lung Flute[®] features include:

1. Simple hand-held disposable device
2. Low pressure operation

Low Frequency Acoustic Waves Help Patients' Natural Mucus Clearing System

A low frequency wave is generated at the mouth by exhaling through a mouthpiece over a laminar surface (Reed) inside the Lung Flute[®]. The resulting low frequency acoustic wave that is produced travels retrograde into the lower airways and lung parenchyma and increases mucociliary clearance. Patients expel air with the force required to blow out a single candle. 20 repetitions of a single two breath pattern are performed with the device to complete a diagnostic session.

The Lung Flute[®] is a safe, effective, convenient and rapid method of sputum induction.



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The Lung Flute® was selected by Popular Science magazine for inclusion in the magazine's Best of What's New (BOWN) awards for 2009.

Clinical Results in Chronic Bronchitis

A clinical study entitled, Efficacy and Safety of a New Acoustic Device, The Lung Flute®, for Sputum Induction in Healthy Non-smokers and Chronic Bronchitis, tested the hypothesis that expectorate samples obtained after induction with the Lung Flute® would have characteristics of lower respiratory tract secretions and would be comparable to sputum samples obtained by induction with hypertonic saline. The researchers found that samples from 100% of the chronic bronchitis patients obtained with the Lung Flute® contained lower respiratory secretions. Analysis also revealed that the samples obtained using the Lung Flute® and through hypertonic saline induction were not statistically different. The most common adverse event associated with use of the Lung Flute® was mild transient throat irritation. The researchers concluded, "The Lung Flute® is a safe, effective, convenient and rapid method of sputum induction. Further investigation in its utility for diagnostic and therapeutic applications is warranted."

Clinical Results in Tuberculosis

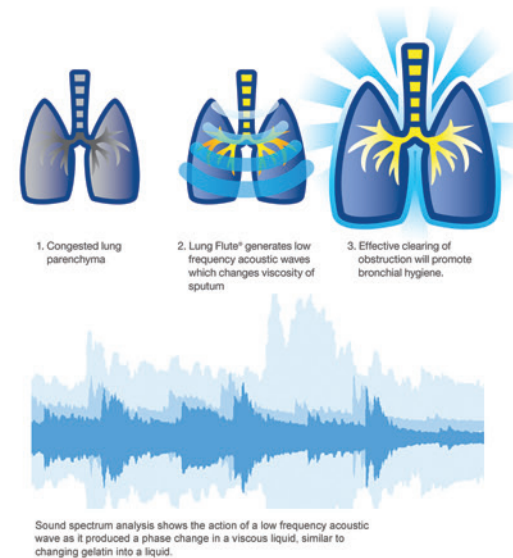
Background and objective: The Lung Flute is a small self-powered audio device that generates sound waves, which vibrate in tracheobronchial secretions. This was a preliminary trial to evaluate the usefulness of the Lung Flute for sputum sampling in patients suspected of pulmonary tuberculosis (TB).

Methods: Thirty-four patients who were not expectorating sputum, but for whom sputum examination was required for the differential diagnosis of TB or other diseases, were enrolled in the study. Patients were instructed to blow out fast and hard through the Lung Flute and to repeat this for a total 20 sets of two blows each.

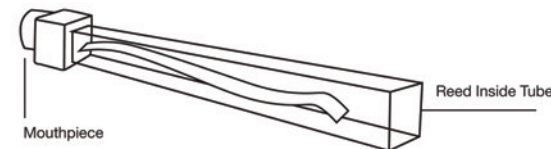
Results: Using the Lung Flute, sputum samples were collected within 10 or 20 min from 30 of 34 patients (88%). The device permitted a rapid diagnosis of TB in seven of 15 confirmed TB cases. In three patients acidfast bacillus smears were positive. In four patients acid-fast bacillus smears were negative, but PCR tests for TB were positive. Hyperventilation-related symptoms occurred in three patients.

Conclusions: The application of the Lung Flute may represent a promising technique for the rapid diagnosis of pulmonary TB.

Reference: Respirology (2009) 14, 899–902 doi: 0.1111/j.1440-1843.2009.01584.x



The Lung Flute® – Mucus Clearing Device



Products

Product No. MA1004-01 Lung Flute® for Hospitals/Clinics
Dual-indicated for diagnostic and therapeutic secretion mobilisation

NicheMedical
Solutions in Respiratory Care & Diagnosis

Telephone 1300 136 855 Facsimile 1300 664 204
Email: info@nichemedical.com.au
www.nichemedical.com.au