BARK TECHNOLOGY

BARK PERCUTON

Vibroacoustic device



info@bark.com.sg
www.bark.com.sg

PERCUTON

SOUND.EFFECTIVE

BARK PERCUTON

Purpose

The device is intended for the treatment of pulmonary diseases and lung complications present in out-patient and in-patient departments settings.

Principle of operation

PERCUTON generates electric signals, which are subsequently converted to high-intensity acoustic waves, in the low-frequency audio range, through two hand-held emitters. The emitters are applied to the surface of the chest, where the acoustic waves then propagate to the lungs, causing vibrations ofthe lung parenchyma. The frequency of the signal constantly changes, thuscreating a number of effects such as resonance.





Application

Vibro-acoustic therapy for lungs is appropriate for conditions associated with hyperproduction and the impaired evacuation of bronchial mucus, suchas:

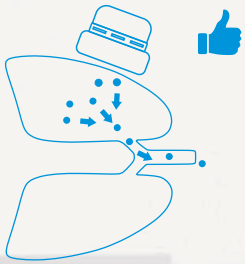
- Exacerbation of COPD,
- Hyper-productive bronchitis,
- Bronchiectatic disease,
- Bronchial asthma,
- Cystic fibrosis,
- Depressed coughing reflex in neurology and other conditions.

Vibro-acoustic therapy is also recommended for restrictive lung pathology associated with the following signs and symptoms:

- Impaired lung aeration associated with alveolar collapse,
- Increased volume of intrapulmonary fluid, and
- Abnormal ventilation-perfusion ratios, including the following:
- Pneumonias of various severity,
- Acute respiratory distress syndrome (ARDS),
- Other parenchymal lung disorders.

BARK PERCUTON

DRAINAGE



Mechanisms

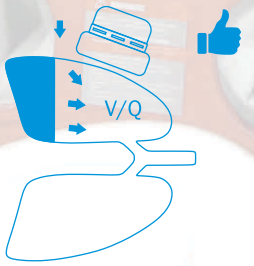
When propagated to bronchial walls, acoustic waves cause them to vibrate,which in turn loosens their contact with bronchial mucus. Additionally, low-frequency pressure oscillates inside the bronchial lumen, contributing to faster mucus evacuation. The use of drainage positions also potentiatesthe effect with the help of gravity.

OPEN LUNG



Positive airway pressure, which is sufficient to maintain collapsed alveoli in expanded states, as well as vibration of the lung's parenchyma structuralunits caused by acoustic waves, contribute to alveolar recruitment. Vibro-acoustic exposure results in less pressure and less time to "open" alveoli.

GRAVITY



Vibro-acoustic exposure, used in combination with kinetic therapy, helps to speed up the process of gravitational redistribution of intrapulmonary fluid and improve ventilation-perfusion ratios (V/Q). The positive airway pressure results in better aeration of lungs.

SOUND.EFFECTIVE