

# Advancements in Chest Physiotherapy for Paediatric Bronchopneumonia: A Comprehensive Review of Current Techniques and Outcomes

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## ABSTRACT

Bronchopneumonia is the most common clinical manifestation of pneumonia in paediatric population, particularly life threatening in young children aged between 0 to 5 years. It is also seen in children aged between 5-15 years with chronic complications and long term illness. It is an important cause of neonatal and childhood morbidity and mortality in developing countries, with death rates greatest in children and adults older than 75 years. Approximately 40% of pneumonia during childhood requires hospitalisation. Children with chronic respiratory or neuromuscular diseases benefit from chest physical therapy, which is a crucial adjuvant in the treatment of the majority of respiratory ailments. Helping children's tracheobronchial secretions to be cleared is the main goal of chest physical therapy. This improves gas exchange, lowers airway resistance, and facilitates breathing. A search strategy was performed for the past five years with original research published in English language between 2020 to 2024. Three databases, that

is, Scopus, PubMed and PEDro were searched for full text articles. Four original papers revealed that chest physiotherapy including postural drainage, percussion, deep breathing and vibrations together are helpful in clearance of airway secretions from the lungs. Modern techniques, including forced expiration, active cycle of breathing, autogenic drainage, assisted autogenic drainage, and slow and prolonged expiration, utilise variations in airflow through breath control to facilitate the mobilisation of secretions. Also, the assisted physiotherapy techniques are worthy and beneficial in non cooperative paediatric patients in which coughing is not as effective to eliminate secretions which tends to increase the risk of infection. More assisted techniques can be helpful in improving the quality of life and cardiorespiratory capacity of paediatric patients suffering from bronchopneumonia.

**Keywords:** Airway resistance, Hospitalisation, Infants, Physical therapy modalities, Quality of life.