

Role of Physiotherapy in the Management of Chronic Obstructive Pulmonary Disease : An Overview

Chronic Obstructive Pulmonary Disease is a progressive, irreversible, respiratory disease affecting adults. It is characterized by chronic airflow limitation that is partially reversible, progressive and accompanied by an abnormal inflammatory response of the lungs to noxious particles or gases. Morbidity and mortality are high and COPD leads to significant disability and distressing symptoms.

Pulmonary rehabilitation is a well-proven affective therapy given by physiotherapists which results in important health benefits for people with COPD with the aim of improving breathlessness, quality of life and exercise tolerance.^[1]

Physiotherapists have been instrumental in the management of COPD for decades; they play an important role in the assessment and non-pharmacological treatment of breathing dysfunction and dyspnoea^[2] and in the management of impaired airway clearance.

The National Institute for Health and Clinical Excellence (NICE) has stated that patients with COPD are suitable for pulmonary rehabilitation program and should receive it.

Corresponding Author:

C. Krishna Bindu

Department of Physiotherapy

R.L.Jalappa Hosptial & Research Centre,
Tamaka, Kolar.

Mobile: 9663614987

Email ID: binduchalasani@gmail.com

METHODS

1. Breathing Techniques and Positioning- Teaching patients the way to breathe, to reduce the work of breathing and maximize the amount of air to the lungs.
2. Mucus Clearance Techniques - Provide techniques to clear excess bronchial secretion and reducing airflow obstruction including teaching patients how to drain the lungs using postural drainage and use of forced expiratory techniques or coughing, positive expiratory pressure masks, chest percussion and vibration are employed to improve the mucous clearance.
3. Inspiratory Muscle Training-Teaching specific techniques to strengthen muscles involved in inhaling and is recommended in combination with aerobic and limb strengthening exercises.
4. Prescribe specific exercises to increase exercise tolerance and capability - Design safe, appropriate effective exercise programs to improve aerobic capacity, strengthen weakened leg and arm muscles and improve overall functional tolerance. Exercise training is the corner stone of pulmonary rehabilitation which is the most effective strategy for improving symptoms, exercise tolerance and quality of life.^[3]

The exercise prescription is based on recommendations of the American College Of Sports Medicine.^[4]

- A minimum of 20 sessions should be given at least 3 times per week.
- High intensity exercise produces great physiological benefits; however low-intensity training is also effective for those patients who cannot achieve this

level of intensity.

- Intermittent training may be useful in promoting higher levels of exercise training in the more symptomatic patients.
- Combining endurance and strength training has multiple beneficial effects and is well tolerated and strength training is indicated for patients with significant muscle atrophy.

5. Teaching the patients to self manage certain COPD symptoms and inspire patient confidence in their ability to self manage.

6. Promote Prevention - Physiotherapists support public health interventions to prevent COPD including smoking prevention and cessation, air quality improvement, physical activity, life style choices and safe occupational environments.

This overview summarizes the intervention strategies that are commonly employed by physiotherapists. Physiotherapy

offers valuable and diversified practices to alleviate patient's symptoms and improves their functional capabilities and quality of life.

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