

Effects of a Pulmonary Rehabilitation Programme on Physiologic and Psychosocial Outcomes in Patients with Chronic Respiratory Disorders

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Abstract

Introduction: The purpose of this prospective study is to determine the effects of a pulmonary rehabilitation programme (PRP) conducted at our centre for patients with chronic lung disease. **Materials and Methods:** Thirty-four patients (27 men and 7 women, mean age 67.6 years) with predominantly moderate-to-severe chronic obstructive pulmonary disease (31 patients), bronchiectasis (2 patients) and interstitial lung disease (1 patient) completed a 6-week outpatient PRP that included education, physical and respiratory care instruction and supervised exercise training. Outcome assessment was performed at baseline, on completion of PRP and 3 months after PRP. Physiologic measures included pulmonary function, incremental exercise and 6-minute walk tests (6MWTs). Disease-specific quality of life was assessed using the Chronic Respiratory Disease Questionnaire (CRDQ). **Results:** There was no significant change in resting spirometry or lung volumes after PRP. Maximal oxygen uptake and work-rate improved significantly after PRP by $132.4 \text{ mL.kg}^{-1} \text{ min}^{-1}$ and 10.7 W , respectively. 6MWT distance improved significantly by a mean of 67.3 m ($P < 0.0001$). Maximum Borg dyspnoea scores decreased significantly by 1.2 ± 0.5 ($P < 0.038$). All domains of the CRDQ completed by a sub-group of patients improved significantly and the total scores increased by a mean of 21.7 points at the end of the PRP. The improvements gained in maximal exercise capacity immediately following PRP were maintained in 17 patients who returned for repeat assessment 3 months after PRP. **Conclusion:** Patients who completed a comprehensive PRP at our centre showed significant increase in functional capacity, reduction of exertional dyspnoea and improvement in health status.

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