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BOOK REVIEW

Practical Guide -Physical Therapy in Chronic Respiratory Diseases by Rik Gosselink, PT,PhD,FERS

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Chronic respiratory diseases affect the airways and other structures of the lungs. As given by World Health Organization, Chronic obstructive pulmonary disease, asthma, occupational lung diseases and pulmonary hypertension are some of the most common chronic respiratory diseases. These diseases are usually irreversible and are characterized by periods of acute exacerbations. It's also characterized by high prevalence, disability and multiple co morbidities. Thus the treatment strategies involve aggressive management of the acute exacerbations as well as symptomatic management in long term course. Most commonly encountered symptoms are dyspnea, productive or dry cough, fatigue, decreased endurance, chest pain, pedal edema and so on. Physiotherapy or precisely pulmonary rehabilitation plays a pivotal role in the management of these conditions. Regular exercise and physical activity helps in improving majority of the associated symptoms of chronic respiratory diseases.

Professor Rik Gosselink is an eminent faculty in the field of Rehabilitation Sciences. He has clinical and research expertise in domains of exercise physiology and physical therapy of patients with acute critical illness and chronic pulmonary diseases. He has extensive publications in areas related to the assessment, training and evidence based physical therapy guidelines of limb and respiratory muscles in critically ill patients. He also had major contribution at national and International level towards physical therapy and rehabilitation in patients who suffered from COVID-19.

This book was created as a practical guide towards assessment and treatment strategies for patients with

chronic respiratory diseases. It gives an overview of how should a physical therapist go around the screening, evaluation and then the treatment of patients with chronic respiratory conditions. It also elaborates on how the analysis of the results of various investigative procedures should be done. The focus of this book is on major domains of "Impairment of mucus clearance "and the "shortness of breath ", decreased exercise capacity/ or decreased physical activity in chronic respiratory conditions. This guide also provides detailed video material of some of the evaluation as well as treatment methods. This will facilitate the adoption of these techniques into daily clinical practice. Video links have been indicated at the respective chapters and the videos are made available on their website.

It has total of 5 chapters focusing on screening, investigations, treatment plans and follow up domains in chronic respiratory diseases. Chapter 1 gives an introduction about various factors contributing to impaired mucus clearance and the respiratory rehabilitation for the same. It is well supported by the standardized guidelines for obstructive pulmonary diseases given by Global Initiative for Chronic Obstructive Lung Disease (GOLD). Chapter 2 describes about the "Methodical Physical Therapy Practice" pathway which is based on the hypothetico-deductive method. It starts with defining the problem statement and then the screening for it which includes detailed history, clinical assessment and specific evaluation tests for the same. This is to be followed by analysis and then deciding on the treatment plan. This should again be followed by evaluation and after care. The pathway

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also indicates the extent to which multidisciplinary respiratory rehabilitation will be needed.

Chapter 3 explains about the detailed physical therapy examination and all the relevant investigations of the respiratory system like Pulmonary Function Assessment, Ergospirometry, exercise testing, limb strength tests (including dynamometers) and respiratory muscle strength tests (including Respiratory Muscle Force testing), physical activity assessment and the assessment of Quality of Life. The authors have explained every single practical tip involved in the usage of these techniques. The reference values are also provided for the cutoff points of respective values. Detailed explanation along with the pictorial representation gives a proper insight of the same. Video links are also provided for better understanding of every single step involved in the assessment procedure. Chapter 4 describes detailed treatment plans for mucus clearance and shortness of breath, decreased exercise capacity and/ or physical inactivity. Along with the detailed descriptions of individual techniques and video links, a very easy flowchart to help decide on a better treatment plan is also provided. Chapter 5 gives an insight on the "Follow up" aspect involved in respiratory care. In case of patients suffering from chronic respiratory conditions, who might have repeated periods of severe acute exacerbations continuity of care is of extreme importance. Be it multidisciplinary rehabilitation or primary care setting, regular follow-ups need to be scheduled so that the patient stays as a part of loop and can avail proper care.

At the end, various appendices are provided which focus on interpretation of various tests. Best part of these appendices is that they have provided different examples and its interpretation which will surely help in sharpening practical skills wherein you need to be good at the application based part and not just the theoretical aspect of it. Physical activity questionnaire, clinical COPD questionnaire is also provided as a part of appendices. They have also enlisted details that should be included in the evaluation form of respiratory rehabilitation.

Relevant topics that should be considered under the domain of "Patient education" are also described in one of the appendix. They have also enumerated various requirements or essential components of the respiratory rehabilitation program. This is in accordance with the guidelines given by American Thoracic Society (ATS). This is followed by a detailed case study report wherein all the aspects of history taking, evaluation, interpretation of the diagnostic tests and the treatment protocol derived are covered.

The unique feature of this book in my opinion is that it truly provides a "Practical Guide "and not just theoretical description about the chronic respiratory conditions. Every minute detail that should be taken into consideration while taking history, or evaluating or ordering for investigative procedures is given in these chapters. Flow chart or schematic representation of how to decide on the treatment strategies is demonstrated very well which will help to give the reader a quick review of what needs to be done and how can he/ she go about it. A reader can quickly go through these charts to help him decide on the priority of the treatment strategies to be implemented. Also it is commendable that such vast information is presented in such a simplified and concise way, that the reader be it an academician or a clinician or even a student will surely learn something new from it. It will surely serve as a great learning experience for the students. All and all it is an excellent read for someone looking at practical points or tips involved in the evaluation and treatment of patients with chronic respiratory conditions.

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