

## Mosby's Respiratory Care Equipment

*JM Cairo. Elsevier 2014 (9<sup>th</sup> edition). ISBN: 978-0-323-09621-8. Soft cover. 657 pages.*

With the ongoing advancement of technology and health care delivery, as health care workers we have to be up to date with our knowledge in continuing to provide a high standard of quality services to the population. This book has been edited and published in the last three decades and it is up to its ninth edition with recent information included in it. It was authored by a respiratory therapist in the United States of America and the purpose of the book is to provide respiratory therapists a comprehensive overview of the equipment and techniques and the rationale behind them, to treat cardiopulmonary dysfunction. Although the scope of a Respiratory Therapist in the States is different from a Cardiopulmonary Physiotherapist, nonetheless there are important basics and knowledge within the cardiopulmonary physiotherapy field that this book provides that can be applied in our daily clinical practice.

The book is divided into five sections with each chapter beginning with an outline, objectives and key terms, to aid the reader with navigating its contents. Each chapter is summarized in a bullet pointed format which makes it very easy to read. There are also clinical questions throughout the chapter to challenge readers to think whilst reading.

The first section provides a revision of basic respiratory science which is in-depth yet written clearly and simply, and well-illustrated with diagrams. This section also discusses the principles of infection control which includes how microorganisms transmit and how health care workers can assist in controlling infection transmission by adhering to isolation precautions.

The second section of the book provides information on medical gases including oxygen, carbon dioxide, nitric oxide among others and the various ways to store and transport them. However in this section the most relevant to cardiopulmonary physiotherapists is oxygen therapy and delivery devices and systems. The book explains the difference between high-flow versus low-flow oxygen therapy and devices. It also includes the clinical practice guidelines of the American Association for Respiratory Care on Oxygen Therapy administration in various situations.

The third section discusses airway management, humidity and aerosol therapy. The author provides a comprehensive review of the various types of nebulizers and inhalers used at different settings and their technique. This section also discusses lung expansion therapy devices such as incentive spirometer, intermittent positive pressure breathing (IPPB) device and positive airway pressure (PAP) devices. It outlines the basic principles of other chest physiotherapy techniques of manual chest physiotherapy, pneumatically powered and electrically powered devices, and the mechanical insufflation-exsufflation device. High-frequency oscillation devices are also discussed such as intrapulmonary percussive ventilation, flutter valve therapy and the high-frequency chest wall oscillation device.

Section four discusses the various technique and devices in assessing pulmonary and cardiovascular functions. Although it is most relevant to respiratory therapists, the basic principles of these are still relevant to cardiopulmonary physiotherapists such as the lung function test standards in a spontaneously breathing person versus a mechanically ventilated person.

The last section describes devices used in a critical care setting and in extended care. It is primarily on mechanical ventilation both invasive and noninvasive. It outlines the basic principle of mechanical ventilation and different modes and settings. This also includes the mechanical ventilators used in infants and pediatric populations. Extending further, this book also describes the mechanical ventilators used at home with troubleshooting guidance.

This book definitely provides a very good basis for cardiopulmonary physiotherapists from an acute to a community setting. It outlines a very comprehensive scope and knowledge for respiratory therapists that can be applied to cardiopulmonary physiotherapy. It provides a broad range of devices that are relevant to our clinical practice that allows us to have a good understanding of them. In comparison to the previous editions the author has included some clinical practice guidelines and some clinical scenarios, the book is however still relatively machinery based. As physiotherapists, it is also important to look at research evidence to ensure the assessment and treatment used are valid and effective.

*Wing Ho BPhy, PG Dip HSc  
Physiotherapist  
Allied Health, Auckland City Hospital*