
Today the respiratory therapist is faced with ever-changing and more complex equipment than ever before. Respiratory care practitioners need to be armed with the knowledge and understanding of the many devices at their disposal to provide the highest, safest level of care to their patients. Authors Cairo and Pilbeam have taken on the daunting task of reviewing, updating, and improving upon a text that was first published over 20 years ago and has become an essential tool for respiratory care professionals everywhere.

The 7th edition of Mosby’s Respiratory Care Equipment quickly catches your eye with its brightly colored hard cover. This is followed by a comprehensive list of abbreviations on the inside front cover and frequently used formulae and values on the inside back cover. The book begins with a detailed table of contents, making it easy for the reader to navigate all 15 chapters and quickly find specific information.

Chapter 1 provides a nice review of the basic physics involved in the practice of respiratory care. Chapters 2 and 3 deal with all aspects of medical gases, from manufacturing and storage to devices for proper administration. Specialized and mixed gases are also included. Chapter 2 has a very useful, organized appendix, outlining National Fire Protection Association and Compressed Gas Association recommendations and regulations for the safe storage, transportation, and use of medical gas systems. This information is valuable to all practitioners, including managers and administrators living in an environment of increased scrutiny from state, federal, and independent regulating agencies.

Chapter 4 discusses humidity and aerosol therapy, utilizing several tables to illustrate important points. Chapter 5, “Principles of Infection Control,” is a concise discussion of an extremely important aspect of health care. This chapter would be a nice review for any practitioner involved in direct patient care.

Chapter 6 is a nicely organized chapter that discusses and demonstrates aspects of airway management and includes many helpful, accurate illustrations and photographs to assist the reader in understanding the available airway management tools.

Chapter 7 reviews lung-expansion devices. I question the value of giving nearly 10 pages of attention to intermittent positive-pressure breathing. To my knowledge, positive-airway-pressure devices, along with other techniques, have become much more popular and have been studied more recently as an adjunct to bronchial-hygiene therapy.

Chapters 8, 9, and 10 detail the various diagnostic tests related to the practice of respiratory care, including pulmonary function testing, cardiovascular testing, and blood gas monitoring. Each of these chapters provides up-to-date, accurate information for practitioners who routinely order diagnostic tests.

Chapters 11 and 12 may be the best chapters in this text. Cairo and Pilbeam have captured the essence of mechanical ventilators, from the most basic concepts to the most complex of today’s ventilator modes. They provide key information about 22 different ventilators. Yes, 22 ventilators were included in Chapter 12 alone. This is the most comprehensive chapter I have seen on the ventilators available today, and the authors organized the information in a readable, understandable, and useful way. The attention to detail, including the figures and photographs of each ventilator, is remarkable.

Chapter 13 follows in line with Chapters 11 and 12 by providing key information on numerous infant and pediatric ventilators, including continuous-positive-airway-pressure systems, jet ventilators, and high-frequency oscillatory ventilators. Once again, the attention to detail and the ventilator photographs are wonderful additions.

Chapter 14 is a particularly timely chapter, as transport and home-care ventilators have become more popular. Included in this chapter are descriptions of several transport ventilators, home-care ventilators, devices to provide noninvasive ventilation, and negative-pressure ventilators. The text concludes with a chapter on sleep diagnostics.

This chapter is concise and nicely written, so the reader will have a basic understanding of sleep disorders, their pathophysiology, and physiologic consequences.

The text begins each chapter with a clear set of learning objectives and key terms. The body of each chapter contains subtitles, clear and readable text, and tables, figures, and photographs that complement the surrounding text. Each chapter also includes “clinical rounds,” a problem-solving, critical-thinking section to test the reader’s understanding of the topic being presented. Each chapter ends with a summary and a set of review questions that challenge the reader. There are also references, a bibliography, and a list of Internet resources. Since the Internet is such a worldwide wealth of information, I believe this is a useful tool. Although I did not visit each Web site, I trust the authors and others involved in the writing of this text have done so and verified the credibility and accuracy of the information at each site.

Mosby’s Respiratory Care Equipment, 7th edition, is a comprehensive, well-written text that makes good use of tables, illustrations, figures, and photographs to complement the text. This text is a “must-have” for respiratory care departments and respiratory care schools. It would also be a welcome addition to any health-care professional’s personal library. This book is a bargain at $72.95. I thoroughly enjoyed reviewing this text and will use it in my practice on a regular basis.

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This book is a welcome addition to the excellent Lung Biology in Health and Disease series of textbooks published by Marcel Dekker. It provides wide-ranging coverage of the physiology of mucus clearance,