

sections, as there is greater difficulty in deciding what to include in a short clinical summary, as opposed to one on physiology. For example, the section on pleural diseases includes very little discussion of pleural fluid analysis but devotes a paragraph to mesothelioma. In addition, rapid changes in clinical medicine and practice differences between societies may rapidly make information outdated or inaccurate (eg, ciprofloxacin, rather than more active fluoroquinolone, is mentioned as second-line anti-tuberculosis therapy).

Given the small space allotted to each topic, clarity in statements is essential, but the clinical sections contain occasional unclear or confusing statements. For example, community-acquired pneumonia is defined as "lower respiratory tract infections occurring within 48 hours of hospital admission." It is not clear that this definition could apply to patients who are not hospitalized.

The *At a Glance* series is British in orientation, and the clinical section includes and excludes information that would/wouldn't typically be found in an American text. The text uses European units (eg, kPa rather than cm H₂O), but information on unit conversion is included. Some of the information is clearly not directed at the North American student; for example, the chapter on tuberculosis states that, "Pulmonary tuberculosis is most common in Asian, Chinese, and West Indian people." Other points of difference in the tuberculosis section include a paragraph devoted to the Heaf test and drug therapy, which recommends a 3-drug initial regimen (as opposed to the 4-drug regimen recommended by the United States Centers for Disease Control).

There was an obvious effort to make this book user-friendly. The index is thorough and there are few typographical errors. The diagrams are clear and well-labeled, and the radiographs clearly illustrate the pathology. No references were included, which would have been useful, given the concise nature of this book.

In summary, **The Respiratory System at a Glance** is a basic and concise review of respiratory physiology and disease processes. It would be most useful for students in medicine, nursing, and respiratory therapy as a supplement to more comprehensive texts and as a review for examinations. I recently taught a course on respiratory medicine for second-year (pre-clinical) medical students, and this book's chapters on respiratory physiology would have been a useful

supplement to highlight and concisely explain key concepts. The sections on clinical medicine might also be useful for health-professional students in their pre-clinical years. Students looking for a guide during their clinical years should seek out one of the many available "on the wards" pocket reference books.

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The Washington Manual Pulmonary Medicine Subspecialty Consult. Adrian Shifren MD, editor. *Washington Manual Subspecialty Consult* series, Tammy L Lin MD and Daniel M Goodenberger MD, series editors. Philadelphia: Lippincott Williams Wilkins/Wolters Kluwer. 2006. Soft cover, illustrated, 284 pages, \$29.95.

The Pulmonary Medicine Subspecialty Consult is a pocket-sized manual that addresses a broad range of topics in both inpatient and ambulatory pulmonary medicine in a concise and well-organized fashion. It is one of 11 such subspecialty manuals in the *Washington Manual Subspecialty Consult* series. **The Pulmonary Medicine Subspecialty Consult** has 32 chapters, ranging from basic pulmonary concepts (chest radiograph and pulmonary function testing) to complicated disease processes (interstitial lung disease and pulmonary hypertension), with a targeted and thoughtful design. Each chapter contains at least one table of important concepts or differential diagnoses that should be considered when evaluating an individual patient.

There are also flow diagrams that provide logical diagnostic or therapeutic approaches to common pulmonary difficulties. These graphics nicely complement the text in both organization and content. Each chapter is well organized and designed to function as a quick review of the topic, highlighting key points in the patient's history and physical findings, appropriate laboratory and radiographic studies, differential diagnoses, and therapeutic strategies. Each chapter lists suggested readings, including key consensus statements, practice guidelines, important clinical trials, and review articles.

The primary target audience is medical students, residents, and fellows in in-patient and out-patient consultative services, so the book is a quick reference for key details and issues that should be considered in the typical evaluation of patients with common pulmonary disorders. The book fits in a lab coat pocket. The intent of this text is not to function as a complete reference of pulmonary medicine, and it will not replace traditional textbooks that have detailed descriptions of airway mechanics, pulmonary physiology, and pathology.

However, as a quick reference that can be reviewed in several minutes on an in-patient ward or clinic setting, it will be a useful tool in the evaluation of pulmonary patients, by listing the key issues that should be considered while evaluating the patient at the bedside and providing references for a detailed review later. Another population that will find this text helpful are those who practice in busy primary care and hospitalist settings, where the wide variety of patient issues encountered requires convenient, easily accessible information. It will also be a useful and reliable desktop companion.

Overall, this is a useful and well-written reference that addresses a wide variety of topics with a very logical and practical approach. It will quickly find a niche in the lab coats of medical students and residents on pulmonary services. Those looking for a brief review of basic pulmonary topics will also find a tremendous value that lives up to the expected quality and reputation of other products from the *Washington Manual* series.

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Lung Function: Physiology, Measurement, and Application in Medicine, 6th edition. JE Cotes DM DSc FRCP, DJ Chinn PhD MSc, and MR Miller MD FRCP. Malden, Massachusetts: Blackwell Publishing. 2006. Hard cover, illustrated, 636 pages, \$199.95.

What an honor it is indeed to have the opportunity to review this book, though I must admit that the idea of critically reviewing it gave me as much disquietude as one might expect from an invitation to publicly discuss inaccuracies in Garry Kasp-

arow's chess play. Coates and colleagues have made tremendous contributions to our understanding of respiratory physiology over many decades. Crapo, who wrote the foreword, refers to Coates as "one of my icons"; it is difficult to find higher praise than that. When I began reading **Lung Function: Physiology, Measurement, and Application in Medicine**, it became clear that I had taken on dual roles: reviewer and fortunate student. The book's stated aim is to give "a comprehensive account of lung function and its assessment in healthy persons and those with all types of respiratory disorder, against a background of respiratory, exercise, and environmental physiology." After reading the book I think that sentence is an understatement. Though the book will certainly be useful for physicians and physiologists, it should be regarded as not just appropriate, but *necessary* for respiratory therapists, nurses, and students. This is a book that a student can grow with throughout his or her career.

Aesthetically this is a very nice book. I like the simplicity of the title. The diction and spelling are British, but I think this will not be a distraction, since most North American readers will surely find it necessary to read articles from the fine British and European journals. I appreciate the fact that numerical values are given in both *Système Internationale* units and the units most commonly used in the United States. Moreover, the European Respiratory Society and the American Thoracic Society get equal billing in this book. The beginnings of most chapters include both a general outline and an index of specific topics. References and suggestions for further reading are listed at the end of each chapter. There are very few typographical errors, the index is without difficulties, and the book is loaded with exceptional figures and tables. The book's most remarkable trait is its logical, lucid, and concise writing style. It is a joy to read.

There are 44 chapters and 7 parts. Whilst I thoroughly enjoyed all of this book, there are a few chapters I am particularly fond of. Chapter 21, "The Oxygenation of Blood," reviews in great detail all of the steps and barriers to aerobic respiration. The discussion of the oxyhemoglobin curve is the finest I have ever read. Most texts simply list what makes the curve shift, but this book explains how and when these changes occur and articulates the physiologic necessity of a dynamic relationship between oxygen tension and oxygen saturation at the pulmo-

nary and tissue level. However, in regard to the oxyhemoglobin curve, there is an inaccuracy in Chapter 34, "Hypobaria: High Altitude and Aviation Physiology and Medicine," where it is stated that a leftward shift of the oxyhemoglobin curve results from the combined effects of respiratory alkalosis, lactic acidemia, increased production of diphosphoglycerate (2,3-DPG), and, in some circumstances, a reduction in lung temperature." Of course acidosis and increased 2,3-DPG cause a rightward shift of the oxyhemoglobin curve. Chapter 23, "Control of Respiration," is perhaps the finest in the book. I will revisit this chapter regularly as a clinical reference and for teaching purposes. As I read it, I repeatedly thought, "I've got to use this figure in a presentation." I found the sections on peripheral neural inputs and learned responses of the respiratory control center particularly fascinating and thought-provoking.

I also admired the authors' effective arguments against certain widely accepted practices and terminology. For example, the American Thoracic Society suggests the use of maximum oxygen consumption per kilogram of body weight to determine the ability to sustain work, but the authors cite a study that showed that one third of British shipyard workers would be excluded from employment by that recommendation. In addition, the authors dispute the term "diffusion capacity," because this measurement is made at rest and therefore doesn't measure the true capacity. The term "anaerobic threshold" is also challenged, because intracellular oxygen tension after the anaerobic threshold remains adequate for the functionality of the electron transport chain, and because there is not a point of discontinuity between the oxygen consumption and lactate levels, so "there is no threshold."

There are some inaccuracies in this book. In Chapter 15, in a discussion of bronchial pharmacology, it is stated that magnesium may be beneficial in childhood asthma. However, Silverman et al¹ found a clear benefit from magnesium therapy in adults with acute severe asthma. In Chapter 42, while discussing the blunted ventilatory response to hypercapnia, the text incorrectly states that "the hypercapnic response is already reduced in patients with COPD." The text attempts to support this incorrect statement by citing a study by Montes de Oca and Celli,² but that study actually indicated that the ventilatory response to carbon di-

oxide is preserved even in COPD patients with chronic hypercapnia.

The section in Chapter 42 on mechanical ventilation is the book's only failure. The descriptions of how to ventilate lungs and controlled mandatory ventilation (with fixed time intervals) and expiratory retard are outdated; the citations are from the 1960s. It is also incorrectly stated that the Acute Respiratory Distress Syndrome Network mechanical ventilation study³ showed a mortality benefit from a strategy of "5 mL/kg minute ventilation." The text also states that the prolonged use of positive end-expiratory pressure increases the risk of barotrauma, but Amato et al,⁴ found that higher positive end-expiratory pressure and mean airway pressure, when used with small tidal volume, were associated with less volutrauma.

In conclusion, if you have a passion for respiratory physiology, you will treasure this book. The abundance of exceptional tables and figures is an invaluable resource. The \$199.99 price is a bargain; indeed, for a mere \$199.99 the reader can be a student of some of the world's great respiratory physiologists. Compare that to the cost of one class at your local community college—with book not included!

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1. Silverman RA, Osborn H, Runge J, Gallagher EJ, Chiang W, Feldman J, et al; Acute Asthma/Magnesium Study Group. IV magnesium sulfate in the treatment of acute asthma: a multicenter randomized controlled trial. *Chest* 2002;122(2):489-497. *Erratum in: Chest* 2002;122(5):1870.
2. Montes de Oca M, Celli BR. Mouth occlusion pressure, CO₂ response and hypercapnia in severe chronic obstructive pulmonary disease. *Eur Respir J* 1998;12(3):666-671.
3. The Acute Respiratory Distress Syndrome Network. Ventilation with lower tidal volumes as compared with traditional tidal volumes for acute lung injury and the acute respiratory distress syndrome. *N Engl J Med* 2000;342(18):1301-1308.
4. Amato MB, Barbas CS, Medeiros DM, Magaldi RB, Schettino GP, Lorenzi-Filho G, et al. Effect of a protective-ventilation strategy on mortality in the acute respiratory distress syndrome. *N Engl J Med* 1998;338(6):347-354.

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