

The book is divided into 4 parts: "The Basics," "Disorders of the Upper Airway," "Disorders of the Lower Airway," and "Non-Airway Disorders That Present With Respiratory Symptoms." The first part reviews the general approach to patients with respiratory disorders; it covers basic anatomy, physiology, and pulmonary function testing. The second part reviews common upper-respiratory problems such as allergic rhinitis, sinusitis, pharyngitis, and laryngitis. Part 3 examines lower-airway problems, including croup, asthma, chronic obstructive pulmonary disease, cough, sarcoidosis, and bronchiolitis. The final part includes chapters on sleep apnea, obesity, vocal-cord dysfunction, pulmonary embolus, hemoptysis, and gastroesophageal reflux.

Each chapter includes, in this order: a table of contents; a case presentation that introduces the chapter; key clinical questions and learning objectives; the epidemiology, pathophysiology, differential diagnosis, diagnosis, and treatment; and future research directions of the particular respiratory disorder. This chapter conformity makes the book easy to read, and the fact that the author co-wrote every chapter gives the book an evenness and consistency. The subsections on pathophysiology and future directions are particularly well-written and interesting. They will provide medical students, residents, and seasoned physicians with the necessary background to understand respiratory disease processes and what the future holds. That said, I believe busy primary care practitioners will be primarily interested in what treatments work today.

There are a few problems with the book. Most importantly, there is no mention of levels of evidence when the authors make treatment recommendations. The authors failed to tell which treatment recommendations are based on expert opinion and which are based on analysis of randomized controlled studies. Although some chapters reference Cochrane reviews as the source of recommendations, other chapters rely on dated articles. For instance, in the section on allergy avoidance strategies (page 40) the recommendation to use impermeable bed coverings is based on a 1992 article. Recent evidence suggests that that method is ineffective.¹ When evidence-based recommendations are included, they are often buried in the text alongside expert-opinion-based recommendations.

There are other problems: the pediatric and adult asthma chapters present overlap-

ping material, and the flow-volume loop on page 22 is incorrect. Summary answers to the questions posed at the beginning of the chapter would have been helpful. These are minor quibbles.

This book is best suited for medical students, residents, and primary care practitioners who want a great overview of the epidemiology, pathophysiology, and evaluation of common respiratory disorders. For treatment recommendations *and* the levels of evidence that support them, the practitioner must look elsewhere.

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REFERENCE

1. Woodcock A, Forster L, Matthews E, Martin J, Letley L, Vickers M, et al. Control of exposure to mite allergen and allergen-impermeable bed covers for adults with asthma. *N Engl J Med* 2003;349(3):225-236.

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Pulmonary Medicine Review, 2nd edition. Michael Zevitz MD and Richard Lenhardt MD. *Pearls of Wisdom* series. New York: McGraw Hill. 2006. Soft cover, 314 pages, \$69.95.

The *Pearls of Wisdom* series includes over 30 review books on various specialties and subjects in clinical medicine. Specific titles target nurses, allied health professionals, and doctors. **Pulmonary Medicine Review** is for preparing to take the board examination in pulmonary medicine or for a general review of pulmonary medicine. It is written as a set of rapid-fire questions and answers, grouped by topic. The authors suggest that the book be used either as a pre-clinical assessment of one's own knowledge or as a post-textbook assessment of retention and comprehension. They suggest doing a primary review with another source and using this book for self-assessment.

There are 2 things anyone preparing for the boards wants from a review book: that it covers the material to be tested, and that it does so in a concise manner, emphasizing "high-yield" subjects and weeding out need-

less minutia. The authors proffer this text as all-inclusive, but that seems to be an erroneous claim. For all of their board examinations the American Board of Internal Medicine publishes a "blueprint" that lists the test topics and their relative percentages in the test. A complete board review and a thorough pulmonary review should touch on each of the 19 topics in the pulmonary medicine test, but this book does not cover the categories epidemiology/ethics/statistics, quality/safety/complications, and cell biology, which represent one eighth of the test. As a general review of pulmonary medicine, however, these missing topics are probably not as clinically important as the topics the authors did include.

There are similar information deficits in the individual subjects reviewed. For instance, the coverage of sleep medicine, which constitutes 10% of the board examination and is an important component of clinical pulmonary medicine, is relatively superficial. Of the 15 subtopics under the blueprint categories "sleep, respiratory" and "sleep, nonrespiratory" at least 7 (and arguably 10) are not discussed. A reader preparing for a board review should be aware of these important gaps in coverage. Similarly, a reader trying to achieve a general pulmonary review should be aware that clinically relevant aspects of sleep medicine are not reviewed.

Perhaps it is unreasonable to expect that a review book be all-encompassing. While lacking in breadth, this book does succeed in being brief. The questions are rarely longer than a single sentence, and the answers are usually even more terse. Chapters are readily manageable in a single sitting. Next to each question there is an open bubble the reader can mark to signify interest, weakness, or simply that it has been read. This could make a re-read more efficient. As a board review, however, several topics are over-represented, including airway management and altitude medicine, each of which has an entire chapter but represents only a small fragment of the board examination. And within some of the other chapters certain subtopics seem somewhat over- or under-represented for a board review.

A consequence of this book's brevity is that the answers often lack sophistication. While some of the answers are both brief and sufficiently comprehensive, many of them fail to represent the complexity pulmonary fellows should expect. This oversimplification is exemplified by 4 consecu-

tive questions in the chapter on pulmonary critical care:

Q: What are the major causes of arterial hypoxemia?

A: Hypoventilation, ventilation-perfusion inequality, shunt, low F_{IO_2} , and diffusion impairment.

Q: How does one assess oxygenation?

A: Skin color, pulse oximetry and blood gas analysis.

Q: How does one assess ventilation?

A: End-tidal CO_2 monitoring and blood gas analysis.

Q: What is a tension pneumothorax?

A: An injury to the lung allowing intrapleural air to collect without escaping via the chest wall. . .

Furthermore, the intentional lack of explanation will often force the reader to go elsewhere to learn about the subject. In addition, these rapid-fire questions bear little resemblance to the actual questions on the board examination. There are a number of overly simple true/false question, such as:

T/F: The more risk factors a patient has, the greater the chances of developing a DVT?

T/F: Only patients with known risk factors develop DVTs [deep vein thrombosis].

Many questions are repeated, occasionally even verbatim.

There is a chapter that intentionally includes more board-type case presentations with multiple-choice questions. However, even this section has too many true/false questions to emulate a board examination. Overall, this strict adherence to a rapid-fire question-and-answer format is one of the principle weaknesses of the book. As a board review, some of the answers are "too easy." And, as a general pulmonary medicine review for the rotating student, the answers often lack adequate explanation to serve as a primary review.

For the most part, the answers seem to be reliable, but occasionally opinion is stated as fact, and a few of the answers are outdated. The authors did a good job of sticking to safe, time-honored topics.

One other deficit is the almost complete absence of radiographs. Though the book contains textual descriptions of the radiographic and histologic appearance of various diseases, there is only one chest radiograph image in the entire text, and there are no histology or gross pathology images.

In conclusion, this book does succeed in being an affordable, quick read that covers a breadth of pulmonary topics. However, it suffers from being insufficiently broad or thorough for board review. It would function a bit better as a general review for the non-board-taker, but the rapid-fire question-and-answer format is better for assessing knowledge than for a primary review of it. The text further suffers from the near-complete absence of exemplary images. I would not recommend this text as a pulmonary board review and would caution the general pulmonary reviewer that it could serve as an adjunct but not a primary review source.

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Crash Course: Respiratory System. Adam Myers PhD. *Crash Course* series, Daniel Horton-Szar, series editor. Philadelphia: Elsevier Mosby. 2006. Soft cover, illustrated, 242 pages, with online student consult access, \$29.95.

This book approaches the understanding of the respiratory system in an integrated fashion, which clearly surpasses the rote teaching method (ie, memorization). The text describes the normal respiratory anatomy and physiology, and integrates the concepts discussed with lung disorders throughout. Additionally, the pathophysiology, diagnosis, and treatment are discussed. This integrative format is an ideal adjunct for problem-based, evidence-based, systems-based, or more traditional curricula.

The book has 2 parts. Part I, "Basic Medical Science of the Respiratory System," consists of 7 chapters, and Part II, "Clinical Assessment," has 3 chapters. At the end of each chapter are several questions designed to reinforce the concepts discussed. Unfortunately, there is no bibliography, although several of the figures are referenced. I found the index useful and referred to it many times during my review. The book's color format is based on various shades of blue, which at first seemed pleasant, but some of the figures would have been clearer with additional colors.

Chapters 1 through 3 provide a cursory overview of lung anatomy and physiology, with figures, tables, and diagrams that are appropriate, not overdone, and easy to follow. Chapter 1 gives an abbreviated overview of the respiratory system that prepares the reader for what lies ahead in the succeeding chapters. Chapters 2 and 3 describe the anatomy and physiology of the upper and lower respiratory tracts, respectively, and their embryonic development. Chapter 2 also discusses disorders of the nose, pharynx, and larynx, whereas Chapter 3 describes defense mechanisms (at the physical, humoral, and cellular levels), some of the lung's metabolic functions, and fetal pulmonary circulation. The figures and tables support the text and are appropriate.

Chapters 4 and 5 address ventilation, gas exchange, perfusion, and gas transport. Particularly helpful, again, are the illustrations and tables, which visually reinforce concepts that can be difficult to grasp from just the written word. Chapter 4 provides a good description of dead-space characteristics, the distinction between minute and alveolar ventilation, and the definitions of various lung volumes. One minor discrepancy I noted was that the text uses the term " V_T " for tidal volume, but most of the figures and tables use "TV." The description of pulmonary mechanics, especially the section on the compliance and elastic properties of the lung, is well written. The explanation and illustrations of airway resistance and work of breathing are well done. Some of the figures in Chapter 4 require close scrutiny because of their use of blue shading. In Chapter 5 the principles of hydrostatic, colloid osmotic, and colloid oncotic pressure are presented in relation to fluid balance in the lung. The concepts of filtration and reabsorption (ie, fluid dynamics) are not easily explained, but the author's attempt is noteworthy in this challenging subject. A couple of the figures are somewhat complex and may require a little extra attention, although they are important to understanding the concepts presented. Ventilation-perfusion relationships are addressed, along with consequences of their mismatch. Oxygen and carbon dioxide transport are described, which provides a springboard to the discussion of the oxyhemoglobin dissociation curve and the various factors that shift the curve (eg, temperature, pH, and 2,3-diphosphoglycerate). The various forms of hemoglobin and their effects on the oxyhemoglobin dissociation curve are also addressed.