

service to the encumbered system. Finally, I have found that more than 95% of the attorneys I've encountered to be smart, educated on the topic, honest, and enjoyable to work with! In my experience, the image of "the lawyer" has not been true. On the other hand, if you are an expert, you can turn the tables on a poorly prepared attorney and take some solace in that.

One can also pick up a lot of tricks along the way. In that light I found **Cross-Examination: The Comprehensive Guide for Experts** to be a superb and extensive handbook for physicians entertaining the idea of becoming involved in medical-legal expert testimony. Despite its length and some redundancy I found myself reading enthusiastically through the numerous examples of question-and-answer scenarios one might encounter, which include tips on how to respond well, honestly, and clearly, as well as how to be "one-up" on the attorneys.

The organization helps the reader to see issues from both the physician's and the lawyer's sides. Chapters 2 and 3 describe how an attorney prepares and how a physician should prepare for depositions and trials. Chapter 4 describes the juror's perception of what is going on and the techniques to communicate with the jury through one's testimony. The remaining chapters (5–10) further delineate the legal limits of the process, tactics to defeat the counsel's cross-examination, the handling of trick questions, and techniques to become a "dangerous" or "bulletproof" expert witness. Each chapter has an executive summary at the beginning and an extensive example of an actual trial question-and-answer session, with evaluation of poor and excellent responses. The book teaches one to listen very carefully to every word of the questions, to respond clearly and accurately, and to avoid being cornered. Most importantly there are excellent tips on how to avoid trick questions and in some cases turn the tables, leaving the attorney standing empty in front of the judge and jury. This book is very helpful for experts who come from either the academic or practice setting, both of whom can be extremely valuable witnesses.

Despite its length and boring façade (looks like it belongs in some legal library) this book is a must for physicians—both novice and seasoned—in this arena of medical-legal work. Reading this book should diminish one's fear of the challenge in an

unfamiliar setting. My hat is off to the authors.

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Principles of Pulmonary Medicine, 4th edition. Steven E Weinberger MD. Philadelphia: Saunders. 2004. Soft cover, illustrated, 403 pages, \$44.95.

Now in its 4th edition, **Principles of Pulmonary Medicine** provides an excellent introduction to the fundamental mechanisms, manifestations, and management of respiratory diseases. The book is written with pre-clinical medical students in mind, but its readability and clinical scope make it suitable for others seeking a basic overview of pulmonary medicine. It lacks the depth and clinical emphasis to be of substantial use to seasoned practitioners and those in the advanced stages of their training. The newest edition retains the strengths of previous versions, with concise, stimulating, and comprehensible prose combined with a generous number of figures and tables. In addition, it offers improved graphics, more radiographic images, and updates on advances in basic sciences, diagnostic tools, and treatment options.

The opening chapter briefly reviews the fundamentals of respiratory anatomy, lung mechanics, and the physiology of ventilation, circulation, diffusion, gas transport, and gas exchange. The following 2 chapters provide an overview of the presentation and evaluation of patients suffering pulmonary disease. For the most part the remainder of the book is divided into sections on airway disease, parenchymal disease, pulmonary vascular disease, neuromuscular disease, infectious disease, and respiratory failure. Each section begins with an overview of the pertinent anatomy and physiology, and the chapters discuss specific respiratory diseases in detail. There are also chapters on pleural disease, mediastinal disease, and lung cancer. The appendixes review analysis of pulmonary function tests and arterial blood gases.

It is particularly important for an introductory textbook to correlate basic pathophysiology with the radiologic, pathologic, and clinical manifestations of individual diseases, and **Principles of Pulmonary Medicine** fulfills that expectation admirably. Throughout the

book the author sequentially discusses the etiology and pathogenesis, pathology, pathophysiology, clinical features, diagnosis, and treatment of each disease. Consistent use of that format takes the reader seamlessly from pathophysiology to clinical presentation to diagnosis to treatment. It also allows the reader to anticipate the flow of material and easily retrieve specific information.

The discussion of respiratory failure and pulmonary function tests are not as cogently presented. Topics central to respiratory failure are scattered throughout the book (ventilation-perfusion relationships and abnormalities of gas exchange in Chapter 1, arterial blood gases in Chapter 3 and Appendix 3, respiratory control in Chapter 17, disorders of the respiratory pump in Chapter 19, and the pathophysiology and treatment of respiratory failure in Chapters 27, 28, and 29). Alternative and additional figures of the 2-alveolus model illustrating ventilation-perfusion mismatch, shunt, and hypoventilation would be helpful. The causes of hypoxemia and the response (or lack thereof) to interventions to improve gas exchange, such as increased alveolar ventilation and supplemental oxygen, are arguably the most difficult concepts for students to understand and merit more detailed explanation. The discussion of pulmonary function tests would benefit from less emphasis on midexpiratory flow rates and a more integrated discussion of how spirometry, lung volumes, and diffusion capacity are used to differentiate common obstructive, parenchymal, neuromuscular, and pulmonary vascular diseases.

This 4th edition provides a thorough update on pulmonary medicine, with major developments incorporated into each topic. For instance, the chapter on pulmonary embolism describes the expanding role of contrast computed tomography angiography and introduces the use of D-dimers in diagnosis. Also covered are the impact of highly active antiretroviral therapy on respiratory infections in individuals with acquired immune deficiency syndrome and the use of positron emission tomography for lung cancer diagnosis and staging. In addition to incorporating new information on pathogenesis, pathology, and therapy, the chapter on asthma includes a new table that outlines asthma severity and corresponding treatment. Reference to prominent ongoing areas of research, such as lung cancer screening with chest computed tomography, is made in an appropriately succinct, neutral

fashion. The author steers clear of esoteric and inappropriately advanced topics, and the discussion of clinical aspects is limited to material suitable for an introductory text. The net effect of the author's judicious writing is that the book, with 400 low-text-burden pages, remains a cover-to-cover read rather than an unwieldy desk reference.

The book contains a number of features that facilitate learning. An outline is provided on the first page of each chapter and sections and subsections are clearly demarcated. Brief annotations written in the margins highlight key learning points, and students could go a long way toward passing most introductory courses by studying the margins alone. The tables are easily readable and nicely complement the text. The radiographs and pathology figures are of high quality and more numerous than in the previous edition. In the figures important features are obviously visible or are identified with arrows, and the figure legends contain sufficient explanatory detail. The images are strictly black-and-white; inclusion of color photomicrographs would, presumably, excessively increase the price of the text. Typographical errors are rare, the references are well-selected and timely, and the comprehensive index is user-friendly for students.

In summary, the 4th edition of **Principles of Pulmonary Medicine** is a practical, user-friendly, well-written, timely introduction to pulmonary medicine that successfully elucidates the relationship between basic pathophysiology and the presentation of respiratory diseases. The discussion of clinical topics is sufficiently detailed to provide excellent preparation for clinical rotations but is rightfully limited to material suitable for an introductory textbook. Preceding familiarity with the fundamentals of cardiopulmonary physiology is helpful, as some aspects of gas exchange and pulmonary function are covered in cursory fashion. Nonetheless, we will continue to use **Principles of Pulmonary Medicine** for our pre-clinical medical student course on respiratory diseases, and other learners at similar stages of their training will likewise find it useful.

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Multidisciplinary Approaches to Breathing Pattern Disorders. Leon Chaitow ND DO, Dinah Bradley DipPhys, and Christopher Gilbert PhD. Edinburgh, United Kingdom: Churchill Livingstone. 2002. Soft cover, illustrated, 280 pages, \$49.95.

Hyperventilation is a vexing problem, both for patients who experience distressed breathing and for clinicians who treat them. Often such patients are judged adversely by clinicians as though the term "psychosomatic" implies ruling out "somatic" causes so that the patient's signs and symptoms can be relegated to the precincts of psychopathology. That the syndrome may involve abnormal sensitivity to a level of dissolved carbon dioxide in the blood or that it may represent a complex, multisystem, conditioned response to obscure stressors seems to have little bearing on treatment (especially in emergency care settings) or referral. Rather, treatment typically focuses on symptom-relief during acute episodes, via rebreathing and anxiolytic medication. Though such treatment often results in fairly immediate relief, the patient commonly is none the wiser with respect to how to avert such attacks in the future, especially if the patient is predisposed to some form of chronic hyperventilation.

Hyperventilation is not the only clinical problem addressed in **Multidisciplinary Approaches to Breathing Pattern Disorders**, but it is a recurrent and consistent theme throughout. In essence it is a model of what the authors mean by "breathing pattern disorder." The authors' backgrounds in osteopathy (Chaitow), respiratory physiotherapy (Bradley), and psychology (Gilbert) make the term "multidisciplinary" more than just a buzzword or empty promise.

Throughout the text there is strong, sustained emphasis on respiratory and musculoskeletal structure and function relationships. For osteopathic and physiotherapy practitioners there is ample detail on various manual therapeutic techniques, with appropriate cautions to the effect that such techniques require adequate theoretical and clinical grounding in those disciplines. Numerous figures, tables, and text boxes highlight important conceptual and clinical content and help to clarify many of the technical points for readers from outside of those disciplines.

Nevertheless, some readers (eg, those whose training and expertise are entirely within an allopathic medical tradition, par-

ticularly those who fancy themselves to be committed to rigorous evidence-based practice) may well object that many theoretical and clinical points are derived from less-than-optimal evidence for causal claims (eg, studies with observational designs). Careful consideration of the text may alleviate some of those concerns. Although the authors do not "grade" evidence per se, they generally provide sufficient information about cited studies to permit readers to form their own judgments about methodological quality. However, that does place some burden on readers, the more skeptical of whom may find it necessary to suspend judgment on some claims by taking them as hypotheses awaiting more rigorous attempts at corroboration or refutation. Readers unwilling to devote more than casual attention to the underlying conceptual framework of the authors' perspectives may question the value of that effort.

In the context of clinical science and practice, this may well exemplify Thomas Kuhn's (1970) thesis of incommensurability across conceptual frameworks.¹ Kuhn focused on "revolutions" in basic science (notably physics) rather than conceptual evolution in clinical science, which may proceed along parallel tracks in relation to specific needs and interests of practice disciplines. Nevertheless, his basic point about incommensurability was that conceptual frameworks need to be understood in their own terms and evaluated as adequate or wanting on that basis. To the extent that one accepts that thesis, attempts to focus critical comments on divergent, framework-dependent interpretations of which facts or claims matter most or least are apt not to illuminate controversies, let alone resolve them.

To the authors' credit, their theoretical explanations and empirical claims about breathing patterns are expressed, whenever possible, in familiar terms of disordered pulmonary or thoracic mechanics and the neurophysiology of respiratory control. There also is a very welcome, sustained emphasis on the psychological distress that attends disordered breathing. However, the interpretation of what such evidence means and what its relevance may be to practice (ie, how much is "signal" as opposed to "noise") remains framework-dependent.

The book begins with a lengthy chapter on structure-function relationships that the authors deem critically important for analyzing normal and disordered breathing. The