

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

second chapter deals with patterns of breathing dysfunction (in particular, hyperventilation). Chapter 3 deals with "biochemical aspects of breathing," and the following chapter addresses "biomechanical influences" on breathing, in which both chemical and neuromuscular aspects of respiratory control are covered in reasonable depth. Subsequent chapters pertain to psychological and emotional interactions relevant to disordered breathing, osteopathic assessment and treatment, physiotherapy in the context of pulmonary rehabilitation, and self-regulation of breathing. The chapters on osteopathic and physiotherapy approaches to assessment and treatment will probably be far more useful to practitioners in those fields as opposed to a more general readership. On the other hand the chapters on psychological issues and self-regulation are insightful, clearly written, and characterized by enormous empathy for what patients experience when breathing goes awry. They should be required reading for anyone inclined to dismiss as cranks or malingerers patients with acute or chronic hyperventilation and other forms of disordered or distressed breathing who have a problem that is "all in their heads."

The last 2 chapters include a mixed bag of "other breathing issues" and self-help approaches and exercises that had "no natural [ie, conceptual] home" (page 223) in the foregoing chapters. The "other issues" chapter is wide-ranging and covers such issues as hyperventilation during air travel and exercise, paper-bag rebreathing (with appropriate cautions), sleep-disordered breathing, Buteyko breathing exercises, as well as a brief overview of traditional Chinese medicine and acupuncture in relation to dysfunctional breathing. The authors state unambiguously that inclusion of a particular method in that chapter does not imply their endorsement; rather, they justify devoting a chapter to arguably "fringe" methods because there already are practitioners who employ such techniques in practice and "we felt it important to provide at least a thumbnail impression of the methodology and underlying concepts, and, where necessary, a word of caution" (page 223). Despite the disclaimer it is entirely possible that practitioners of such techniques will claim that their inclusion in a respectable text is, in some sense, legitimizing, whereas more mainstream readers may find much of this material highly speculative and lacking evidence of efficacy.

At a more concrete level a similar criticism may attach to the final chapter, which is a compilation of various breathing exercises and self-help techniques in the form of brief summaries that the authors intend for use as handouts for individual patients (and for which duplication is expressly permitted). According to the authors some of the techniques (eg, autogenic training) are, "well-researched while others have proved themselves in practice to the satisfaction of one or more of the authors" (page 241). Whether practitioners interested in using such techniques make scrupulous distinctions between data-based evidence and expert opinion is an open question.

One limitation of the book that I found rather surprising was a relative lack of attention to how primary pulmonary diseases such as asthma, chronic obstructive pulmonary disease, and intrapulmonary restrictive conditions affect breathing patterns in ways that contribute to alveolar hypoventilation. Rather more attention is devoted to extrapulmonary sources of restriction such as kyphoscoliosis and other postural abnormalities. There also is surprisingly little material on the psychophysics and physiology of dyspnea. On balance, however, the strengths of the book outweigh those limitations. By elucidating an alternative, nonallopathic framework for understanding disordered breathing, the authors persuasively argue that—to paraphrase Hamlet—there is far more to both normal and disordered breathing than, perhaps, many of us have "dreamt of" in our "philosophy" of assessment and treatment.

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REFERENCE

1. Kuhn TS. The structure of scientific revolutions. Chicago: University of Chicago Press; 1970.

Radiology of the Chest and Related Conditions. Fred W Wright MA DM. New York: Taylor & Francis. 2002. Soft cover, illustrated, unpaginated (with CD ROM), \$280.

A number of different texts are available on chest radiology. They are primarily of 2 types: those designed to be all-inclusive and

those that focus on a particular facet of chest radiology. **Radiology of the Chest and Related Conditions** is in the former group. Most often the disadvantage of a comprehensive textbook is its large size, often spanning multiple volumes. Fred Wright has condensed the essence of cardiopulmonary radiology into a single volume, measuring a mere 18×26×5 cm. And the entire text plus supplementary images are included on the companion CD-ROM.

In the preface Wright indicates that his intended audience is "radiologists and chest physicians (especially those in training), medical students, technologists, and radiographers." Indeed, there is something for everyone. A medical student or intern would benefit from the introductory chapter on normal chest anatomy. The technologist could learn from the short section on technical variables and radiation physics. The physician would use this book as a reference when encountering an unknown or unusual disease process of the chest.

As with any text there are positive and negative attributes. The book does present a wide range of topics within chest radiology but some are given only token mention. The style in which the topics are presented is unique and allows for its compact size, although it also creates shortcomings.

The book is bound in an esthetically pleasing soft cover with a matching rigid cardboard box. The paper quality is good and the type face is very readable. Except for a single color picture (of Saint Ansanus) inside the front cover, the only illustrations in the book are (numerous) black-and-white line drawings. All the radiographs are on the CD-ROM. The text is not consecutively paginated from beginning to end; rather each individual chapter is paginated.

The book is in 24 chapters, beginning with basic anatomy, ending with lung cancer. The chapter organization is somewhat awkward, as some chapters are divided by anatomic location (veins, arteries, chest wall, pleural space, and esophagus), whereas others are divided by appearance or pathology (eg, lung consolidation, cavitation). Chapters 3 and 4 discuss common and atypical lung neoplasms. Later Chapter 17 discusses metastasis of chest tumors to the abdomen. Chapter 24 examines the etiology, classification, and management of lung cancer. Lymphangitic carcinomatosis is discussed in Chapter 8, along with pulmonary edema and acute respiratory distress syndrome. Overall the book has a somewhat disjointed