

Breathing Disorders in Sleep. Walter T McNicholas MD and Eliot A Phillipson MD. London: WB Saunders. 2002. Hard cover, illustrated, 339 pages, \$95.

The processes that control respiration differ substantially across the 3 sleep/awake states (awake, rapid eye movement sleep, and non-rapid-eye-movement sleep). This has important implications for clinicians caring for patients with and without underlying cardiopulmonary disease, because we now recognize an array of sleep-related breathing disorders. Some diseases, such as sleep apnea, are sleep/awake state dependent and only occur during sleep. Other diseases, such as obstructive lung diseases and congestive heart failure, are profoundly affected by the sleep state. Also, many respiratory ailments alter the quality of sleep. Given that the prevalence of obstructive sleep apnea (OSA) is second only to asthma among respiratory diseases, it is essential that clinicians understand respiration during sleep. I congratulate the authors of **Breathing Disorders in Sleep** for meeting their goal of putting together a book that addresses the entire spectrum of sleep-disordered breathing in a fashion that will be of great utility to practicing clinicians who may or may not have special expertise in sleep disorders medicine.

Breathing Disorders in Sleep will find a home on the shelves of many different clinicians' libraries. General pulmonologists who have not had specific training in sleep medicine may be the perfect target audience for this book. They are often called upon to consult on patients who have sleep-related breathing complaints. They will find this an excellent overview of the topic and also a suitable reference when looking for help with a specific problem. It will be an excellent resource for those studying to take the qualifying examination of the American Board of Sleep Medicine. Respiratory therapists and sleep technologists will use the text in the classroom and to study for certification examinations. Medical students and internal medicine house staff should read this text during their pulmonary rotations. Primary care clinicians will find it useful as a reference tool but should also use it to

educate themselves about these highly prevalent diseases. Finally, sleep medicine specialists from all backgrounds will find the text to be a concise, state-of-the-art summary of sleep and breathing.

The editors thoughtfully divided the book into appropriate sections and chapters and enlisted the leading scientists in their respective fields to write the individual chapters. The chapters flow together, with very little overlap. Most of the chapters are well written and appropriately referenced. The information is current and factually correct. Though the majority of the text is devoted to the OSA syndromes, the last section of the book discusses the effects of sleep on asthma, chronic obstructive pulmonary disease, interstitial lung diseases, neuromuscular diseases, and central sleep apnea syndromes.

The chapters on epidemiology, morbidity, clinical features of OSA, surgery for OSA, and central sleep apnea syndromes were outstanding. In all cases the authors present data in novel written or graphic formats that are refreshing and enlightening. The epidemiologic data from many studies are very well summarized in the chapters by Drs Young, Peppard, and Redline. They gleaned the critical statistics and placed them into a practical context for nonstatisticians. Drs Flemons and Whitelaw did a superb job with the difficult topic of clinical predictors of OSA. The table summarizing the odds ratios associated with specific clinical signs and the presence of OSA is unique and exceedingly useful. Dr Sher's compilation of the outcomes literature for all of the commonly performed surgical procedures for OSA is by far the best I have seen. The illustrations in his chapter were extremely useful. Finally, Drs McNicholas, Phillipson, and Bradley wrote 2 exceptional chapters on central sleep apnea syndromes. Their clear writing nicely elucidated the complex physiology of disorders that can be difficult even for well-trained pulmonary physicians.

The book has few limitations. The section on sleep apnea in the young and the elderly could have been edited into other sections of the book. Respiratory therapists would enjoy more information about nocturnal ventilation for non-sleep-apnea syndromes as well as more detail about contin-

uous positive airway pressure equipment and interfaces. I think some general discussion about sleep physiology and polysomnography would have made the text a more stand-alone educational tool for clinicians who are not trained in sleep medicine. Finally, a discussion about the clinical approach to patients with nocturnal respiratory symptoms would be useful.

Each chapter includes boxes that summarize key points. Though these boxes were an excellent idea, most of the key points were too vague to be useful as tools to study for examinations. In general I found the illustrations to be of average quality. They were few in number and often too small, making them difficult to read. There were almost no photographs.

I found the book to be a very comfortable size. It could be easily held and read comfortably in a chair rather than at a desk. There were a moderate number of typographical errors, occurring at rate of 1–2 every other chapter. I did not like the font or its size. This, combined with the gloss on the pages, made it somewhat difficult to read in all but perfect lighting.

I congratulate the editors on putting together a superb text on a growing and important topic. It should be recommended reading for any clinician interested in respiration or sleep.

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Sleep Apnea: Pathogenesis, Diagnosis, and Treatment. Allan I Pack, editor. (Lung Biology in Health and Disease, Volume 166, Claude Lenfant, executive editor.) New York/Basel: Marcel Dekker. 2002. Hard cover, illustrated, 703 pages, \$195.

Sleep Apnea: Pathogenesis, Diagnosis, and Treatment is volume 166 of the Lung Biology in Health and Disease series of monographs, which first examined sleep and breathing with volume 21 in 1984. Volume 166 includes 21 chapters of presentation, analysis, and interpretation of current re-

search findings on pathophysiology, diagnosis, and treatment of sleep apnea.

The intended readership is not plainly stated, but this is clearly not an abridged "how to" pocket manual for the busy clinician. Do not look here to learn how to score sleep studies or fit patients with continuous positive airway pressure (CPAP) equipment. Rather, this book would be worthwhile reading for clinicians who need to more completely understand the phenomenon of sleep apnea, how our diagnostic methods measure up or fail, and how our treatment methods are rationalized. This would include any physician, nurse, nurse practitioner, respiratory therapist, or sleep technologist with the stomach and desire to digest research summaries and analysis. If you are not satisfied with following rote diagnosis and treatment algorithms or blindly accepting consensus statements, but insist on validating such dogma on your own, this book is for you.

Although obstructive sleep apnea (OSA) seems to be the commonest type of sleep apnea, there is no section in this book on the important topic of central sleep apnea. The book's title implies that it would cover all types of sleep apnea, but since it does not cover central sleep apnea, it would have been better to have named the book **Obstructive Sleep Apnea** or to include a discussion about central sleep apnea.

The series editor, Claude Lenfant MD, states the aim of the book as an update in research and clinical application. Dr Pack, the editor of this volume, has done an admirable job of meeting that aim. He has assembled a diverse group of contributors, most of whom are distinguished by substantial research contributions to this field.

The chapters are largely well organized and thoughtfully chosen. Chapter 10, on functional brain imaging, is an exception and seemed a little out of place because it contained only a brief section on brain imaging in sleep apnea. This 40-page chapter is also peculiar in that it has 9 authors listed. Did all 9 really participate in writing it?

The chapters were substantially and refreshingly void of unsupported opinion. Like Sergeant Joe Friday in the television series *Dragnet*, this book says "Just the facts, Ma'am." Chapter 19, on oral appliance therapy (an otherwise excellent chapter) contained an exception to this rule. In the summary portion the authors opine about rigid roles for dentists and physicians in the management of OSA with oral appliances but

provide no supporting evidence. The authors also assert that an "appliance should be used during sleep for life," perhaps unaware that some patients successfully use the appliance as an alternative to CPAP during travel or for camping only, or successfully change back to CPAP after several years using an appliance.

The material in each chapter is presented logically and referenced exhaustively. The contributors appeared to have a free hand to arrive at unvarnished conclusions, and some of these conclusions run counter to much of prevailing conventional wisdom. For instance, Stradling and Davies in Chapter 16, "Simplified Diagnostic Tests for OSA and Its Variants," argue convincingly for their conclusion that conventional "polysomnography cannot, and should not, be regarded as a gold standard as it has never been properly validated as a tool to measure the actual pathological process resulting from reduced upper airway tone with sleep onset." They also point out that polysomnography has not been validated as a predictor for common clinical questions such as (1) What is the relationship between sleep apnea and the patient's symptoms? and (2) Is nasal CPAP or surgical treatment likely to benefit the patient?

Stradling and Davies's careful dissection of diagnostic goals and treatment end points in this chapter warrants expansion into another chapter of its own, as these topics form such controversial and critical elements of sleep medicine practice. Whereas the surgery literature (reviewed in Chapter 20) has been historically saddled with groundless treatment end points such as a reduction in the apnea index by "50% from its preoperative value," the end points of CPAP titration, pharmacotherapy, and oral appliance therapy have been assigned variably and empirically as well. Sanders and Sériès touch on treatment end points in Chapter 17, "New Developments in Positive Pressure Therapy for Sleep Apnea," but the reader would be well served by a discussion of this topic on its own.

In Chapter 2, "Biomechanics of the Upper Airway During Sleep," Smith and Schwartz argue convincingly against conventional wisdom as well. They show that there is little to distinguish the flow-limited respiratory events identified in the "upper airway resistance syndrome" from usual hypopneas and leave the reader to conclude

that there is little to justify a separate classification (apart from OSA syndrome) for these patients.

There is also evidence of thoughtful coordination between chapters. For instance in Chapter 1, "Anatomical Factors: Insights From Imaging Studies," in a brief discussion of genetic influence on upper airway structure, the reader is referred to Chapter 8, "The genetics of the OSA Hypopnea Syndrome," for further reading.

This text has no color illustrations but is otherwise appropriately replete with graphs, tables, diagrams, and illustrations. I was particularly impressed by the elegant axial magnetic resonance images in Chapter 7, which demonstrate thinning of the lateral pharyngeal walls with weight loss. There is an extensive subject index (18 pages) as well as an amazing author index totaling 50 pages—a handy tool if you know whose work you are looking for. If you were looking for JA Fleetham, for instance, you would find 38 citations, each listed by page number. I found the text virtually free of typographical errors.

Bound with a glossy white paper veneer, this stubby (23.5 cm tall) and fat (3.8 cm thick) little book will fit nicely on any bookshelf. I enjoyed the book immensely and learned much.

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Clinical Management of Chronic Obstructive Pulmonary Disease. Thomas Similowski MD PhD, William A Whitelaw MD PhD, and Jean-Philippe Derenne MD, editors. (Lung Biology in Health and Disease, Volume 165, Claude Lenfant, executive editor.) New York/Basel: Marcel Dekker. 2002. Hard cover, illustrated, 1,072 pages, \$250.

Chronic obstructive pulmonary disease (COPD) is increasing in frequency in the United States and the world. The incidence, prevalence, and death rate attributed to this disease are rising. COPD is currently the fourth leading cause of mortality in the United States. The increasing burden of this disease has resulted in a major effort by the World Health Organization and the National Institutes of Health, including publication of the *Global Initiative for Chronic Obstruc-*