

Dyspnoea in Advanced Disease: A Guide to Clinical Management. Sara Booth and Deborah Dudgeon, editors. Oxford: Oxford University Press, 2006. Soft cover, illustrated, 271 pages, \$57.50.

In a recent book review for this journal I stated that from an educational, advocacy, and research standpoint, the respiratory care profession has given insufficient attention to dyspnea.¹ From a pedagogical perspective at least, the inherent complexity of dyspnea may dissuade educators from attempting to delve deeply, as respiratory care students first need to grasp the fundamentals of respiratory physiology and pathophysiology. It was my opinion that excellent textbooks like the one described in the previous review (*Dyspnea: Mechanisms, Measurement, and Management*, 2nd edition)¹ were more likely to serve as a useful resource for educators, who would then need to abstract general concepts regarding dyspnea and reformulate them to a level appropriate for students.

By a lucky circumstance, the recent publication of the British textbook **Dyspnoea in Advanced Disease: A Guide to Clinical Management** may have circumvented that need. This 271-page, soft-cover textbook contains 14 chapters contributed by 20 authorities in the field of dyspnea. Although written primarily by and for clinicians specializing in palliative care, I believe the textbook is accessible to both respiratory care practitioners and students.

Dyspnoea in Advanced Disease: A Guide to Clinical Management begins with a concise introductory chapter that covers the neurophysiologic mechanisms believed to be responsible for the generation of dyspnea. The chapter is co-authored by Schwartzstein, director of one of the only research centers devoted to the treatment of dyspnea. This is followed by an intriguing chapter on the assessment of dyspnea. Not only are topics such as physical examination, history-taking, laboratory assessment, and measurement scales succinctly described, but the chapter also addresses the complex interplay between physiological, psychological, social, and environmental factors that clinicians must master if they

are to help patients successfully manage their symptoms.

The next 4 chapters are devoted to the evaluation and treatment of dyspnea in specific disease states: heart failure, chronic obstructive pulmonary disease, advanced cancer, and neurologic disease. Dudgeon's chapter on dyspnea in advanced cancer is particularly poignant, as she describes how dyspnea exacerbates the emotional suffering and social isolation of these patients. It also underscores the importance of the chapters by Carrieri-Kohlman on the multidimensional assessment of dyspnea and nonpharmacologic approaches to its management.

A shortcoming of the book is the absence of a chapter devoted to the management of dyspnea in patients suffering from autoimmune diseases such as pulmonary fibrosis and systemic lupus erythematosus. However, I was pleased to see that the editors included a chapter specifically devoted to children, particularly those with cystic fibrosis and terminal cancers. Liben, who is the director of palliative care at Montreal Children's Hospital, does a masterful job in categorizing the pediatric population according to disease states and then organizing dyspnea by contributing causes and treatments. What I found particularly interesting was Liben's discussion on utilizing nonverbal cues (such as facial expressions) to diagnose dyspnea in very young children. With further research this technique eventually may have implications for the treatment of dyspnea and patient-ventilator asynchrony in acutely ill adults who also cannot communicate.

The second half of the book addresses a number of issues, including respiratory muscle function, rehabilitation strategies, oxygen therapy, surgical interventions to improve dyspnea, pharmacologic interventions, and nonpharmacologic approaches to the management of dyspnea. Unfortunately, the chapter on the role of respiratory muscles in dyspnea is disappointing. Although it includes some interesting data on fatigue, overall the writing is poorly focused and provides an insufficient foundation of knowledge of skeletal muscle physiology. Pulmonary rehabilitation is structured as an overview that

covers the necessary components of an effective rehabilitation program and an evidence-based summary of the benefits of such programs. The first few sections of the chapter on oxygen therapy provide a nice literature review, although the respiratory therapist can skip over the later sections on practical aspects of oxygen therapy.

The chapter on pharmacologic interventions focuses primarily on the role of opioids in the treatment of dyspnea in different diseases, and also reviews some of the evidence from clinical trials. Drain and Wells provide a succinct, well-organized discussion of surgical treatments to relieve dyspnea in patients with thoracic malignancies. Carrieri-Kohlman's chapter on nonpharmacologic treatments for dyspnea is one of the best chapters in the book, if for no other reason than it shows a wonderfully humane approach to working with patients by empowering them to manage their symptoms and to help assuage their suffering during each stage of their disease, from the active-and-stable phase to their death bed.

Finally, the editors contributed a summary chapter on the palliative approach to dyspnea that ties together the essential elements of a care plan for patients with advanced disease. **Dyspnoea in Advanced Disease: A Guide to Clinical Management** is a fine addition to the body of literature on the management of dyspnea. It is a practical guide, written in a very accessible style, and is very reasonably priced. Respiratory therapists who work in the palliative or chronic care setting will find it particularly useful, as will educators seeking a text that presents a complex topic as elegantly as possible. It will also be helpful to any practitioner interested in obtaining a better understanding of dyspnea and its treatment.

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Interstitial Lung Diseases: A State-of-the-Art Series. Dario Oliveri, editor. (Reprint of *Thematic Review Series* published in *Respiration*, 2004, volume 71, issues 1–5 and 2005, volume 72, issue 1). Basel, Switzerland: S Karger. 2005. Soft cover, illustrated, 83 pages, \$34.75.

Interstitial lung disease (ILD) is a very broad topic that poses diagnostic and therapeutic challenges to physicians in the midst of recent and emerging insights into its management. The most important skills for physicians with an interest in ILD are how to elicit a thorough medical history (which should include family medical history, exposures to drugs, environmental factors at work and at home, and hobbies), prompt diagnostic intervention, appropriate interpretation of results, and recognition of patterns in high-resolution computed tomography (HRCT) of the chest, pulmonary function testing (PFTs), and surgical lung biopsy. An accurate ILD diagnosis can be achieved with dynamic interactions between the clinician, radiologist, and pathologist.

This *Thematic Review Series* book provides up-to-date information to the clinician confronted with the challenges of diagnosing ILD. The first 3 chapters focus on the diagnostic tests. The subsequent 3 chapters discuss specific ILDs, including iatrogenic (drug and radiation induced) ILD, rare infiltrative lung diseases, and the extrapulmonary presentation of sarcoidosis. Each chapter provides an in-depth study of its topic and incorporates the latest data and citations. The busy clinician in practice may at times be overwhelmed with this book's in-depth details and might be tempted to skip paragraphs to get to the relevant clinical aspects.

The book is by no means intended to cover all categories of ILD, as only specific topics are addressed. Thus, the reader will need to look up other resources for comprehensive review of many specific ILD topics. Chapter 1 provides an overview of the use of HRCT for diagnosing ILD. Though this detailed technical discussion would be of interest to radiologists, HRCT techni-

cians, and students who are researching the topic, internists and pulmonologists may not benefit from reading many of the technical details discussed here, for day-to-day patient management. For the clinician this chapter gives an excellent description of various HRCT patterns and relates those patterns to specific diseases. The clinician might have gotten a better appreciation for the importance of the various HRCT patterns if the images had been displayed next to one another rather than placed on separate pages.

Chapter 2 discusses the utility of invasive diagnostic modalities for diagnosing diffuse lung disease; the chapter focuses on the role of bronchoalveolar lavage, transbronchial lung biopsy, and surgical lung biopsy in both immunocompetent and immunocompromised patients. The discussion is well written and easily understood; the algorithms provided are particularly useful for physicians in training.

Chapter 3 is a relatively short chapter on pulmonary function testing in the diagnosis and follow-up of ILD to monitor disease course and therapeutic response. Internists, pulmonologists, and respiratory care providers will find this chapter useful. The acronym for idiopathic pulmonary fibrosis is commonly "IPF," but in this chapter it is referred as "HPF"; that may simply be an oversight. In addition, nonspecific interstitial pneumonitis and usual interstitial pneumonitis are stated to represent the 2 different forms of IPF, but that is debatable. The current classification system, reached by an international consensus and published as joint statements by the American Thoracic Society and European Respiratory Society, have those as separate and distinct entities.

The section on the utility of residual volume, total lung capacity, and functional residual capacity might have been improved with illustrations. I think the illustrations of cardiopulmonary exercise testing may be difficult to follow for a reader who is not involved in interpreting such tests.

The chapter fails to state the importance of adequate respiratory muscle strength for respiratory mechanics and the impact of muscle weakness on pulmonary function testing. Diseases such as connective tissue disorders (eg, systemic lupus erythematosus, dermatomyositis) can cause respiratory muscle weakness and thus may affect measurements of inspiratory effort, maximum voluntary ventilation, and spirometry values.

Chapter 4 gives a detailed review of drug-induced and radiation-induced ILD.

The overall pulmonary adverse effects of individual drugs are not discussed in any length, but the authors discuss various ILD patterns as the presenting condition (eg, ILD and respiratory failure, diffuse alveolar hemorrhage, bronchiolitis obliterans) and the drugs associated with particular patterns. There is particular emphasis on amiodarone-induced pneumonitis. This chapter will be useful to the practicing pulmonologist, because the differential diagnosis and evaluation of drug-induced ILD is adequately covered.

Chapter 5 summarizes some of the rare ILDs (eg, pulmonary alveolar proteinosis, inherited lipidoses, amyloidosis, pulmonary alveolar microlithiasis) and discusses their pathophysiology, symptoms, diagnosis, and treatment. This chapter will be a good reference for physicians and students. The acronym "IPO" used in this chapter presumably refers to "pulmonary ossification," but it is unclear whether the "I" in "IPO" stands for "interstitial" or "idiopathic." Regardless, IPO is not a widely used acronym and not familiar to the vast majority of pulmonologists and/or respiratory care providers.

Chapter 6 is a short chapter that discusses the Sarcoidosis Clinic of Milan's experience with extrapulmonary sarcoidosis; the discussion focuses on incidence rates, presenting symptoms, and possible reasons for delayed diagnosis. This chapter targets internists who may encounter patients with nonspecific symptoms in the setting of sarcoidosis, and it emphasizes the consequences of a delay in diagnosis.

In essence, this series of chapters is clinically relevant to respiratory care providers, physicians, and radiologists interested in an update on a few selected topics in ILD.

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ABC of Asthma, 5th edition. John Rees and Dipak Kanabar. Malden, Massachusetts: BMJ Books. 2006. Soft cover, illustrated, 70 pages, \$34.95.

It was my privilege to read and review the 5th edition of **ABC of Asthma**. This book is a collage of scholarly work, and in the authors' words it is specifically designed for "all those who deal with children and adults who have asthma" (book jacket reverse).

The book clearly establishes the authors' asthma management paradigm is of top-down leadership from physicians and researchers, combined with bottom-up deployment of the program by key providers serving as asthma educators to the patient, family members, and others in the life of the person with asthma.

Rees tackles adult asthma issues while Kanabar's focus is pediatrics. Each author then covers 3 content areas: definition and prevalence of asthma; management and treatment of asthma; and asthma drug delivery. The result is 15 succinct and well-organized chapters.

The book is well-designed and brilliantly appointed with visually stimulating and demonstrative color pictures, clear narrative, readable algorithm flow charts, and simple tables and graphs. Despite its brevity (70 pages), it is thorough in its effort to review empirical and alternative/integrative/complementary treatments and the asthma management in adults and children.

Rees and Kanabar designed **ABC of Asthma** to be both evidenced-based and readable. The text is laid out in 2 columns, to place the narrative near the illustrations and tables, which improves the book's flow.

The writing is crisp, energetic, and should be easy to read even for a novice consumer of science publications. As a caveat, the gas partial pressures are expressed in kilopascals instead of millimeters of mercury, but an equivalency table will bring these numbers into line with the units used in the United States.

In reading this soft-covered 5th edition I asked, are the references appropriate and do the recommended asthma treatments—especially emergency treatments—correspond to those in the National Asthma Education and Prevention Panel, Expert Panel Report 2, Guidelines for the Diagnosis and Management of Asthma?¹

ABC of Asthma cites Asthma United Kingdom, a program published by the Brit-

ish Thoracic Society and Scottish Intercollegiate Guidelines Network.² I found that **ABC of Asthma** is in concord with Asthma United Kingdom, the National Asthma Education and Prevention Panel guidelines,¹ and the 2004 update of the Global Strategy for Asthma Management and Prevention workshop report.³

Chapter 2, "Prevalence," by Rees, and Chapter 11, "Definition, Prevalence, and Prevention," by Kanabar (which is also the introductory chapter on asthma in children) give a thorough discussion on the prevalence of asthma, reasons for the increased prevalence of asthma and reactive airway disease diagnoses, and selected strategies for surveillance and changing a patient's indoor and outdoor environment. The chapters illuminate critical factors of asthma management that are sometimes underestimated in their power to improve a patient's quality of life.

Several photomicrographs complement the narrative in the text, particularly the slides of a dust mite, CD3-positive lymphocytes, *Aspergillus fumigatus*, and pollen and diesel fumes. The richness of the color photos will appeal to the average reader and will be greatly appreciated by the student or practitioner with a visual learning preference.

I often demonstrate the correct way to use an inhaler. A nice touch would have been to add pictures that demonstrate techniques of using a metered-dose inhaler (with and without a spacer), how to count the doses remaining in a dry-powder inhaler, coaching proper breathing techniques, and sustained maximal inhalation during use of a small-volume nebulizer. I would also have liked to see nomograms and references for peak expiratory flow and predicted values based on age and height for children, which, curiously, were included only for adults. United Kingdom asthma action plans are included.

The authors approached many scenarios from their clinical experience and addressed questions such as: Is there a relationship between Churg-Strauss syndrome and asthma? What is the current thinking and evidence on intravenous medications in severe or refractory asthma? The authors address these questions with brevity and clarity, and direct the reader to the most current literature on asthma in the publications of the British Thoracic Society and Scottish Intercollegiate Guidelines Network.

The chapters use a different method for formatting the attributions, citations, page numbers, etc. For example, on page 25 there

is a graph connoting the "gradual deterioration of peak flow in exacerbation" of asthma, but there is no accompanying reference or citation. A future edition could include more citations to add further credibility to the book's stated readability.

The book recommends follow-up and monitoring in an asthma clinic, and the use of respiratory and "asthma nurses." A helpful addenda in the discussion on inhaled corticosteroids would have been to suggest mouth rinsing and mouth care for patients who use daily inhaled corticosteroids.

The discussion on asthma clinics in the United Kingdom is refreshing and worth reading. The text describes how asthma education must diffuse through a patient's "asthma community," which includes babysitters, teachers, coaches, parish and school nurses, and others who interact with the patient in everyday life. This is a critical lesson—a concept that is only rhetorically supported in the United States. This book's emphasis on patient education, monitoring, and out-patient care is state of the art.

The reader of **ABC of Asthma** will better understand asthma as it exists in the world, aided by the graphs on page 47, which display the prevalence of asthma in countries other than the United States. The authors' idealism resets the stage for asthma diagnosis and treatment and suggests a brighter outlook and expanded roles for the multidisciplinary team members engaged in asthma care.

I recommend **ABC of Asthma** and look forward to future editions of this excellent asthma primer.

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Pharmacotherapy of Asthma. James T Li, editor. *Lung Biology in Health and Disease* series, volume 212. Claude Lenfant, series editor. New York: Taylor & Francis. 2006. Hard cover, illustrated, 400 pages, \$179.95.

This book describes the pharmacotherapy of asthma. The introductory chapter provides the reader with the perspective of the national and international asthma management guidelines, then the following 10 chapters cover specific drug classes and their basic mechanisms of action and efficacy in asthma. Then 2 chapters outline out-patient and in-patient asthma therapy and provide the appropriate perspective on the relative efficacy of the various pharmacologic classes and which agents are first-line and second-line choices. This objective perspective is missing in some of the chapters on specific agents. Thus, I would recommend that any reader relatively new to the topic read the first and last 2 chapters prior to immersing themselves in the drug-specific chapters.

Pharmacotherapy of Asthma is the 212th volume in this established series on lung diseases. It has been 20 years since the publication of *Drug Therapy for Asthma*, the 31st volume in this series, which explored asthma therapy in a similar though much larger text (800 pages). Since that time most volumes in this series that have discussed asthma pharmacotherapy did so as treatises on specific aspects, such as exercise-induced asthma or a specific class of drugs, such as inhaled corticosteroids, β_2 agonists, or the leukotriene receptor antagonists. It therefore must have been a daunting task to cover such a large topic in such a limited space, and in this book, coverage of certain aspects of pharmacotherapy are sacrificed in favor of others. Practical aspects of drug administration, such as drug delivery techniques, which agent to use in specific patient situations (with the exception of the chapter on management of acute severe asthma), and patient education are sacrificed for coverage of the mechanisms of action (both proven and theoretical), and general efficacy and approach to therapy with the agents is emphasized. This book is targeted at clinicians who care for patients with asthma. The editor included nurses, asthma educators, and respiratory therapists in the list of persons who would find the recommendations helpful. Pharmacists were notably left off the list. Because the most useful aspects of the drug-specific chapters

were the discussions of basic mechanisms of action, pharmacists would be a good target audience.

One weakness of the book is that many of the authors wrote in advocacy for specific drug classes, as opposed to a more balanced approach of describing the proven relative efficacies of the various agents. However, the reader can go to the more recent guidelines to obtain more evidence-based, balanced recommendations. Notable exceptions to the advocacy found in many chapters include the chapters on inhaled and systemic corticosteroids, and on immunosuppressive and alternative treatments.

The first chapter reviews the national (National Asthma Education and Prevention Program) and international (primarily the Global Initiative for Asthma) guidelines. The most interesting aspect of this chapter is that the last few sections on the guidelines have influenced physician prescribing and patient outcomes on a global scale. Author Bernstein notes that we have seen improvement but that we still have a long way to go to improve asthma outcomes.

The chapter on β_2 agonists discusses the newer dynamic model of the mechanism of action, as opposed to the older "lock and key" model of agonists, antagonists, and receptors. However, the chapter authors could only theorize about how full agonists and partial agonists differ in this model, so it is not clear how to explain all clinical aspects by the newer model. They provide excellent discussions of the mechanisms of and differences between inhaled long-acting β_2 agonists, formoterol and salmeterol, and the relative clinical importance of tolerance (minimal) to their overall efficacy. They cover long-acting β_2 agonist use as an adjunctive therapy with inhaled corticosteroids and the issue of potential masking of inflammation, because they treat only bronchoconstriction. There is no discussion of the new "black box" warning on the package inserts for long-acting β_2 agonists that was recently mandated by the Food and Drug Administration (FDA), based on the results of the Salmeterol Multi-center Asthma Research Trial (SMART) and an FDA advisory panel meeting,¹⁻³ which came out after this book went to press; this demonstrates the difficulty of keeping a textbook current. The discussion on the newest issue concerning the pharmacogenetics of β_2 agonist response is similarly limited, in that it does not include the recent studies by the Na-

tional Heart, Lung, and Blood Institute's Asthma Clinical Research Network.

The chapter on anticholinergics could have been easily eliminated, as none of the current anticholinergics has an FDA approved indication for chronic asthma, nor is there adequate data on their use in asthma, as the text makes clear. The various guidelines recommend ipratropium bromide as adjunctive therapy in moderate-to-severe asthma exacerbations in the emergency department, and that could have been adequately dealt with in the chapter on emergency-department treatment. An entire chapter on a drug that is primarily for chronic obstructive pulmonary disease (COPD) was unwarranted, in my opinion, and added little.

Both chapters on corticosteroids (inhaled and systemic) are very good and fairly balanced in their discussion of relative efficacy and safety. Unfortunately, there is no discussion of the use of inhaled corticosteroids in children. The editors may have thought that subject was adequately covered in volume 209 of this series, *Childhood Asthma*. However, some of the other chapters discuss asthma drugs in children.

Unfortunately, in the chapter on systemic corticosteroids, starting on page 245, the references starting at 82 are off by one through the rest of the text (reference 82 should be 81, and so on).

The chapter on leukotriene modifiers was particularly one-sided. The section on their history and basic mechanisms is excellent, but, starting in section 5-III, on leukotriene modifier effects in various types of asthma, the advocacy for these agents is particularly egregious. The author states (page 22) that "the bronchoprotective effect of β_2 agonists in exercise-induced asthma is lost with recurrent use." However, the cited reference clearly shows that pretreatment with albuterol results in a 1.1% drop in forced expiratory volume in the first second (FEV₁) after long-term placebo treatment and a 5.5% drop in FEV₁ after long-term albuterol treatment. A drop of $\geq 15\%$ is considered exercise-induced bronchospasm, so both a 1% and a 5% drop would be considered complete blocking. It is then stated that zileuton completely blocks the physiologic consequence of aspirin challenge in aspirin-sensitive individuals, but the author fails to point out that the study was done by titrating to the dose of aspirin-caused adverse effects, then that dose was used in the subsequent challenge, and completely ignores other studies that clearly showed that these agents

do not protect against aspirin challenge if one titrates the aspirin dose upward.⁴⁻⁶ These studies showed that just the threshold dose of aspirin is altered, and it is still considerably below the standard dose of 325 mg in adults. Further, in the discussion of its use as adjunctive therapy with inhaled corticosteroids, the studies that have demonstrated greater efficacy of the long-acting β_2 agonists as adjunctive therapy were left out of the references.

The chapter on theophylline and phosphodiesterase inhibitors covers much of the same territory covered in previous reviews by the same author. The discussions of the airway anti-inflammatory effects of theophylline are interesting, yet the clinical importance is still unknown, particularly when the selective phosphodiesterase 4 inhibitors (given short shrift at the end of the chapter), which are relatively selective for the anti-inflammatory activity, have shown little to no clinically important activity in asthma. On page 156 the author equates the addition of theophylline to inhaled corticosteroids similar to that of long-acting β_2 agonists, yet studies show that it is no more effective than doubling the dose of inhaled corticosteroids, whereas the addition of long-acting β_2 agonist generally provides better efficacy than doubling the inhaled corticosteroid dose. The statement on page 152 that theophylline can completely block exercise-induced bronchospasm is not supported by the referenced study, which shows that some patients with that level have no blocking effect. Other statements about theophylline attenuating exercise-induced bronchospasm are more accurate.

The sections on toxicity and pharmacokinetics are well written concise reviews of these topics. However, the author downplays the potential adverse effects and toxicities—a view not necessarily shared by others; the potential for serious toxicity is the main reason theophylline is seldom used anymore.

The chapter on the chromones, cromolyn and nedocromil, extensively reviews the basic mechanisms and the various in vitro and in vivo findings on inflammatory cells and mediators, and the chapter puts these findings in proper perspective by pointing out the limited efficacy in clinical asthma, compared to the inhaled corticosteroids. In section 7-VIII, "Allergen Challenge Clinical Trials," the authors discuss effects on other challenges, such as exercise and sulfur dioxide. On page 210 the authors reverse ref-

erences 98 and 99. On page 215 the authors state there has been only one study that compared nedocromil to inhaled corticosteroids, but then they discuss the Childhood Asthma Management Program (CAMP) trial,⁷ which, although not designed as a double-dummy study, was a parallel trial that compared nedocromil and budesonide to their respective placebos, and so provided the best available perspective on how each compared to placebo over an extended period.

The chapter on omalizumab, which is the newest therapy for asthma, is very good. However, all of their selected figures reference the paper by Milgrom et al⁸ that suggested that omalizumab is as effective in children as in adults, although the FDA thought the data insufficient to warrant an indication in children. Dykewicz wrote an excellent chapter on the broad category of alternative treatments. The balance between mechanisms and actual clinical efficacy is very valuable.

The final 2 chapters, on out-patient and in-patient asthma management, could also be called beyond the guidelines, as they address data more recent than the publication of the guidelines. They both provide balanced perspective on the potential therapies, and the chapter on in-patients provides some excellent information on asthma treatment in the intensive care unit that is missing from the guidelines.

In conclusion, the strength of this text is its discussion of the basic pharmacology mechanisms of asthma drugs. All of the authors wrote concise, easy-to-understand sections on complicated information. However, in a number of chapters the authors' zeal for certain therapies prevented a balanced discussion on how the basic mechanisms translate into relative efficacy. Thus, my recommendation about this book is limited to those interested in knowing the basic pharmacology for the specific chapters and reading the first and last 2 chapters for perspective on each of the agents for the general treatment of asthma.

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Allergy and Asthma in Modern Society: A Scientific Approach. Reto Cramer, editor. *Clinical Immunology and Allergy* series, volume 91. Basel: Karger. 2006. Hard cover, illustrated, 224 pages, \$167.25.

Allergy and Asthma in Modern Society: A Scientific Approach is volume 91 in this series. The editor selected some of the best in their field to write the book's 18 chapters, which include such timely topics as environmental factors that influence allergy and asthma (Platts-Mills, Erwin, Woodfolk, and Heymann), the immunologic basis of the hygiene hypothesis (Renz, Blümer, Virna, Sel, and Garn), the role of T lymphocytes in asthma (Kay), allergic manifestations of skin diseases (Breuer, Werfel, and Kapp), allergic conjunctivitis (Bonini), and fungal allergies (Cramer,

Weichel, Flückiger, Glaser, and Rhyner). These will all appeal to the clinician, nurse, and technician. They are well written and timely chapters that will help in the clinical management of patients. In the chapter on the hygiene hypothesis, the sections on environmental factors and the role of infections driving the atopic phenotype will be of special interest to those in the clinic. Also, the chapters on allergic conjunctivitis, atopic dermatitis, and the often-forgotten fungal allergies will be of interest.

However, the majority of chapters focus on research and basic science, including "Molecules Involved in the Regulation of Eosinophil Apoptosis," "Skin-Homing T Cells in Cutaneous Allergic Inflammation," "Structural Features of Allergenic Molecules," "Regulation of Human T Helper Cell Differentiation by Antigen-Presenting Cells: The Bee Venom Phospholipase A₂ Model," and "Regulation of the IgE Response at the Molecular Level: Impact on the Development of Systemic Anti IgE Therapeutic Strategies." Although these chapters on immunologic mechanisms are necessary for a more profound understanding of the underlying pathophysiology of allergic diseases, there is little in the book that will help the patient today or the clinician seeking clinically useful information. Therefore, most nurses and technicians will not find much of this book helpful in their current clinical care responsibilities. Only a few chapters have sections on treatment, and much of this is at a basic level—offering very little that is new that can be applied to patient care today. Nevertheless, this book covers many current topics well and will appeal to physicians and researchers who have only a very fundamental knowledge of the topic. For more depth the reader will need to find other resources, which, fortunately, is made easier by this book's very adequate reference lists at the chapter ends.

I am disturbed by the cost of medical texts, which in almost all cases seems to me expensive and perhaps excessive. For example, this book, which has 224 pages, sells for \$167.25, which, even if justifiable based on the expense of publication, might keep important information out of the hands of those who do not have easy access to medical libraries or who are interested in only a few chapters of the volume. Authors expend much effort in researching, writing, and editing their chapters, often with little or no compensation. It must be disappointing to find that their efforts have reached a

very small readership because of the price of books in our field.

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Asthma in the Workplace, 3rd edition. I Leonard Bernstein, Moira Chan-Yeung, Jean-Luc Malo, and David I Bernstein, editors. Boca Raton, Florida: Informa/Taylor & Francis. 2006. Hard cover, illustrated, 875 pages, \$249.95.

This is the third edition of **Asthma in the Workplace**, which remains an exhaustive reference textbook on all aspects of this topic. The title page also includes the phrase "and related conditions," since chapters on the upper airways, urticaria, and other non-asthma conditions are included.

Part 1 covers "general considerations" and includes most of the basic science topics, such as epidemiology, genetics, pathophysiology, and animal models. The sections on genetics have been expanded to include new research on association studies with asthma. The chapter on animal models is expanded and updated as well.

Part 2, "Assessment and Management," includes chapters on clinical evaluation. Practical features of the clinical assessment chapters include typical patient case presentations at the beginning and discussions at the end of the chapters. The medico-legal aspects of workplace asthma are dealt with in this part.

Part 3, "Specific Agents Causing Occupational Asthma With a Latency Period," discuss agents such as enzymes, wood dusts, metals, and baking industry substances. The title of the section differentiates these agents from "nonallergic" agents, which are discussed in the next section.

Part 4, "Specific Disease Entities and Variants," tackles a number of asthma variants and respiratory conditions that do not fall into the strict definition of occupational asthma, including reactive airways dysfunction syndrome and hypersensitivity pneumonitis. There are useful chapters on building-related illnesses, upper-airway conditions, and occupational urticaria. A new addition in this edition is the chapter on work-exacerbated asthma.

The editors state that most of this book is aimed toward primary care physicians, occupational health specialists, allergists, and

pulmonologists, while specific chapters will also be useful to workers' compensation administrators, insurers, and lawyers. As a reference text, most of the chapters offer in-depth, comprehensive, and extensive reviews. However, respiratory therapists and technicians will find the clinical discussions very useful and the basic science sections interesting and an excellent resource.

The editors are leading, internationally recognized authorities on occupational asthma, and they co-authored many of the chapters with other experts. Previous editions of this book were considered a definitive resource on workplace asthma. Overall, the chapters are well written and readable. However, this book is not for the casual reader looking for quick, short overviews. The chapters are extensive, comprehensive, and well-referenced with recent literature. As in previous editions, the chapters on specific agents probably provide the most current research updates to be found in textbooks. The paragraphs on future research directions, at the end of the chapters, are helpful.

Primary care physicians and specialists will find the case presentations and discussions in the clinical chapters helpful in patient care. Especially welcome is the new chapter on work-exacerbated asthma, which reviews the literature on pre-existing asthma worsened at work, and will help practitioners recognize and differentiate this condition from "true" occupational asthma.

The chapter on medico-legal aspects provides a detailed survey of the legal climate of and compensation system for occupational asthma in the United States and around the world. There is even a table of the systems and compensations in 17 countries around the world. This is an invaluable resource for physicians who deal with occupational asthma in today's litigious world.

The book contains only a few paragraphs on molds, in the chapters on high-molecular-weight protein agents and building-related illnesses. An expanded section or chapter on the respiratory and other effects of mold exposure would have been timely, in light of the sensational and often misleading reports that have proliferated in the media and Internet in recent years. The primary care physician would probably expect a text entitled **Asthma in the Workplace** to deal with the mold issue more extensively, since respiratory symptoms are among the most common complaints with molds. A comprehensive review of the scientific data

would assist practitioners and patients, who have been deluged with usually pseudoscientific information on alleged effects of mold exposure at home and in the workplace.

Though there is a chapter on occupational urticaria, there is no section on contact dermatitis in the workplace, which is probably at least as commonly encountered in practice.

The section and chapter headings, though all technically accurate, could be made more consistent and user-friendly in format. For example, the section title “Specific Agents Causing Occupational Asthma With a Latency Period” is unnecessarily long and implies that there should also be a section on agents that do not have a latency period. Instead, discussion of the nonallergic (no latency period) agents and conditions is in

the section “Specific Disease Entities and Variants.”

As the authors indicate, the definition of asthma in the workplace setting is very important for both medical and legal reasons. Therefore, it is a surprise that the terms “work-aggravated asthma” and “work-exacerbated asthma” are used interchangeably and randomly without comment. The “Definitions” chapter discusses “work-exacerbated asthma,” whereas a heading in Table 1 reads “work-aggravated asthma.” A comment regarding this would have been useful.

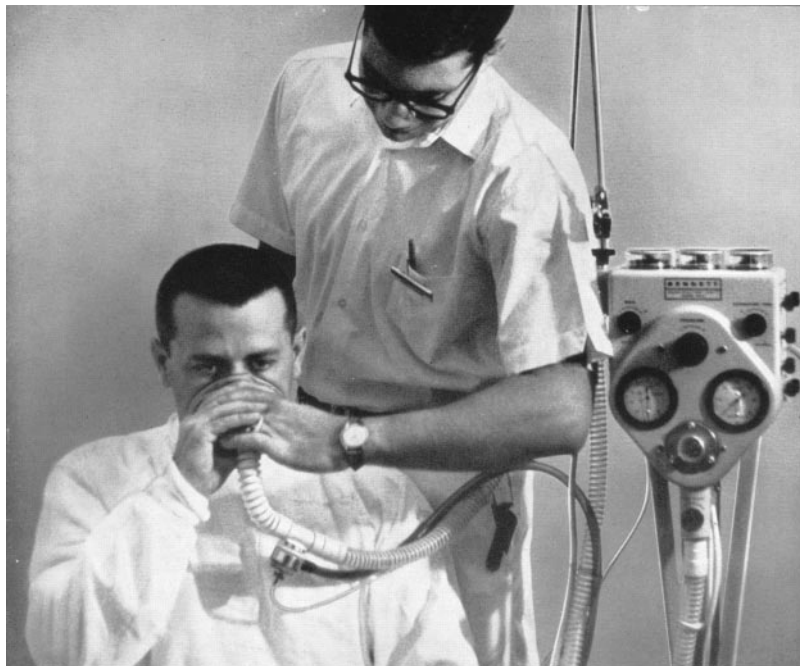
Overall, *Asthma in the Workplace*, in its third edition, continues to be the definitive resource on this topic for the medical and legal community. The chapters are comprehensive, extensively referenced, and

readable. This book can provide everyone—from the basic science researcher to the clinical practitioner to the respiratory therapist and technician—with a wealth of information.

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Aerosol therapy, 1964. From an advertisement for pancreatic dornase (Dornavac, Merck Sharp & Dohme)
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