

The Asthma Sourcebook, 3rd edition. Francis V Adams MD. New York: McGraw Hill. 2007. Soft cover, illustrated, 254 pages, \$16.95.

The subtitle to this book, "Everything You Need to Know About: Recognizing the Signs and Symptoms of Asthma; How to Reduce the Risk of an Asthma Attack; Asthma Medications and Delivery Systems; Treatment Strategies for Mild, Moderate, and Severe Asthma; Special Considerations and Related Illnesses," sets a very high standard, but for the most part the author meets the standard he set for himself.

The Asthma Sourcebook is aptly named, for it is a comprehensive guide to virtually all the aspects of asthma a knowledgeable reader would ever want to know. The book describes what asthma is, how it is diagnosed, what an asthma attack involves, and the medications available to treat asthma. The book goes on to discuss some of the more problematic aspects of medication treatment, including patient adherence to therapy, and it discusses various actions an asthmatic can undertake as a participant in managing his or her asthma.

The book then proceeds with a discussion of asthma in special contexts (eg, pregnancy, occupational causes, exercise, illnesses related to asthma) and some special considerations (eg, asthma and surgery, asthma and menopause). After a very brief visit to the world of alternative medicine, the book concludes with a look to the future, including new medications and devices, new ways to manage environmental factors, and new ways to create successful partnerships in managing asthma.

So, at least from the description of the contents the book seems to live up to its subtitle. But *touching on* all of the subjects in the subtitle is not the same as providing useful, understandable, and comprehensive information about each of the topics in the broad table of contents. With a few stylistic exceptions, and with the exception of the chapter on alternative medicine, the book is as good as its word; it is indeed everything you need to know. However, a very important qualifier in reviewing this book is to make sure the potential reader knows who the "you" is in the "Everything You Need

to Know." This is not a book for a casual reader looking for a superficial view of asthma. Though not as technical as a medical textbook or a specialized medical journal article, Adams does not shy away from using medical terminology in describing what asthma is and how it is treated. But, like any good textbook teaching a difficult subject, this book rewards the reader who takes care to understand the concepts introduced early on, for when they are referenced later in the book.

For example, the first chapter, "What is Asthma?" describes asthma in terms of the common symptoms most asthmatics are familiar with: inflamed and swollen bronchial tubes and mucus production. But it doesn't stop there. The reader gets a brief lesson in the anatomy of the alveoli and the interplay between the nervous system and the lungs, with descriptions of the sympathetic and parasympathetic branches of the autonomic nervous system. We're taken even deeper into the physiological aspects of asthma; on our way to learning about α and β receptors we learn about the chemicals that mediate effects of the nervous system, the neurotransmitters, and agents and medications that mimic the effect of those chemicals.

Why all this detail? I said the careful reader is rewarded for diligence in the early chapters. The rewards show up in the ensuing chapters, which describe an asthma attack and diagnosing asthma with some of the terms explained early in the book. But the biggest reward comes in the medication chapter, where I, for the first time in my asthma-medicated life, understood the differences between the various asthma drugs and their intended effects. And this brings us to me. My perspective on this book is, of course, greatly influenced by my own experiences as an asthmatic, my preexisting understanding of the causes and treatment of asthma, and my own treatment plan.

I was diagnosed with asthma at age 6, in 1954. My asthma symptoms largely went away with the onset of puberty, but returned in a different form around age 18. My symptoms as a child were primarily wheezing episodes, with extreme difficulty breathing. My symptoms as an adult are primarily lung congestion associated with illnesses such as cold and flu. There were few effective med-

ications available in my youth and young adulthood, and it wasn't until a nearly fatal asthma episode at age 26, in 1974, that I was introduced to certain available medicines, primarily theophylline, oral steroids, and rescue inhalers. My only recourse before 1974 for asthma problems was over-the-counter epinephrine-based inhalers, which I greatly overused. The asthma medications I was given in 1974, and those added as the arsenal of drugs expanded, saved my life, and I am very adherent to all my prescribed medicines. I have quality doctors with up-to-date knowledge, to whom I have easy access.

So for me this book was an explanation of the treatment I was already receiving—or was about to receive. One of the new drugs discussed in the book is omalizumab (Xolair). Between the time I received **The Asthma Source Book** for review and the time I wrote this review, I was started on omalizumab. I did extensive research on this new drug. To the author's credit, I found little useful information in my own research that was not included in **The Asthma Sourcebook**.

As I look back on my own experiences, I conclude that in most ways users with different experiences will have a similar or even more positive reaction to this book. For example, my asthma is moderate to severe, and I take a combination of most of the recommended medications. For an asthma patient with less severe asthma, or a parent or spouse of such an asthma patient, what dosage of what medications to take is, in most cases, simply a matter of following your doctor's advice. This book's detailed descriptions of asthma, how the various asthma medications work, and what portions of the asthma spectrum they deal with, provides the patient (or parent or spouse) an extremely valuable source of information to weigh along with the doctor's recommendation. The book aids the patient/caregiver in asking informed questions and allows them to play a strong partnership role in the treatment plan. For example, in the chapter on medication treatment strategies Adams lays out medication types and dosages for patients with mild, moderate, and severe asthma, and what medications to consider adding if the symptoms do not improve or

the patient experiences a flare-up. He also sets out a plan for early detection of exacerbation symptoms and the progressive interactions that are needed. He discusses monitoring your asthma symptoms with a peak flow meter, determining your personal best, and setting up a treatment strategy for intervening when the peak flow falls by 25%, 50%, or 75% of your personal best. This early-detection/intervention strategy has been the hallmark of asthma treatment for more than 20 years, and this easy-to-understand strategy for early intervention is a helpful addition to that overall treatment plan. With this knowledge an asthma patient (or his or her support person) is in a much better position to evaluate the doctor's recommendations.

What are the shortcomings of the book? I found two that are easily addressed and another one less so. The first problem I encountered, which is more one of style than substance, was in this effort I described earlier of being a careful reader from the start. For a layman in the field of medicine, I am relatively knowledgeable about asthma, and I can read and understand complex material with a new vocabulary. But I found the early going difficult, particularly in internalizing some of the medical terminology. For example, on page 4, in one short paragraph the reader is introduced to "adrenergic" and "cholinergic" effects and "acetylcholine" and "epinephrine" neurotransmitters. The only one of those I was familiar with was epinephrine. Then, "boom," we were on to a discussion of α and β receptors. My reading and comprehension style would have benefited from a slightly longer discussion of the neurotransmitters, perhaps explaining their function in more general terms before introducing the foreign terms. As it was, my eyes (and brain) glazed over when I hit these foreign words, and I was not as equipped as I should have been later in the book when anticholinergic drugs were discussed.

The second problem was one of substance. This book is 207 pages long, only 6 pages of which were devoted to alternative medicines, so the discussion of alternative medicines was brief and summary, and many of the alternative approaches were dismissed as not meeting the scientific requirement of proven value. Though my own life-threatening experience with asthma made me a firm believer in traditional medicine, my wife and son are strong believers in alternative approaches to medical problems.

They encourage me to consider such treatments. Other than responding with a simplistic argument that there is no medical evidence those treatments work, I have little answer for them, and, unfortunately, this book's skimpy treatment of this subject did not make me any more informed. Notwithstanding my biases in favor of traditional medicine for asthma, based on my own experiences, I am aware of the substantial impacts alternative medicine, including lifestyle changes, can have. I would like to have seen a less judgmental, more descriptive treatment of alternative approaches.

The third shortcoming is this. Though I am an extremely "religious" follower of the medication treatment plan my doctor set out for me, it is clear that I am in a distinct minority among asthmatics. Adams provides anecdotes about patients who simply did not follow their treatment plans and did not take their medicines. For example, one patient drank black tea instead of taking his medications, even though he was experiencing periodic bouts of asthma severe enough to send him to the emergency room. For all the discussion of the physiology of asthma and current and future asthma drugs, a patient in 2008 who does not adhere to his or her prescribed asthma regimen is in no better position than I was in 1958, when few drugs were available. I'm sure this non-adherence to therapy is a major frustration for allergists and asthma doctors. I'm equally sure that, in these days of 4-to-6-patients-an-hour medical practice, little can be done to improve that adherence. This seems to be a classic situation where spending a dollar now on adherence would provide many dollars of return in fewer asthma flare-ups and emergency-department visits. I would like to have seen some discussion of therapy adherence and research on improving it, or at least objectively monitoring it. I'm not a research scientist, but I can think of several protocols that should be tested to see if they improve adherence.

So perhaps **The Asthma Sourcebook** is not really *everything* you need to know about asthma and asthma treatment, but it's pretty darn close, and for me it was an extremely informative read.

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The author of this review reports no conflict of interest.

Therapeutic Strategies in Asthma: Current Treatments. Riccardo Polosa and Stephen Holgate, editors. Oxford: Clinical Publishing. 2007. Hard cover, 192 pages, \$89.95.

Therapeutic Strategies in Asthma: Current Treatments explores the pharmacology and pharmacobiology of asthma. It does not address the control of asthma triggers or how to facilitate adherence to therapy. The book appears to be most concerned about evaluating current knowledge to point the direction to future asthma drugs. It is consciously less concerned about the present than the future. The preface states that the goal is to "provide readers with an overview of possible novel approaches in a field in need of innovation." This book is likely to be most interesting to scientists interested or involved in asthma drug development. For those interested in a clinically applicable, practical review of current asthma therapy, the reader would be better served by the current asthma care guidelines from the National Asthma Education and Prevention Program¹ or the Global Initiative for Asthma.²

Chapter 1 focuses on the role and mechanisms of glucocorticoids in asthma, with an emphasis on mechanisms and mediators. This chapter touches on a large amount of complex material, and, unfortunately, within the space constraints it does not do the material justice. To someone who is not a molecular biologist, it reads like a poorly organized list of pathways and mediators. Each mechanism and mediator has its own acronym, each defined at first appearance; I counted 46 acronyms in the chapter. This made for a very difficult read.

Chapter 2 examines risk/benefit assessment of long-acting β agonists and touches on the controversies about down-regulation of the β_2 receptor and the role of enantiomers. Research on ultra-long-acting β agonists in development is described.

Chapter 3 reviews β_2 agonist activities other than bronchodilation. In vitro research has documented inhibition of mediator release from mast cells, degranulation of eosinophils, and inhibition of lymphocyte function, although tolerance to these effects occurs rapidly. However, in vivo, clinically important anti-inflammatory effects of β_2 agonists have not been demonstrated. The authors believe that the disparity between those in vitro and in vivo responses is best explained by the rapid desensitization of β_2