

Sleep medicine, in general, and pediatric sleep medicine, in particular, are relatively new fields. Sleep board accreditation through the American Board of Sleep Medicine (or its predecessor) has been in existence since 1978, with 3,445 sleep specialists being board certified as of 2006, the majority of whom are not pediatricians. Since then, the American Board of Medical Specialties has taken over administering this examination and has begun accrediting sleep fellowship programs. The training of the next generation of sleep specialists will now be more in line with more established subspecialties, such as pulmonology and cardiology. More sleep laboratories are opening, with accreditation becoming the norm. Polysomnogram technologists are also expected to be board certified. Clearly, the field of sleep medicine is on the rise.

There are many textbooks on the subject of sleep medicine, with the accepted standard being Kryger et al’s Principles and Practice of Sleep Medicine. Few texts are dedicated solely to pediatric sleep disorders. These 2 books, Sleep and Breathing in Children: Developmental Changes in Sleep Patterns, 2nd edition, and Sleep and Breathing in Children: Developmental Changes in Breathing Patterns, 2nd edition, represent a comprehensive collection of pediatric-focused material covering sleep physiology and clinical sleep disorders. Originally published in 2000 (Sleep and Breathing in Children: A Developmental Approach, volume 147), the editors have elected to update their material because of the wealth of newly published information in the field of pediatric sleep medicine. For this edition the editors chose to split this extensive amount of material into 2 volumes, the first focusing on the neurologic aspects of sleep, and the second concentrating on the respiratory components of sleep. Given the large amount of information presented, this was a wise move and one that leads to improved organization of the material.

The first several chapters of volume 223 focus on the neurologic development of sleep, from infancy through adolescence. Details covered include electroencephalogram development and its analysis, as well as the development of normal sleep-wake cycles. Arousals and temperature control are also discussed. The second half of this volume focuses on several neurologic-based sleep disorders and discusses various nonrespiratory-based parasomnias and dysomnias. A chapter each is devoted to several of the more common neurologic-based sleep problems as well as some medical conditions that can have an impact on children’s sleep. These include: narcolepsy (yes, it is seen in children), restless leg syndrome and periodic limb movement disorder (no, they are not the same thing), gastroesophageal reflux, and various neurologic conditions. Psychiatric issues are also addressed. Finally, neurocognitive outcomes and tools to assess them are reviewed, along with a chapter reviewing magnetic resonance imaging technology and its potential use in pediatric sleep medicine.

The first several chapters of volume 224 focus on the development and control of respiration, from the fetus through adolescence, with emphasis on its impact on sleep as well as sleep’s impact on control of breathing. Upper-airway structures and their muscular control, along with chemoreceptor physiology, are reviewed. There is a separate chapter on craniofacial development and its impact on sleep, as well as a chapter on breathing and sleep in the premature infant. The latter two thirds of the book then focuses on several specific respiratory-related sleep disorders, including apparent life-threatening episodes and sudden infant death syndrome; the impact of hypoxia and hypoventilation on sleep; and, finally, several chapters on various aspects of obstructive sleep apnea and its sequelae (such as cardiac, inflammatory, endocrine, and neurocognitive complications). A chapter is dedicated to the study of acoustic reflectance. The book then concludes with an outstanding review of the field of pediatric sleep medicine to put the progress made over the last 50 years into perspective.

Many of the chapters in these 2 volumes represent a comprehensive review of their subjects. Several of these chapters (especially the physiology-focused ones) are outstanding and well written, giving the reader an up-to-date review on their topics. The clinical chapters are also well written and easy to follow. The only chapters that are somewhat weak are those whose subject matter is very broad-based. These authors try to review several specific disease processes and wind up with a more superficial review than I suspect they wanted to provide. Two chapters in particular would include the review of neurologic diseases and review of psychiatric illnesses. As an overview, these chapters are acceptable; however, a more detailed reading on these specific illnesses is clearly warranted (something that the authors themselves suggest to the reader). As for the 3 chapters that discuss research tools (neurocognitive testing, functional magnetic resonance imaging, and acoustic reflectance), they present a detailed amount of information; however, more clinical applications would have proven useful. All of the chapters in these 2 volumes are exceedingly well referenced and provide an excellent starting point for further reading.

If a third edition of these volumes is ever contemplated, I would recommend adding chapters focused solely on attention-deficit disorder/attention-deficit hyperactivity disorder, sleep hygiene, insomnia, home sleep studies and monitors, actigraphy, and medication use in pediatric sleep disorders, as these are underrepresented in the current edition. This recommendation would go along with the more detailed chapters on neurologic and psychiatric issues suggested ear-
Corticosteroids are the most effective available therapy for asthma at present. Clearly, patients would be poorly served without them. Yet between 5% and 10% of all asthma patients demonstrate an inadequate response to corticosteroids. Even oral corticosteroids may prove inadequate for some. Problems of steroid resistance may also arise in other inflammatory pulmonary diseases. Such problems are further complicated by the substantial adverse effects corticosteroids demonstrate, especially at the higher doses that may be required in the face of resistance. Corticosteroid resistance presents enormous difficulties for clinicians as well as patients. This book, written by world-renowned scientists, provides the background to help clinicians and researchers understand this critically important subject. It is highly welcome, since this is an area that until now has not been well addressed.

Topics range from the glucocorticoid receptor and its molecular mechanisms of action to inhalation as a drug delivery mechanism. The principal target audience for this book is researchers in varied settings studying either biomedical or clinical aspects of corticosteroid activity and use. Clinicians who wish a more in-depth, molecular-level understanding of the therapies they use and the adverse effects they may see will also find the book as a whole of interest. In addition, the chapter on adverse effects, the two on corticosteroid-sparing strategies, and the one on inhalation therapy may be directly useful to physicians in clinical practice, while the ones on adverse effects and inhalation therapy may be similarly helpful for nurses and respiratory therapists. Such readers should be aware, however, that while the writing style is clear and appropriate for its intended audience, it makes few concessions to those who may be less expert in molecular mechanisms. Likewise, the chapters on the role of macrophage migration inhibitory factor in regulating corticosteroid response and on kinases as potential therapeutic targets in asthma offer little information of direct clinical usefulness, yet will be highly appreciated by basic science researchers.

The most innovative and provocative theme of this book is developed in Chapters 3 and 4. This is the concept that, since the glucocorticoid receptor has numerous isoforms, these isoforms may have somewhat different functions, perhaps affecting different tissues. These isoforms may also have somewhat different selectivities for structural variations in the steroid molecule they bind. Consequently, it may be possible to develop drugs specific for a given tissue or ones that lack the activities associated with adverse effects. Indeed, one corticosteroid based on this concept has now entered clinical trials.

Chapters 5 through 7 then examine the molecular basis for the lack of corticosteroid response seen in some patients. Chapter 5 describes an uncommon genetic condition in which mutations of the glucocorticoid receptor decrease the body’s general sensitivity to corticosteroids. Chapter 6, and especially Chapter 7, develop the idea that similar but more subtle changes may underlie variations in patient response, although Chapter 6 also addresses the possibility that poor response may reflect features of the disease as well as of the patient. Although these chapters focus on asthma, they also address other diseases where corticosteroid resistance may occur. A later chapter explores the pharmacokinetics and pharmacodynamics of corticosteroids and how they may affect an individual patient’s response. These chapters provide information that will be very helpful to researchers in the field but, with the possible exception of Chapter 6, are unlikely to prove directly useful to clinicians.

All chapters in this book are well organized and easy to follow, and the authors have done an excellent job of researching, synthesizing, and presenting the vast amount of literature available. The references cited are both comprehensive and up to date; notation of important seminal papers is distinctly helpful. Relevant clinical examples are welcome on the occasions when they appear. Although a certain amount of repetition is inevitable in a multi-author text, the editors have done a very good job of minimizing duplication of material and restricting it to instances where it may usefully emphasize important points.

Despite the general excellence of the book, there are a few minor caveats. The color inserts add an unnecessary expense without, in my opinion, adding much to the usefulness. A few of the chapters lacked sufficient concluding summaries, or concluding summaries altogether, that would have helped solidify the main points in the reader’s mind. Chapter 10 would also have benefited from additional tables summarizing the studies cited.

Overall, this book represents a superb presentation of the background and current un-
Infant sleep training refers to a number of different regimens parents employ to adjust their child's sleep behaviors. During the first year of life, infants spend most of their time in the sleeping state. Assessment of sleep during infancy presents an opportunity to study the impact of sleep on the maturation of the central nervous system (CNS), overall functioning, and future cognitive, psychomotor, and temperament development. Sleep is essential to human life and involves both physiologic and Sleep problems are common, reported by a quarter of parents with children under the age of 5 years, and have been associated with poor behavior, worse school performance, and obesity, in addition to negative secondary effects on maternal and family well-being. Yet, it has been shown that pediatricians do not adequately address sleep in routine well-child visits, and underdiagnose sleep issues. Pediatricians receive little formal training in medical school or in residency regarding sleep medicine. These physiologic processes change over the life course, especially in the first 5 years. Adequate sleep is often difficult to achieve, yet is considered very important to optimal daily function and behavior in children; thus, understanding optimal sleep duration and patterns is critical for pediatricians. For children who are sleeping without problems, but on a different schedule because of the pandemic, August is a time when parents can try and help them recalibrate for school in the fall, whether in-person, remote or hybrid. Dr. Spinks-Franklin suggested waking children earlier and earlier on successive days. If they're not sleepy, then putting them to bed early is not going to work, she said. You actually have to rob them of sleep. Dr. Owens said, Start by moving wake time earlier in increments for a couple of days, then move sleep time so they fall asleep earlier in the evening. No