
Contents

Part I Basic Science of Sleep

1	Introduction to the Topic	3
	Clifford B. Saper	
2	Overview of Normal Sleep	5
	Sudhansu Chokroverty	
3	Sleep Deprivation and Excessive Daytime Sleepiness	29
	Sudhansu Chokroverty	
4	Effects of Sleep Deprivation and Sleepiness on Society and Driving	41
	Michael A. Grandner and Raza Mian	
5	Neurobiology of REM Sleep, NREM Sleep Homeostasis, and Gamma Band Oscillations	55
	James T. McKenna, Mark R. Zielinski, and Robert W. McCarley	
6	Basic Circadian Timing and Sleep-Wake Regulation	79
	Marc Cuesta, Philippe Boudreau, and Diane B. Boivin	
7	Neurotransmitters, Neurochemistry, and the Clinical Pharmacology of Sleep	103
	Max Hirshkowitz and Hanul Bhandari	
8	Neurobiology of NREM Sleep and Thermoregulation in Sleep	119
	Ronald Szymusiak	
9	Phylogeny of Sleep	127
	Kristyna M. Hartse	
10	Sleep and Anesthesia: Different States with Shared Pathophysiological Traits	143
	David Hillman, Roop Kaw, and Ralph Lydic	
11	Physiological Changes of Sleep	153
	Sudhansu Chokroverty	
12	Sleep and Immune Regulation	195
	Norah Simpson, Monika Haack, and Janet M. Mullington	
13	Sleep and Memory Consolidation	205
	Rebecca M.C. Spencer, Matthew P. Walker, and Robert Stickgold	
14	Dreaming and Sleep Disorder	225
	James. F. Pagel and Seithikurippu R. Pandi-Perumal	
15	Study Design and Analysis in Sleep Medicine	235
	Vincent A. DeBari	

Part II Technical Considerations

16 Instrumentation, Electronics, and Signal Analysis	251
Diane L. Donnelly	
17 An Overview of Polysomnographic Technique	267
Nic Butkov and Sharon A. Keenan	
18 Electroencephalography, Electromyography, and Electro-oculography: General Principles and Basic Technology	295
Sushanth Bhat and Sudhansu Chokroverty	
19 Electrocardiography: Principles and Applications in Sleep Medicine	331
Daniel M. Shindler and John B. Kostis	
20 Evaluation and Monitoring of Respiratory Function	339
Reena Mehra and Harneet K. Walia	
21 Neuroimaging in Normal and Abnormal Sleep	353
Thien Thanh Dang-Vu, Jordan O’Byrne, Victoria Zhang, Audrée Arcelin, Sophie Schwartz, Philippe Peigneux, Pierre Maquet, and Martin Desseilles	
22 Multiple Sleep Latency Test	391
Thomas Roth and Timothy A. Roehrs	
23 Maintenance of Wakefulness Test	399
Cathy Goldstein and Ronald Chervin	
24 Scoring of Normal Sleep and Arousals	405
Raman K. Malhotra and Alon Y. Avidan	
25 Scoring of Sleep-Related Breathing Events	431
Robert Joseph Thomas	

Part III Clinical Topics

26 Approach to the Patient with Sleep Complaints	451
Sudhansu Chokroverty	
27 International Classification of Sleep Disorders	475
Michael Thorpy	
28 Epidemiology: Principles and Application in Sleep Medicine	485
Markku Partinen and Erkki Kronholm	
29 Genetics of Sleep and Sleep Disorders	523
Stéphanie Maret, Yves Dauvilliers, and Mehdi Tafti	
30 Nutrition and Sleep	539
Markku Partinen	
31 Sleep Duration, Morbidity, and Mortality	559
Shawn D. Youngstedt, Daniel F. Kripke, and Shelli James	
32 Obstructive Sleep Apnea Syndrome	567
Rachel Korson and Christian Guilleminault	
33 Central Sleep Apnea, Hypoventilation Syndrome, and Sleep in High Altitude	597
Bernardo J. Selim, Virend Somers, and Sean M. Caples	
34 Positive Airway Pressure in the Treatment of Sleep Apnea–Hypopnea	619
Charles W. Atwood and Patrick J. Strollo	

35 Preoperative, Perioperative, and Postoperative Evaluation and Management of Sleep-Disordered Breathing	647
Edwin Seet and Frances Chung	
36 Oral Appliances and Surgical Techniques for Treatment of Obstructive Sleep Apnea Syndrome	661
John A. Fleetham and Fernanda R. Almeida	
37 Nature, Evaluation, and Treatment of Insomnia	673
Charles M. Morin and Ruth M. Benca	
38 Narcolepsy and Idiopathic Hypersomnia	697
Seiji Nishino	
39 Motor Control and Dyscontrol in Sleep	713
Sudhansu Chokroverty, Sushanth Bhat, and Richard P. Allen	
40 Evaluation and Management of RLS and PLMD	759
Richard P. Allen	
41 Sleep, Breathing, and Neurologic Disorders	787
Sudhansu Chokroverty and Federica Provini	
42 Fatigue in Clinical Practice	891
Sushanth Bhat and Sudhansu Chokroverty	
43 Sleep, Coma, Vegetative and Minimally Conscious States	901
Carol Di Perri, Carlo Cavaliere, Olivier Bodart, Aurore Thibaut, Mohamed Ali Bahri, Andrea Soddu, and Steven Laureys	
44 Sleep and Epilepsy	915
Sudhansu Chokroverty and Lino Nobili	
45 Dreaming in Neurological Disorders	963
Mark Solms, Susan Malcolm-Smith, and Danyal Wainstein	
46 Sleep in Psychiatric Disorders	977
Peter L. Franzen and Daniel J. Buysse	
47 Sleep Disturbances in General Medical Disorders	997
Sudhansu Chokroverty	
48 Evaluation and Management of Circadian Rhythm Sleep Disorders	1059
Sabra M. Abbott and Phyllis C. Zee	
49 Rapid Eye Movement Sleep Behavior Disorder	1069
Stuart J. McCarter, Erik K. St. Louis, and Bradley F. Boeve	
50 Parasomnias	1087
Jacques Montplaisir, Antonio Zadra, Tore Nielsen, and Dominique Petit	
51 Sleep Disorders in the Elderly	1115
Sudhansu Chokroverty	
52 Evolution of Sleep from Birth to Adolescence and Sleep Disorders in Children	1139
Timothy F. Hoban	
53 Sleep and Sleep Disorders in Women	1159
Helen S. Driver and Eileen P. Sloan	
54 Sleep, Violence, and Forensic Implications	1175
Michel A. Cramer Bornemann and Carlos H. Schenck	

55 General Principle of Treatment of Sleep Dysfunction and Pharmacology of Drugs Used in Sleep Disorders	1187
Jaime M. Monti	
56 Sleep and Alternative Medicine: I	1209
Divya Gupta	
57 Approach to Sleep Disorders in the Traditional School of Indian Medicine: Alternative Medicine II	1221
Kamalesh K. Gulia, Arathi Radhakrishnan, and Velayudhan Mohan Kumar	
58 Sleep in Extreme Environment	1233
Sudhansu Chokroverty	
Erratum to: Sleep Disorders Medicine	E1
Sudhansu Chokroverty	
Epilogue	1243
Index	1245

Sleep Disorders Medicine

Basic Science, Technical Considerations and Clinical
Aspects

Chokroverty, MD, S. (Ed.)

2017, XIX, 1269 p. 340 illus., 156 illus. in color. In 2
volumes, not available separately., Hardcover

ISBN: 978-1-4939-6576-2