

Foreword

Preface

About the Editors

List of Contributors

SECTION I. ANATOMY, DEVELOPMENT, AGING, AND MECHANISMS OF CONTROL OF VENTILATION

1. Anatomy of the Respiratory Neural Network

Christopher A. Del Negro and Christopher G. Wilson

2. Chemoreception: Pathways, Plasticity, and Pathophysiology

Barbara J. Morgan and Jerome A. Dempsey

3. Developmental Changes in the Respiratory System of the Neonate-Child

Ahuva Brown, Liran Tamir Hostovsky, and Estelle B. Gauda

4. Control of Breathing in Older Adults

Susmita Chowdhuri

5. Breathing Control in Exercise

Philippe Haouzi

6. Control of the Upper Airway during Sleep

Leszek Kubin

SECTION II. PATHOPHYSIOLOGY OF SLEEP-DISORDERED BREATHING

7. Pathophysiology of Sleep-Disordered Breathing in Children and Neonates

Sofia Konstantinopoulou and Ignacio E. Tapia

8. Pathogenesis of Sleep-Disordered Breathing in Adults: Overview

Thomas M Tolbert, Indu Ayappa, and David M Rapoport

9. Risk and Causality by Genetics, Gender, and Age

Moshe Prero, Nardine Zakhary, Sally Ibrahim, and Kingman P. Strohl

10. The Influence of Cerebral Blood Flow and Cerebrovascular Responsiveness on Ventilatory Control

Jay M. J. R. Carr, Gustavo Vizcardo-Galindo, and Philip N. Ainslie

11. Central Apnea: Propensity and Plasticity

M.S. Badr

SECTION III. SLEEP-DISORDERED BREATHING IN DIFFERENT CONDITIONS AND DISEASE STATES

12. Sleep-Disordered Breathing due to Heart Failure

S. Javaheri and R. Germany

13. Breathing at Altitude

David Patz

14. Sleep-Disordered Breathing Associated with Chronic Lung Diseases

Bernie Y Sunwoo, Ana Sanchez-Azofra, and Atul Malhotra

15. Obesity Hypoventilation Syndrome

Amanda Piper

SECTION IV. PATHOPHYSIOLOGY-DIRECTED THERAPIES FOR SLEEP-DISORDERED BREATHING

16. Effect of Positive Airway Pressure on Ventilatory Control and Sleep-Disordered Breathing

James A Rowley

17. Mild Intermittent Hypoxia and Supplemental Oxygen: Potential Therapeutic Interventions to Treat Breathing Instability

Sreenavya Gandikota and Jason H. Mateika

18. Pharmacological Management of Sleep-Disordered Breathing

Thomas J. Altree, Peter G. Catcheside, Sutapa Mukherjee, and Danny J. Eckert

19. Neural Mechanisms Regulating Opioid-Induced Respiratory Depression and Therapeutic Strategies to Alleviate the Respiratory Side-Effects of Opioid Drugs

Jean-Philippe Rousseau and Gaspard Montandon

20. Pharmacologic Intervention Studies to Mitigate Breathing Instability – Animal Studies

Carla Freire, Lenise J. Kim, and Vsevolod Y. Polotsky

Index