
Preface

The beginning, middle, and end of the birth, growth, and perfection of whatever we behold is from contraries, by contraries, and to contraries; and whatever contrariety is, there is action and reaction, there is motion, diversity, multitude, and order, there are degrees, succession, and vicissitude.

Giordano Bruno
(Italian philosopher and astronomer, 1548–1600)

It might be hard to find a better example for the duality in life science than the effects of intermittent hypoxia on living organisms including human bodies. As the above-quoted wisdom of the controversial philosopher and astronomer Giordano Bruno (1548–1600), this universe and its miniature form – our life – are full of contraries and complexity. For these very reasons, we should not be surprised by the divergent or even controversial findings and notions surrounding the scientific field of intermittent hypoxia.

Dealing with these long-standing controversies and new concepts, this book provides an open forum for the most updated scientific understanding of both adaptive (beneficial) and maladaptive (detrimental) responses to intermittent hypoxia and their potential pathogenic and prophylactic roles in the development and progression of major human diseases. A total of 68 prominent experts from 9 countries (i.e., Austria, China, Germany, Israel, Russia, Spain, Turkey, Ukraine, and USA) have contributed their most updated research data and perspectives in both basic and translational aspects of intermittent hypoxia. This is our continued effort in promoting the translational research on intermittent hypoxia and its clinical applications in disease prevention and treatment around the globe. In this book, we paid special attention to several important topics related to intermittent hypoxia that have not been covered by our previous book – *Intermittent Hypoxia: From Molecular Mechanisms to Clinical Applications* (Nova Science Publishers, 2009; ISBN 9781608761272). For instance, from the 25 chapters of the present book, readers can find a number of new topics concerning the effects of intermittent hypoxia on cardiac arrhythmias, atherosclerosis, chronic obstructive pulmonary diseases, reproductive and occupational disorders, as well as cancer. This monograph is highly disease-oriented where all the fundamental research findings are selectively presented as mechanistic explanations of a particular human disease. Therefore, our present book is especially prepared for the interests of clinicians, allied healthcare professionals, athletic trainers, and translational medical researchers.

We like to take this opportunity to express our sincerest appreciation to each of the contributing authors for answering our calls and devoting their best effort to write their outstanding chapters for this book. We are truly honored by having a foreword written by Prof. Gregg Semenza (The Johns Hopkins Medical Institutions, USA), one of the world-renowned authorities in hypoxia biology and medicine. Our special thanks to Mr. Grant Weston (senior editor) of Springer-London for his constant encouragement, support, and extraordinary patience throughout the planning, editorial, and publication phases of this book.

Finally, we are indebted to our beloved families for their understanding and tolerance during the countless long hours we had spent at home for writing and editing this monograph in the past year. Without their sacrifice and moral support, the completion of this seemingly endless and overwhelming task would not be possible.

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