IN THE NAME OF ALLAH,

MOST GRACIOUS, MOST MERCIFUL

LUNG FUNCTIONS IN HEALTH AND DISEASE

BASIC AND APPLIED WITH MCQs

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DEDICATION

This book is dedicated to my
parents, wife and children
for their continuous encouragement in my life

ABOUT THE AUTHOR

Prof. Sultan Ayoub Meo is a medical graduate (MBBS) with advanced postgraduate degrees (MPhil) and Doctorate (PhD) in Physiology. Prof. Meo received Fellowship of the Royal College of Physicians (FRCP) of London, Royal College of Physicians of Edinburgh, Royal College of Physicians and Surgeons of Glasgow, UK, and Royal College of Physicians of Dublin, Ireland, in addition to garner MBBS, MPhil, PhD and four fellowships of the highly respectable Royal Colleges of United Kingdom and Ireland. He also obtained a postgraduate Master's Degree in Medical Education (M. Med Ed), University of Dundee, Scotland, UK.

Prof. Meo has a teaching experience of about 24 years and has been actively involved in undergraduate and postgraduate teaching in physiology and supervision of Master and PhD students. Prof. Meo has been appointed as a PhD supervisor and examiner in many universities of Saudi Arabia and Malaysia. He has also been involved in the clinical side and has provided clinical physiology services to community.

Prof. Meo is credited with 10 books and published 140 research articles in ISI indexed science journals, including the world class journal "Science". Prof. Meo has been appointed as an Associate Editor of the International Journal of Diabetes Mellitus, and he has also been an Editorial Board member for the Saudi Medical Journal. Presently, he is an Associate Editor of BMC Medical Education, London, UK.

Prof. Meo has been invited to deliver lectures in more than 95 worldwide international conferences held in various countries, including the Kingdom of Saudi Arabia, United Arab Emirates, Kingdom of Bahrain, Pakistan, Indonesia, Turkey, China, UK and USA.

Considering the outstanding academic and scientific achievements in medical sciences, the honorable governor Riyadh, Faisal bin Bandar bin Abdulaziz Al Saud honored Prof. Meo with an Excellency Award in Medicine year 2017.

PREFACE

To understand the basic and clinical applications of lung functions in health and disease is an important area for undergraduate, postgraduate medical students and also clinicians. Lung function tests measure the lung volumes and flows and demonstrate the effects of obstruction or restriction on lung functions. The evaluation of lung function is a common practice in all clinical settings and is an essential element of respiratory medical surveillance program.

While writing this book, it was aimed to cover both basic and clinical aspects of lung function test parameters and their clinical applications. I have emphasized on the clinical aspects of the lung function test parameters and provided explanations with detailed descriptions and with explanatory comments, flow charts, figures and MCQs.

Another valuable aspect of this book is the incorporation of a large number of tables and figures. These aids, parallel to the text, provide tips and points which ultimately lead to a grip of the concept of lung functions. Such aids in the book facilitate learning and help in understanding the basic and clinical concept and significance of the topic.

I would like to thank the Deanship of Scientific Reteach, King Saud University, Riyadh, Saudi Arabia, for providing me all facilities and support for the book. I am also thankful to the Chairman and all my colleagues in the Department of Physiology, College of Medicine, King Saud University, Riyadh, Saudi Arabia. I also express my gratitude to my mentors, friends, colleagues and students for their help in bringing out the first edition of this book.

Prof. Sultan Ayoub Meo

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I am deeply thankful for the encouragement and appreciation by Prof. Fahad Al-Zamil, Dean, College of Medicine, King Saud University and all my colleagues at the Department of Physiology, College of Medicine, King Saud University, Riyadh, Saudi Arabia for their support.

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Prof. Sultan Ayoub Meo

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