Preface

Although this is the second edition of the ARTP Handbook, it has undergone not only general revision but also the addition of several new chapters to make up "Part One" of a two-part volume. This edition has been developed in response to the establishment of the new ARTP/BTS professional examination that has been expanded to include more than the basic lung function tests previously covered.

This volume covers the underpinning knowledge covering all the basic tests in lung function, spirometry, gas transfer and lung volumes. Many chapters have been edited from the First Edition of the Practical Handbook of Respiratory Testing by leading experts who are also practitioners in their field from leading centres of lung function in the UK.

Although written as a professional handbook for physiologists and scientists, this book will provide an essential source of knowledge for all practitioners and end-users of lung function testing.

The quality of the figures, diagrams and tables has been greatly improved and expanded, and new chapters on paediatric lung function and interpretation have been added. The previous chapters have been expanded to include new information and technology, making the whole book a greater source of knowledge than the earlier version.

The chapters will be supported with slide presentations which will become available to ARTP members via the ARTP website (artp.org.uk). This work is an essential volume for those who need to understand the technology and physiology of this inspiring subject.

I acknowledge the tremendous work of the original authors and the reviewers of this new edition of the "Handbook" and look forward to any constructive comments towards a future edition of this essential book

Dr Brendan G Cooper
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Forward

This handbook attempts to fill a very important gap in the basic information available both to physiological measurement technicians working in respiratory function laboratories and to respiratory trainees in respiratory medicine.

It is an attempt to consider each important aspect of respiratory disease from the practice and safety of running a laboratory, through the anatomy of the respiratory system and then attempts to carefully explain how respiratory physiology works and how it can be measured. Great attention to detail is given to practical aspects of lung function measurement in a way that is easily understandable, both for those who do the tests and for those who try to understand and interpret them.

Respiratory physiology is, in many ways, overshadowed by advances in molecular biology but nevertheless remains the cornerstone of a proper understanding of how respiratory disease affects normal tissues. The measurements of respiratory function and performance are, in my opinion, poorly understood, perhaps particularly by doctors training in respiratory medicine en route to becoming consultants. Many tests are asked for unnecessarily or at least without a proper understanding of the limitations of the test, or the potential of a particular request. This volume provides the opportunity for all those who do need a basic understanding of respiratory function in health and disease to realise how tests should be done, the pitfalls within doing them and how to interpret the results. This book should provide a very useful basis for the smooth running and troubleshooting within respiratory function laboratories and enormously help the respiratory trainee in his/her understanding of the mechanisms used to understand and interpret respiratory disease.

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