



ERS | handbook

Respiratory Sleep Medicine

Editors

Anita K. Simonds

Wilfried de Backer



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Preface

“A thing of beauty is a joy for ever: Its loveliness increases; it will never pass into nothingness; but still will keep a bower quiet for us, and a sleep full of sweet dreams, and health, and quiet breathing...” John Keats

The ERS Handbook of Respiratory Sleep Medicine furthers the ERS HERMES project to Harmonise Education in Respiratory Medicine for European Specialists. Sleep medicine is truly multidisciplinary, and yet the huge expansion in sleep medicine facilities over the past two to three decades can be attributed to the recognition of and need to manage sleep disordered breathing, particularly obstructive sleep apnoea. The field is therefore of very great importance to respiratory physicians and respiratory team members, who are instrumental in running many European sleep laboratories. Moreover, treatment methods for obstructive sleep apnoea and nocturnal hypoventilation with continuous positive airway pressure and noninvasive ventilation have improved and diversified, and the links between sleep disordered breathing and co-morbidities are now much better understood, making it an area with an extensive and growing evidence base.

This handbook is part of the planned development of a training programme in sleep medicine, following the creation of a syllabus and curriculum in respiratory sleep medicine. Its aim is to help physicians and trainees meet the curriculum requirements. However, it covers the field extensively with detailed reference to nonrespiratory disorders and paediatric sleep medicine. As such, it is a valuable resource for any practitioner from a respiratory, neurology, cardiology, dental or ENT background who sees patients with sleep disorders, and needs an up-to date reference book that covers succinctly the causes, diagnosis and management of these conditions.

The Editors are very grateful to the ERS Task Force in Respiratory Sleep medicine, and other contributors who have written the chapters; and to the ERS staff who helped coordinate both the Task Force and the book.

Anita K. Simonds, Wilfried de Backer
Editors

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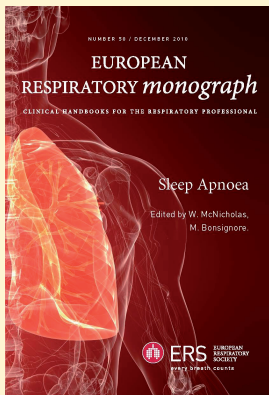
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European Respiratory Monograph 50: Sleep Apnoea *Edited by Walter T. McNicholas and Maria R. Bonsignore.*

This Monograph takes an in-depth look at sleep apnoea, focusing on OSA, from pathophysiology and epidemiology to comorbidities, treatment and future directions. The 24 chapters cover all aspects of the disease, including the latest interventions and new diagnostic technologies. To see the full table of contents and read the editors' introduction, visit erm.ersjournals.com/content/erm50/1.toc

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List of abbreviations

| | |
|--------------|---|
| (C)HF | (congestive) heart failure |
| (N)REM sleep | (non-) rapid eye movement sleep |
| AHI | apnoea–hypopnoea index |
| ASV | adaptive servo ventilation |
| BMI | body mass index |
| COPD | chronic obstructive pulmonary disease |
| CPAP | continuous positive airway pressure |
| CSA | central sleep apnoea |
| CSR | Cheyne–Stokes respiration |
| ECG | electrocardiography |
| EEG | electroencephalography |
| EMG | electromyography |
| ENT | ear, nose and throat |
| EOG | electrooculography |
| ESS | Epworth Sleepiness Scale |
| ICSD | International Classification of Sleep Disorders |
| MRI | magnetic resonance imaging |
| MSLT | Multiple Sleep Latency Test |
| MWT | Maintenance of Wakefulness Test |
| NIV | noninvasive ventilation |
| OHS | obesity hypoventilation syndrome |
| OSA(S) | obstructive sleep apnoea (syndrome) |
| OSLER test | Oxford Sleep Resistance test |
| P_{aCO_2} | arterial carbon dioxide tension |
| P_{aO_2} | arterial oxygen tension |
| PSG | polysomnography |
| P_{tcCO_2} | transcutaneous carbon dioxide tension |
| SAHS | sleep apnoea–hypopnoea syndrome |
| SaO_2 | arterial oxygen saturation |
| SDB | sleep disordered breathing |
| V'_E | minute ventilation |