



### MODULE III

## Sleep and exercise testing

**PART 1: Online presentations on the BeRS website with MCQs to be answered by the trainees before attending the online session.**

**3.1. Breathing and sleep: from physiology to pathophysiology (of obstructive sleep apnoea, central sleep apnoea and sleep hypoventilation)**

Prof. Dr. Johan Verbraecken (UAntwerpen)

**Definitions, pathophysiology of OSAS, periodic breathing, detrimental consequences of OSAS**

**3.2. Scoring sleep breathing abnormalities using polysomnography – polygraphy**

Prof. Dr. Marie Bruyneel (ULBruxelles)

**How to score sleep breathing abnormalities, polygraph as alternative to polysomnography**

**3.3. Multidisciplinary approach of central sleep apnoea and sleep hypoventilation due to neuromuscular disease and heart failure**

Prof. Dr. Dries Testelmans (KULeuven)

**Sleep in heart failure and neuromuscular disease**

**3.4. Exercise physiology: Cardiovascular and ventilatory response to exercise**

Prof. Dr. Eric Derom (UGent)

**Physiology of exercise in the healthy subject, effects of exercise on cardiovascular and respiratory system and on the peripheral muscles**

**3.5. Exercise pathophysiology: exercise limiting factors**

Prof. Dr. Thierry Troosters (KULeuven)

**Exercise limiting factors in pulmonary patients**

**3.6. Functional capacity and physical activity**

Prof. Dr. Heleen Demeyer (UGent, KULeuven)

**Maximal vs. functional test, assessment of functional capacity (6 MWT and others), physical activity in respiratory patients**

**3.7. Preoperative lung function in lung resection and general anaesthesia**

Prof. Dr. Eric Derom (UGent)

**Algorithms for thoracic resection surgery, relevance of lung function in the pre-operative workout of patient scheduled for oncologic surgery, lung Tx and lung volume reduction surgery**

**PART 2: On campus sessions.**

#### INTERACTIVE KEY LECTURES

**3.1. Exercise testing – endurance testing – physical activity: practicalities (theory)**

Prof. Dr. Thierry Troosters (KULeuven)

**Practical organisation of a symptom-limited exercise test and of a functional test. How to measure physical activity in practice**

#### PRACTICAL SESSIONS

**3.2. Practical interpretation of exercise testing – interpretation algorithms**

Prof. Dr. Eric Marchand (UCL – UNamur)

**Systematic approach, criteria of maximal test, cardiovascular, ventilator, peripheral limitation**

**3.3. Exercise testing**

Prof. Dr. Thierry Troosters (KULeuven)

Prof. Dr. Eric Marchand (UCL – UNamur)

**Cases**

#### INTERACTIVE KEY LECTURES

**3.4. Therapeutic choices for sleep disturbances**

Prof. Dr. Katrien Hertegonne (UGent)

**Multidisciplinary approach of OSAS: education, positional therapy, oral devices, upper airway surgery, CPAP.**

**3.5. CPAP, APAP, ASV, BiPAP, NIV, ... : what is this all about ?**

Prof. Dr. Bertien Buyse (KULeuven)

**Description of the equipment, the different modes and settings and their use to support breathing in a variety of diseases.**

#### PRACTICAL SESSIONS

**3.6. Interactive workshop with real life polysomnography (cases)**

Prof. Dr. Marie Bruyneel (ULBruxelles)

Prof. Dr. Bertien Buyse (KULeuven)

Prof. Dr. Katrien Hertegonne (UGent)

- Who to send for sleep investigation ?
- How to proceed when interpreting a polysomnography ?
- What are the therapeutic options ?