

Theoretical Bases of Clinical Medicine 2-3

Learning outcomes

TBL Lesson: 05 Radim Pára - Chronic Obstructive Pulmonary Disease [Jana Vinklerová]

Upon completion of this TBL lesson, students will be able to:

- Describe the physiology and pathophysiology of respiration.
 - Understand the mechanisms of breathing and lung volumes.
 - Define the process of gas exchange in the lungs.
 - Explain the regulation of breathing.
 - Characterize respiratory failure and respiratory distress syndrome.
- Calculate the body mass index and determine its normal and abnormal ranges.
- Discuss the impacts of obesity on the respiratory system.
- Summarize common pathogens affecting the respiratory tract.
- Formulate the pathophysiology of COPD (with emphasis on chronic bronchitis and emphysema), including etiology, risk factors, clinical manifestation, macro and microscopic pathological changes, complications, and differential diagnosis.
- Explain the relationship between COPD and Cor pulmonale and between COPD and mild cognitive impairment.
- Describe the current classification of COPD.
- Interpret current recommendations for the diagnosis of COPD.
 - Explain how pulmonary function tests are conducted, describe the measured lung parameters, what they indicate, and how they change in COPD.
 - Describe the significance and purpose of the CAT symptom assessment questionnaire and the modified mMRC dyspnea scale.
 - Interpret the X-ray results of COPD.
 - Suggest other possible diagnostic methods.
- Propose COPD treatment:
 - Stable COPD.
 - Acute exacerbation of COPD.
 - Define the role of pulmonary rehabilitation.
 - Describe the treatment of respiratory failure, palliative care, and explain the importance of oxygen therapy.
 - Explain the significance of nutrition and psychotherapy.
 - Include treatment of comorbidities.
- Explain the COPD diagnosis to a patient and discuss treatment options, including quitting smoking.
- Describe the psychological aspects of chronic diseases, including factors affecting the initial reaction, psychological adaptation, and self-management.

- Describe smoking and tobacco addiction and their impact on patient health.
 - Effects of smoking on health, including passive, definitions and forms of smoking.
 - Explain and calculate "pack-years".
 - The role of advertising, pricing policies, and health warnings in tobacco consumption.
 - Origins and characteristics of tobacco addiction, psychological aspects of smoking, withdrawal symptoms.
 - Prevention of smoking in general practice and an early detection program for lung cancer in a high-risk population.
 - Smoking cessation, pharmacotherapy for tobacco addiction, and smoking alternatives, reimbursement from the public health insurance system.
- List and describe the influence of high-risk jobs on the development of respiratory diseases.