

МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ РЕСПУБЛИКИ БЕЛАРУСЬ  
УЧРЕЖДЕНИЕ ОБРАЗОВАНИЯ  
«ГРОДНЕНСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ УНИВЕРСИТЕТ»  
Кафедра пропедевтики внутренних болезней

**ПРОПЕДЕВТИКА ВНУТРЕННИХ БОЛЕЗНЕЙ**  
методические рекомендации для студентов III курса  
факультета иностранных учащихся, *обучающихся на английском языке*

**PROPAEDEUTICS OF INTERNAL DISEASES**  
*methodical recommendations for the III year students  
of Medical Faculty for International Students  
who are studying in English medium*

Гродно, 2019  
ГрГМУ

Методические рекомендации подготовлены сотрудниками кафедры пропедевтики внутренних болезней УО «Гродненский государственный медицинский университет» зав. кафедрой доцентом Пронько Т.П., доцентом Сурмач Е.М. в соответствии с типовой учебной программой по дисциплине «Пропедевтика внутренних болезней» для специальностей 1-79 01 01 «Лечебное дело», утвержденной Министерством образования Республики Беларусь 04.09.2014г., регистрационный номер ТД – Л. 399/тип.

## MAIN QUESTIONS FOR PRACTICAL TRAININGS

### Study 1

#### Main complaints of patients with pulmonary diseases. Inspection and palpation of the chest.

##### *Control questions:*

1. Main complaints of patients with pulmonary diseases.
2. General inspection of the patient: forced position due to the bronchial asthma attack, pathology of pleura; central cyanosis, mechanism of appearance; digital clubbing.
3. Reference points and vertical lines which allow describing an abnormality of the chest.
4. The lungs lobes projection on the chest.
5. Normal shape of the chest.
6. Pathological shape of the chest.
7. Rate and depth of breathing: normal and pathological. Types of respiration.
8. Rhythm of breathing. Normal and pathologic rhythms of breathing.
9. Palpation of the chest. Technique of the chest palpation.
10. Tactile fremitus. Technique of the tactile fremitus determination. What is the diagnostic meaning of the tactile fremitus?
11. Determination of the chest circumference, chest expansion.

##### *Practical skills:*

1. History taking of patient with respiratory tract diseases.
2. Technique of the chest inspection.
3. Technique of the determination of the rate and depth of breathing, rhythm of breathing.
4. Technique of the determination of the shape of the chest.
5. Technique of the chest palpation (painful areas, tactile fremitus, elasticity of the chest).
6. Determination of the chest circumference, chest expansion.

### Study 2

#### Percussion of the lungs.

##### *Control questions:*

1. Percussion. Definition. Physical basics of percussion.
2. The role of the L. Auenbrugger in the development of percussion.
3. Types of percussion and their characteristic.
4. Percussion sounds and their characteristics.
5. General technique of percussion.
6. Technique of comparative percussion of the lungs.
7. Abnormalities of lung percussion.
8. Technique of topographic percussion of the lungs. Diagnostic meaning of the topographic percussion abnormalities.
9. The inferior border of the lungs in healthy person.
10. The superior border of the lungs in healthy person. The width and the height of the apex of the lungs.
11. The technique of determination of the diaphragmatic excursion. Normal values. Abnormalities of diaphragmatic excursion.

##### *Practical skills:*

1. General technique of percussion.

2. Technique of comparative and topographic percussion of the lungs.

### **Study 3** **Auscultation of the lungs.**

#### ***Control questions:***

1. Physical basis of the lungs auscultation.
2. The role of the René-Théophile-Hyacinthe Laennec in the development of the auscultation.
3. Direct and indirect auscultation, their characteristic.
4. General rules for auscultation. The main technique of auscultation.
5. Classification of the breath sounds, main and adventitious breath sounds.
6. Vesicular breath sounds, mechanism of appearance and diagnostic meaning.
7. Changes of vesicular breath sounds, diagnostic meaning.
8. Bronchial breath sounds, their characteristic, mechanism of appearance.
9. Pathological bronchial breath sounds, diagnostic meaning.
10. Classification of adventitious sounds.
11. Crackles, characteristic and mechanism of appearance.
12. Wheezes, characteristic and mechanism of appearance.
13. Rhonchi, characteristic and mechanism of appearance.
14. Pleural rub, characteristic and mechanism of appearance.
15. Differential diagnostic of crackles, rhonchi and pleural rub.
16. Bronchophony. The technique of bronchophony.
17. What is the diagnostic meaning of the results of bronchophony?

#### ***Practical skills:***

1. General technique of the lungs auscultation.
2. Auscultation of the main and adventitious sounds.

### **Study 4** **Instrumental and laboratory methods to examine lungs. Syndrome of airflow obstruction, syndrome of hyperinflation. Principles of treatment.**

#### ***Control questions:***

1. The sputum analysis. The method of the sputum collection for laboratory analysis.
2. The sputum analysis. Macroscopic examination of the sputum.
3. The sputum analysis. Microscopic examination of the sputum.
4. Sputum culture test.
5. Spirometry, static and dynamic lung volumes.
6. Spirometry, principles of interpretation.
7. Pneumotachometry, principles of interpretation.
8. The main other methods of the respiratory tract investigation (measurement of peak flow, X-ray, CT, bronchoscopy, biopsy).
9. Syndrome of the airflow obstruction.
10. Acute bronchitis: causes, risk factors, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
11. Chronic non obstructive bronchitis: causes, risk factors, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
12. Bronchial asthma: causes, risk factors, classification, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
13. First aid for patients with attack of suffocation.
14. Chronic obstructive pulmonary disease (COPD): causes, risk factors, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
15. Syndrome of the lungs hyperinflation.
16. Emphysema of the lungs: causes, risk factors, classification, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.

#### ***Practical skills:***

1. Sputum test interpretation.
2. Spirometry results interpretation.

### **Study 5**

#### **Syndrome of consolidation of the lungs tissue. Syndrome of pleural effusion. Pleural fluid analysis. Principles of treatment.**

##### *Control questions:*

1. Syndrome of consolidation of the lungs tissue.
2. Lobar pneumonia: etiology and pathogenesis (pathological anatomy in lobar pneumonia).
3. Lobar pneumonia: complaints and history of present illness.
4. Lobar pneumonia: clinical features (physical examination by stages of the disease, laboratory and instrumental testing by stages of the disease). Principles of treatment.
5. Bronchopneumonia: causes, risk factors, complaints. Clinical features (physical examination, laboratory and instrumental testing). Principles of treatment.
6. Syndrome of the compression atelectasis.
7. Syndrome of the pleural effusion.
8. Syndrome of the pneumothorax.
9. Dry pleurisy: causes, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
10. Exudative pleurisy: causes, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
11. Technique of aspiration of pleural fluid in the case of pleural effusion. Pleural fluid analysis.
12. The distinction between transudates and exudates.

##### *Practical skills:*

1. Sputum test interpretation in pneumonia.
2. Pleural fluid test interpretation.

### **Study 6**

#### **Syndrome of presence of the cavity in the lungs. Syndrome of acute and chronic respiratory failure. Principles of treatment.**

##### *Control questions*

1. Syndrome of presence of the cavity in the lungs.
2. Lung abscess: causes, risk factors, complaints, physical examination, blood test, sputum examination, chest-x-ray data in patients with lungs abscess before and after perforation. Principles of treatment and prophylaxis
3. Sputum test interpretation in lung abscess.
4. Bronchiectasis: causes, classification, clinical features (complaints, physical examination, blood test, sputum analysis, chest-x-rays examination). Principles of treatment and prophylaxis
5. Respiratory failure, definition, causes.
6. Classification of respiratory failure.
7. Acute respiratory failure, etiology, classification, complaints, physical examination, laboratory and instrumental testing.
8. First aid in acute respiratory failure.
9. Chronic respiratory failure, etiology, classification, complaints, physical examination, laboratory and instrumental testing.

##### *Practical skills:*

1. Sputum test interpretation in lung abscess.
2. Spirometry results interpretation in respiratory failure.

**Study 7**  
**Mini-examination: respiratory tract diseases.**

*Control questions:*

1. Main complaints of patients with respiratory tract diseases, pathogenesis of these complaints.
2. Reference points and vertical lines of the chest (surface landmarks of the thoracic wall).
3. The lungs lobes projection on the chest.
4. Normal shape of the chest. Pathological shape of the chest. Symmetry of the chest.
5. Rate and depth of breathing: normal and pathological. Types of respiration.
6. Rhythm of breathing. Normal and pathologic rhythms of breathing.
7. Palpation of the chest. Technique of the chest palpation.
8. Tactile fremitus and elasticity of the chest, general technique, normal and pathological findings.
9. Determination of the chest circumference, chest expansion.
10. Percussion. Definition. Physical basis of percussion.
11. Types of percussion and their characteristic.
12. General technique of percussion.
13. Technique of comparative percussion of the lungs.
14. Percussion sounds and their characteristics.
15. Abnormalities of the lung percussion.
16. Technique of topographic percussion of the lungs.
17. The inferior border of the lungs in healthy person.
18. The superior border of the lungs in healthy person.
19. The width and height of the apex of the lungs.
20. The technique of determination of diaphragmatic excursion. Normal values. Abnormalities of diaphragmatic excursion.
21. Auscultation, definition of auscultation. Physical bases of auscultation.
22. Direct auscultation and indirect auscultation, their characteristic.
23. General rules for auscultation. Technique of the lungs auscultation.
24. Classification of the breath sounds, main and adventitious breath sounds.
25. Vesicular breath sounds, mechanism of appearance and diagnostic meaning.
26. Changes of vesicular breath sounds, diagnostic meaning.
27. Bronchial breath sounds, their characteristic, mechanism of appearance.
28. Pathological bronchial breath sounds, diagnostic meaning.
29. Classification of adventitious sounds.
30. Crackles, characteristic and mechanism of appearance.
31. Wheezes, characteristic and mechanism of appearance. Rhonchi, characteristic and mechanism of appearance.
32. Pleural rub, characteristic and mechanism of appearance.
33. Differential diagnostic of crackles, rhonchi and pleural rub.
34. Bronchophony. The technique of the bronchophony. What is the diagnostic meaning of the results of bronchophony
35. The sputum analysis. Collection of sputum for laboratory analysis.
36. Macroscopic examination of sputum.
37. Microscopic examination of sputum.
38. Sputum culture test.
39. Pleural fluid test.
40. Spirometry, static and dynamic lung volumes. Spirometry, principles of interpretation.
41. Pneumotachometry, principles of interpretation.
42. Peakflowmetry, technique and diagnostic meaning.
43. Pulse oximetry, technique and diagnostic meaning.
44. Syndrome of the airflow obstruction.
45. Acute bronchitis: causes, risk factors, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
46. Chronic non obstructive bronchitis: causes, risk factors, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.

47. Bronchial asthma: causes, risk factors, classification, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment. First aid for patients with attack of suffocation.
48. Chronic obstructive pulmonary disease (COPD): causes, risk factors, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment.
49. Syndrome of the lungs hyperinflation. Emphysema of the lungs: causes, risk factors, classification, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment and prophylaxis.
50. Syndrome of consolidation of the lungs tissue.
51. Lobar pneumonia: etiology and pathogenesis (pathological anatomy in lobar pneumonia); complaints and history of present illness; clinical features (physical examination by stages of the disease, laboratory and instrumental testing by stages of the disease). Complications. Principles of treatment and prophylaxis.
52. Bronchopneumonia: causes, risk factors, complaints. Clinical features (physical examination, laboratory and instrumental testing). Principles of treatment and prophylaxis.
53. Syndrome of the pleural effusion.
54. Technique of aspiration of pleural fluid in the case of pleural effusion. Pleural fluid analysis. The distinction between transudates and exudates.
55. Dry pleurisy: causes, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment and prophylaxis.
56. Exudative pleurisy: causes, clinical features (complaints, physical examination, laboratory and instrumental testing). Principles of treatment and prophylaxis.
57. Syndrome of the compression atelectasis. Clinical features, principles of treatment.
58. Syndrome of the pneumothorax.
59. Syndrome of presence of the cavity in the lungs.
60. Lung abscess: causes, risk factors, complaints, physical examination, blood test, sputum examination, chest-x-ray data in patients with lungs abscess before and after perforation. Principles of treatment and prophylaxis.
61. Bronchiectasis: causes, classification, clinical features (complaints, physical examination, blood test, sputum analysis, chest-x-rays examination). Principles of treatment and prophylaxis.
62. Respiratory failure, definition, causes. Classification of the respiratory failure.
63. Acute respiratory failure, etiology, classification, complaints, physical examination, laboratory and instrumental testing. First aid in acute respiratory failure.
64. Chronic respiratory failure, etiology, classification, complaints, physical examination, laboratory and instrumental testing. Principles of treatment and prophylaxis.