

Department of Pathophysiology
Program For Practical Classes For Pharmacy Students
Summer 2023

1. 26. 02 – 01. 03. 2024

Experimental method. Modeling in pathophysiology. Peripheral vascular disorders.
Regulation of microcirculation. Active (arterial) hyperemia, ischemia, passive congestion
(venous hyperemia). Thrombosis. Embolism. Infarction.

2. 04. 03 – 08. 03. 2024

Pathophysiology of the cell. Neoplasia.
Clinical case – Hemorrhagic shock.

3. 11. 03 – 15. 03. 2024

Body reactivity and resistance. Immunity, allergy.
Clinical cases.

4. 18. 03 – 22. 03. 2024

Disorders of the lipid, carbohydrate and protein metabolism.
Clinical cases.

5. 25. 03 – 29. 03. 2024

Water and electrolyte balance. Sodium and water balance, edema. Potassium balance.
Calcium and phosphorus balance.
Clinical case – Dehydration in Diabetes mellitus.

6. 01. 04 – 05. 04. 2024

Acid-base balance. Acidosis and Alkalosis. Hypoxia. Types and Mechanisms.
Clinical cases – CO poisoning; Acidosis in DM

7. 08. 04 – 12. 04. 2024

Inflammation – causes, mechanisms and clinical signs. Disorders of thermoregulation.
Fever – causes and effects.

8. 15. 04 – 19. 04. 2024

Cardiac disorders. Compensatory mechanisms. Congestive heart failure, arrhythmias,
coronary artery disease, pericardial syndromes.

9. 22. 04 – 26. 04. 2024

Arterial hypertension and hypotension.
Clinical case - Renal hypertension.

10. 29. 04 – 03. 05. 2024

Blood. RBC disorders. Anemia – causes and mechanisms. WBC disorders - leucocytosis, leucopenia, leukemia. Coagulation disorders - Etiology and pathogenesis.

Clinical cases - aplastic anemia, polycythemia vera, iron deficiency, vitamin B12 deficiency; acute lymphoblastic leukemia, chronic myelogenous leukemia, idiopathic thrombocytopenic purpura.

11. 06. 05 – 10. 05. 2024

Respiratory system. Obstructive and restrictive hypoventilation. Diffusion and perfusion alterations. Respiratory insufficiency.

Clinical cases - bronchial asthma, chronic obstructive pulmonary disease, chronic bronchitis; pneumothorax, ARDS

12. 13. 05 – 17. 05. 2024

Gastrointestinal system. Disorders of secretion, motility, digestion and absorption. Gastric and duodenal ulcer. Causes and mechanisms of liver diseases. Liver dysfunction, jaundice.

Clinical cases – Peptic ulcer; duodenal ulcer, acute pancreatitis, celiac disease; hepatic cirrhosis, hepatorenal syndrome.

13. 20. 05 – 24. 05. 2024

Renal disorders. Glomerulonephritis. Nephrotic syndrome. Renal failure. Uremia.

Clinical cases – membrano-proliferative glomerulonephritis, nephritic syndrome, acute tubular necrosis.

14. 27. 05 – 31. 05. 2024

Endocrine disorders. Alterations of the pituitary , thyroid, parathyroid and adrenal glands, pancreas. Diabetes mellitus.

Clinical cases – hyperthyroidism, Cushing syndrome, diabetes mellitus.

15. 03. 06 – 07. 06. 2024

Etiology and pathogenesis of the Nervous system – motor, sensor and autonomic disorders.

Clinical cases - myasthenia gravis, Parkinson's disease. Stroke.

Revision. Certification.

Textbooks:

1. C. M. Porth. Pathophysiology: Concepts of Altered Health States. Lippincott Williams & Wilkins, 2013.
2. S. Silbernagl, F. Lang. Color atlas of Pathophysiology. Thieme, 2009 (in English).

Head, Department of Pathophysiology.....
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