

Kazan (Volga region) Federal University, Kazan University
Institute of Fundamental Medicine and Biology
High school of medicine
Department of Morphology and General Pathology



Thematic plan
for
Clinical pathophysiology

Specialties:

31.05.01 — General medicine

31.05.03 — Dentistry

Leading lecturer
MD, Senior lecturer
Ursan V.Roman

The elective discipline "Clinical Pathophysiology" in the 9th semester and includes 72 hours, 2 credits.

1.1 The structure and thematic plan of contact and students' independent work in the discipline "Clinical Pathophysiology"

N	Theme	Semester	Types of staff contact work		Students' independent work
			Lecture	Practice	
1.	Clinical pathophysiology in cardiology.	9	2	4	2
2.	Clinical pathophysiology in hematology.	9	0	4	4
3.	Clinical pathophysiology in pulmonology.	9	2	4	2
4.	Clinical pathophysiology in nephrology and urology.	9	2	4	4
5.	Clinical pathophysiology in gastroenterology and hepatology.	9	2	4	4
6.	Clinical pathophysiology in endocrinology.	9	2	4	4
7.	Clinical pathophysiology in neurology.	9	2	4	4
8.	Clinical pathophysiology of life-threatening conditions.	9	0	4	4
Hours			12	32	28

1.2 Thematic plan of lectures

Lecture 1 Acute and chronic heart failure. Cardiomyopathy.

Lecture 2 Obstructive sleep apnea syndrome.

Lecture 3 Atypical hemolytic uremic syndrome in adults.

Lecture 4 Acid-dependent GIT diseases. Pathophysiology of the spectrum of precancerous diseases of the stomach.

Lecture 5 Multiple endocrine neoplasia syndrome.

Lecture 6 Neurodegenerative diseases.

1.3 Thematic plan of laboratory classes

Theme 1. Clinical pathophysiology in cardiology.

Arterial hypertension. Pulmonary hypertension. Atherosclerosis. Ischemic heart disease: acute and chronic forms. The main problems of arrhythmology. Diseases of the peripheral arteries. Vasculitis. Pulmonary embolism. Analysis of clinical cases and situational tasks in the context of current clinical recommendations, analysis of comorbid patients.

Theme 2. Clinical pathophysiology in hematology.

Erythrocytosis. anemia. Leukemia. Lymphomas. Pathology of vascular-platelet hemostasis. Diseases associated with the pathology of coagulation hemostasis. Disseminated intravascular coagulation. Deep vein thrombosis of the lower extremities and pulmonary embolism. Exploring the possibilities of laboratory diagnostic methods in hematology. Analysis of clinical cases of patients with diseases of the blood system. Comparison of research results with clinical data.

Theme 3. Clinical pathophysiology in pulmonology.

Obstructive and restrictive diseases of the respiratory system. Pulmonary perfusion disorders. Violations

of the ventilation-perfusion relationship. Cystic fibrosis. Respiratory failure. Lung damage in autoimmune and systemic diseases. Sarcoidosis. Pneumoconiosis. Exogenous allergic alveolitis. Acute lung injury. Respiratory distress syndrome in adults. Tumors of the lung. COPD Bronchial asthma. Pathophysiological substantiation of modern recommendations for the diagnosis and treatment of lung diseases. Clinical reviews and case studies.

Theme 4. Clinical pathophysiology in nephrology and urology.

Glomerular diseases of the kidneys. Tubulointerstitial kidney disease. Pyelonephritis. Nephrolithiasis. Pathological continuum of kidney damage. Nephrosclerosis. Kidney damage in diabetes mellitus, arterial hypertension, chronic heart failure. Pathology of the prostate. Tumors of the kidneys, urinary tract and genital organs.

Acute kidney injury and acute kidney disease. Chronic kidney disease. Terminal renal failure. Analysis of clinical cases and situational tasks in nephrology and urology in the context of current clinical recommendations.

Module control test (written)

Theme 5. Clinical pathophysiology in gastroenterology and hepatology.

Acid related GIT diseases. Gastroesophageal reflux disease. Gastritis. Peptic ulcer disease. Pathophysiology of the spectrum of precancerous diseases of the stomach. Whipple's disease. Ulcerative colitis. Crohn's disease. Celiac disease Acute and chronic pancreatitis. Jaundice, their types and characteristics.

Metabolically associated fatty liver disease. Cirrhosis. Analysis of clinical cases and situational tasks in the context of current clinical guidelines. Comorbid patients.

Theme 6. Clinical pathophysiology in endocrinology.

Prediabetes. Diabetes. Diabetic microangiopathy, diabetic macroangiopathy, diabetic neuropathy, diabetic osteoarthropathy. diabetic comas. Hypoglycemic coma.

Diseases of the hypothalamic-pituitary system. Diseases of the thyroid gland. Diseases of the parathyroid glands. Diseases of the adrenal glands. Diseases of the gonads. Menopause and andropause. MEN syndrome.

Paraneoplastic syndromes with clinic of endocrine diseases. Analysis of clinical cases and situational tasks in the context of current clinical recommendations, including analysis of comorbid patients.

Theme 7. Clinical pathophysiology in neurology.

Acute disorders of cerebral blood circulation. Traumatic lesions of the brain and spinal cord. Clinical pathophysiology of pain. Brain damage in metabolic disorders. Brain lesions in systemic and autoimmune diseases. Pathophysiology of sleep disorders.

Theme 8. Clinical pathophysiology of life-threatening conditions.

Shock. Etiology and risk factors. Types of shock shock classification. General pathogenesis and stages of shock. Features of the pathogenesis of certain types of shock. Coma, definition. The main groups of com. Clinical groups of comas: caused by primary damage to the central nervous system (neurogenic), developing in violation of gas exchange (respiratory, hypoxic), caused by metabolic disorders with insufficient or excessive production of hormones (diabetic, hypothyroid, hypocorticoid, hypopituitar), toxogenic coma, primary.

Module control test (oral)
