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## **KONSPECTUS**

### **FOR PHARMACOTHERAPY EXAM FOR STUDENTS IN PHARMACY V-th COURSE, SESSION 2024/2025**

***Fundamentals of pharmacotherapy. General symptoms and syndromes.***

1. Basic principles of rational pharmacotherapy. Contemporary therapeutic problems and therapeutic strategies.
2. WHO guidelines for rational pharmacotherapy. Criteria for selection of P-drug: efficacy, safety, convenience and price.
3. Clinical evaluation of therapeutic efficacy. Clinical and laboratory indicators. Biomarkers for assessing the effect of drug treatment.
4. Pharmacotherapy during pregnancy and lactation.
5. Clinical trial design – procedures, phases, metrics, data analysis and reporting documentation.
6. Therapeutic drug monitoring.
7. Monitoring the safety of drug therapy - adverse drug reactions (ADRs) and drug interactions. Types of ADRs and factors influencing the frequency, severity and severity of the adverse reaction. Types of monitoring - examples.
8. Chrono-pharmacology and chrono-pharmacotherapy.
9. Pharmacotherapeutic problems with genetic polymorphism of drug-metabolizing enzyme systems.
10. Pharmacotherapeutic considerations in patients with renal and hepatic failure.
11. Drug-induced pathological conditions on the immune system, liver, kidneys, cardiovascular system, nervous system and others.
12. Principles for a rational choice of antibiotic pharmacotherapy.
13. Antimicrobial resistance and clinical indicators of resistant infection. Antibiotic policy and therapeutic strategies.
14. Pain and analgesia – types and mechanisms of the pain syndrome. Therapeutic strategies – non-opioid and opioid analgesics, adjuvant analgesics. A specific strategy for the treatment of pain in elderly patients.
15. Therapeutic strategies for acute and chronic pain – drug selection. WHO step-scheme for the treatment of chronic/tumor pain.
16. Therapeutic strategies for inflammatory joint pain (painful osteoarthritis, rheumatoid arthritis, etc.)

17. Headache - primary and secondary headache and clinical characteristics. Migraine and antimigraine drugs - principles and rules of treatment.
18. Fever – general characteristic of the febrile reaction, causes of fever. Temperature curves as a diagnostic marker. Therapeutic behavior in the state of increased body temperature.
19. Nausea and vomiting – etiological factors, pathogenesis and pharmacological control with antiemetic drugs. Prevention and therapy of vomiting during cytostatic chemotherapy.
20. Diarrheal syndrome – etiological factors, general measures and pharmacological control with etiological and symptomatic antidiarrheal drugs.
21. Constipation – primary and symptomatic, prevention and treatment guidelines.
22. Insomnia - etiological factors, non-pharmacological, pharmacotherapeutic and alternative methods of treatment.

#### ***Skin and eye diseases***

24. General dermatology - structure of the skin and types of rash units. Peculiarities of dermatological drugs in relation to their permeability and extent of systemic resorption.
25. Skin diseases – contact dermatitis, atopic dermatitis, seborrheic dermatitis and other eczemas – clinical manifestations and treatment guidelines.
26. Infectious dermatoses – types and guidelines for treatment.
27. Drug-induced skin reactions – non-allergic and allergic reactions, photosensitivity/phototoxic reactions.
28. Psoriasis - clinic and treatment.
29. Acne and rosacea - clinic and treatment.
30. Eye disorders and diseases of the orbit, eyelids, lacrimal system and conjunctiva - guidelines for treatment. Specificity of application of ophthalmic drugs.
31. Glaucoma - types, clinical manifestations and drug treatment.

#### ***Diseases and syndromes in internal medicine***

32. Acute inflammatory diseases of the upper respiratory tract with cough syndrome - etiological factors, types of cough and therapeutic behavior. Antitussives and expectorants.
33. Types of pneumonia and therapeutic behavior depending on the causative agent and the severity of the infection.
34. Tuberculosis - etiology, clinical forms and manifestations, guidelines for drug treatment and prevention.
35. Chronic obstructive pulmonary diseases - types, etiological factors, clinical manifestations and possible complications. Therapeutic targets and the National Consensus for the treatment of COPD.
36. Bronchial asthma - main characteristics, etiological factors, pathogenesis, clinical manifestations and types of asthma.
37. Bronchial asthma - therapeutic goals and principles of pharmacological control in acute asthma attack and in chronic asthma.
38. Non-infectious-inflammatory syndrome - types of autoimmune diseases and guidelines for treatment - anti-inflammatory, analgesic and immunosuppressive therapy; disease-modifying antirheumatic drugs.
39. Allergic diseases - types, essence of the allergic reaction, exogenous etiological factors and genetic factors of atopy. Clinical manifestations and drug treatment – antihistamines, cromolyns, decongestants and corticosteroids.
40. Dyslipidemia - clinical significance, prevention and treatment.
41. Arterial hypertension – etiological factors, pathogenesis, stages and possible complications. Therapeutic goals and principles of antihypertensive treatment.
42. Drug treatment of arterial hypertension - pharmacological groups of drugs; rules and strategies for optimal blood pressure control.
43. Coronary-vascular disease - pathogenesis, etiological factors and types of myocardial ischemia. Stable angina pectoris – clinical manifestations, therapeutic goals and treatment.



44. Unstable angina - clinical manifestations and drug treatment: anticoagulant, antithrombotic and antianginal therapy.
45. Acute coronary syndrome (Infarction) - pathogenetic essence, clinical manifestations and possible complications. Therapeutic goals and treatment approaches – analgesia and sedation, thrombolysis, antiplatelets and anticoagulants, anti-ischemic drugs.
46. Heart failure - functional classification, therapeutic goals and approaches to the treatment of acute left ventricular and congestive heart failure.
47. Cardiac arrhythmia - etiological factors and mechanisms of occurrence, types and antiarrhythmic drugs for atrial, atrio-ventricular and ventricular arrhythmia. Basic principles, benefit and risk of antiarrhythmic therapy.
48. Thromboembolic syndrome: deep venous thrombosis and pulmonary embolism - nature, etiological factors, clinical manifestations and drug treatment.
49. Acid-peptic diseases - etiological factors, pathogenesis, clinical manifestations, therapeutic goals and treatment - proton pump inhibitors, H2-blockers, antacids, mucoprotectors, anti-helicobacter therapy and others.
50. Dyspepsia and drug-induced erosive gastritis - antacid drugs and cytoprotectors.
51. Goiter. Hypo- and hyperthyroidism. Hashimoto's thyroiditis.
52. Diabetes mellitus - epidemiology, etiological factors, pathogenesis, clinical and laboratory parameters and diagnostics, possible complications of the disease. Type 1 diabetes treatment and insulin administration rules.
53. Diabetes mellitus type-2 - therapeutic goals, non-pharmacological and pharmacotherapeutic approaches - sulfanylurea drugs, biguanides, thiazolidinediones, alpha-glucosidase inhibitors. Combined therapeutic regimens.
54. Therapeutic issues in hepatology. Viral hepatitis - causes, types and treatment guidelines - antiviral drugs and hepatoprotectors.
55. Therapeutic issues in nephrology - significance of pain, urinary problems and changes in urine output. Kidney stone disease.
56. Therapeutic problems in nephrology – infectious-inflammatory diseases and autoimmune diseases with renal localization.
57. Therapeutic issues in hematology. Iron-deficiency anemia - causes of iron deficiency and iron-containing anti-anemic drugs. Drug modulation of hematopoiesis.
58. Megaloblastic anemia - causes, symptoms and medication.
59. Hemolytic anemias - types and drug effects.
60. Shock states - types, therapeutic effect. Anaphylactic shock.
61. Sexually transmitted infections – syphilis, gonorrhea, chlamydia, HIV infection and AIDS. Prevention and treatment.

## BASIC LITERATURE

1. Lecture course in pharmacotherapy, prof. L.Peychev – MU Plovdiv, 2024-2025.
2. Pharmacotherapy: A Pathophysiologic Approach, 11-th Edition 2020 by McGraw Hill.
3. [www.pharmacotherapyonline.com](http://www.pharmacotherapyonline.com)
4. A Quantitative and Narrative Evaluation of Goodman and Gilman's Pharmacological Basis of Therapeutics. BJ Piper, AA Alinea, JR Wroblewski, SM Graha – Pharmacy, 2020 – mdpi.com
5. Textbook of Therapeutics. Drug and Disease Management, Eds. E.Herfindal, D.Gourley. 10th Ed.int., 2016.

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Approved by  
/ **PROF. L. PEYCHEV, MD, PhD, MHM** /

