

PHARMACOLOGY AND TOXICOLOGY

Examination Topics

Winter semester - Year 2020/2021

1. Enteral administration of drugs
2. Parenteral administration of drugs
3. Drug absorption, passage through biological membranes
4. Drug distribution and redistribution
5. Physiological barriers in organism and their influence on the drug effect
6. Drug elimination and metabolism
7. Excretion of drugs from organism
8. Principal pharmacokinetic parameters
9. Mechanisms of drug effects – specific, non-specific effect
10. Receptors: function, structure and classification
11. G-proteins in receptor signaling
12. Affinity and intrinsic activity of drugs
13. Agonism, competitive and non-competitive antagonism, dualism
14. Desensitization and sensitization of receptors
15. Ion channels: structure, function and classification
16. Dose-response relationship
17. Variability of drug effects, factors affecting drug effects
18. Drug accumulation
19. Tachyphylaxis and tolerance
20. Drug addiction and abuse
21. Combination of drugs and their effect
22. Principal parameters of drug effectivity and toxicity
23. Adverse effects of drugs

24. General anesthetic drugs
25. Drugs affecting central nervous system: classification, mechanisms of effect
26. Hypnotics and sedative drugs
27. Antipsychotics
28. Antidepressants
29. Anxiolytic drugs
30. Antiepileptic drugs
31. Antiparkinson drugs, therapy of neurodegenerative diseases
32. Nootropic drugs
33. Psychostimulants
34. Opioid analgesics
35. Analgesics-antipyretics
36. Non-steroidal antiinflammatory drugs
37. Antirheumatic drugs, antiuratic and uricosuric drugs
38. Prostaglandins and their use in therapy

39. Neurotransmitters of central and peripheral nervous system
40. Drugs affecting autonomous nervous system and their classification
41. Sympathomimetic drugs
42. Alpha-sympatholytic and indirect sympatholytic drugs
43. Beta-sympatholytic drugs
44. Drugs affecting parasympathicus
45. Myorelaxants
46. Local anesthetics
47. Therapy of heart failure
48. Antidysrhythmic drugs
49. Therapy of angina pectoris
50. Drugs affecting renin-angiotensin-aldosterone system
51. Calcium channel inhibitors
52. Endothelium and its pharmacology
53. Vasoactive drugs (vasodilatory and vasoconstrictory drugs)
54. Therapy of hypertension
55. Antihyperlipidemic drugs
56. Anticoagulants
57. Fibrinolytic and antifibrinolytic drugs
58. Anti-platelet drugs
59. Antianemic drugs
60. Diuretics
61. Antitussants, expectorants, secretolytic drugs
62. Antiasthmatics
63. Histamine and antihistaminic drugs
64. Antacids and therapy of dyspepsia (indigestion)
65. Anti-ulcer drugs
66. Antiemetics, prokinetic drugs
67. Spasmolytic drugs
68. Laxative and antidiarrhoic drugs
69. Uterotonic and tocolytic drugs
70. Cytostatic drugs
71. Drugs affecting 5-HT receptors
72. Antibacterial drugs: classification, characteristics
73. Beta-lactam antibiotics
74. Macrolide antibiotics and lincosamines
75. Tetracycline antibiotics and chloramphenicol
76. Aminoglycoside antibiotics
77. Chemotherapeutics for bacterial infections
78. Antituberculotics
79. Antiviral drugs
80. Antimycotic drugs
81. Thyroid hormones and antithyroidal drugs
82. Therapy of diabetes mellitus
83. Adrenal cortex hormones and their use in therapy
84. Female sex hormones and hormonal contraceptives
85. Male sex hormones and anabolics