

Министерство здравоохранения Российской Федерации
Федеральное государственное автономное образовательное учреждение высшего образования
ПЕРВЫЙ МОСКОВСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ УНИВЕРСИТЕТ
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УТВЕРЖДЕНО
Заседанием учебно-методической конференции кафедры
(протокол №09 от 11 февраля 2019 года)

Зав кафедрой _____ В.П. Фисенко

Chair of pharmacology of Medical Department.
Questions for the examination for english speaking students.

1. General principles of pharmacokinetics: routes of drug administration, absorption (mechanisms of drug transport across cell membrane), distribution, accumulation and elimination (biotransformation and excretion). Basic pharmacokinetic parameters (bioavailability, volume of distribution, constant of elimination, half-life, clearance).
2. General principles of pharmacodynamics: pharmacological effects, mechanisms and localization of drug action, main targets for drug action, drug receptor types, affinity, intrinsic activity, agonists and antagonists, drug potency and efficacy.
3. Adverse (allergic and non-allergic) and toxic effects of drugs. Effects of repeated dosing (tolerance, dependence, cumulation). Drug-drug interactions. Effects of combined drug administration (synergism and antagonism). General principles of treatment of acute drug poisoning.
4. Local anesthetics (classification, mechanism of action, pharmacological effects, indications, adverse effects).
5. Muscarinic receptor agonists (M-cholinomimetics) (drugs, mechanism of action, pharmacological effects, indications, adverse effects). Mechanism of pilocarpine action in glaucoma.
6. Acetylcholinesterase inhibitors (anticholinesterase drugs) (classification, mechanism of action, pharmacological effects, indications, adverse effects). Acute organophosphate intoxication and its treatment, cholinesterase reactivators.
7. Muscarinic receptor antagonists (M-cholinoblockers) (classification, mechanism of action, pharmacological effects, indications, adverse effects).
8. Neuromuscular blocking drugs (classification, mechanism of action, pharmacological effects, indications, adverse effects).
9. α, β -adrenomimetics (drugs, mechanism of action, pharmacological effects, indications, adverse effects). Action of α, β -adrenomimetics on blood pressure (graphical explanation).
10. α -adrenomimetics (classification, mechanism of action, pharmacological effects, indications, adverse effects).
11. β -adrenomimetics (classification, mechanism of action, pharmacological effects, indications, adverse effects).
12. α -adrenoblockers (classification, mechanism of action, pharmacological effects, indications, adverse effects).
13. β -adrenoblockers (classification, mechanism of action, pharmacological effects, indications, adverse effects).
14. General anesthetics: classification, main properties and differences between inhalational and non-inhalational anesthetics.
15. Sedative-hypnotic drugs (classification, mechanism of action, pharmacological effects, indications, adverse effects).
16. Drugs used in Parkinson's disease (classification, mechanism of action, adverse effects of levodopa and their pharmacological correction).
17. Antiepileptic drugs (classification based on mechanism of action)
18. Opioid analgesics (classification, mechanism of analgesic action, pharmacological effects, indications, adverse effects). Acute poisoning with opioid analgesics, antagonists of opioid analgesics.
19. Centrally-acting non-opioid analgesics (classification, mechanism of action, indications, adverse effects).

20. Antipsychotic drugs (classification, mechanism of action, pharmacological effects, indications, adverse effects).
21. Antidepressants (classification, mechanism of action, pharmacological effects, adverse effects). Mood-stabilizing drugs.
22. Anxiolytic drugs (drugs, mechanism of action, pharmacological effects, indications, adverse effects).
23. Drugs used in bronchial asthma (classification, mechanism of action, pharmacological effects, indications, adverse effects).
24. Bronchodilators (classification, mechanism of bronchodilating action, indications, adverse effects)
25. Antitussive drugs (classification, mechanism of antitussive action, indications, adverse effects).
26. Expectorants (classification, mechanism of action, indications, adverse effects).
27. Pharmacotherapy of congestive heart disease (principles, classification, mechanisms of action, pharmacological effects, indications, adverse effects).
28. Cardiac glycosides (classification, mechanism of action, pharmacological effects, indications, adverse effects). Treatment of acute glycoside poisoning.
29. Non-glycoside cardiotonic drugs (classification, mechanism of action, pharmacological effects, indications, adverse effects).
30. Antiarrhythmic drugs (classification, mechanism of action, pharmacological effects, indications, adverse effects).
31. Class I antiarrhythmics – sodium channel blockers (classification, mechanism of action, pharmacological effects, indications, adverse effects).
32. Class III antiarrhythmics – potassium channel blockers (drugs, mechanism of action, pharmacological effects, indications, adverse effects).
33. Class IV antiarrhythmics – calcium channel blockers (drugs, mechanism of action, pharmacological effects, indications, adverse effects).
34. Antianginal drugs (classification, mechanism of action, pharmacological effects, adverse effects).
35. Organic nitrates (classification, mechanism of action, pharmacological effects, adverse effects). Nitroglycerin – pharmacokinetic and pharmacodynamic particularities.
36. Neurotropic antihypertensive drugs (classification, mechanism of action, pharmacological effects, indications, adverse effects).
37. Myotropic antihypertensive drugs (drugs, mechanism of action, pharmacological effects, indications, adverse effects).
38. Antihypertensive drugs, acting on renin-angiotensin-aldosterone system (drugs, mechanism of action, pharmacological effects, indications, adverse effects).
39. Diuretics (classification based on localization and mechanism of action, pharmacological effects, indications, adverse effects).
40. Furosemide and hydrochlorothiazide (mechanism of action, pharmacological effects, indications, adverse effects).
41. Spironolactone and triamterene (mechanism of action, pharmacological effects, indications, adverse effects)
42. Drugs used to treat hyperlipidemias (classification based on mechanisms of action, adverse effects). Principles of statins action.
43. Drugs used in peptic ulcer (classification, mechanism of action, pharmacological effects, indications, adverse effects).
44. Gastric antisecretory drugs (classification, mechanism of action, adverse effects).
45. Antacids (classification, mechanism of action, adverse effects).
46. Antiemetic drugs (classification, mechanism of action, pharmacological effects, indications).
47. Drugs acting on GI tract tone and motility (classification, mechanism of action, pharmacological effects, indications, adverse effects)
48. Laxatives (classification, mechanism of action, indications, adverse effects).
49. Drugs acting on the tone and contractility of uterus (classification, mechanism of action, pharmacological effects, indications, adverse effects).
50. Drugs used in anemia (classification based on mechanism of action, indications, adverse effects).
51. Drugs inhibiting platelet aggregation (antiplatelet drugs) (classification, mechanism of action, pharmacological effects, indications, adverse effects).
52. Drugs inhibiting blood coagulation (anticoagulants) (classification, mechanism of action, pharmacological effects, indications, adverse effects). Anticoagulant antagonists.

53. Drugs affecting fibrinolysis (fibrinolytics and inhibitors of fibrinolysis) (classification, mechanism of action, pharmacological effects, indications, adverse effects).
54. Insulin (classification by duration of action, mechanism of action, pharmacological effects, routes of administration, indications, adverse effects).
55. Drugs used to treat diabetes mellitus of type 2 (classification, mechanism of action, pharmacological effects, indications, adverse effects).
56. Thyroid and antithyroid drugs (drugs, mechanism of action, pharmacological effects, indications, adverse effects).
57. Glucocorticosteroids (classification by route of administration, mechanism of action, pharmacological effects, indications, adverse effects).
58. Nonsteroidal anti-inflammatory drugs (classification, mechanism of action, pharmacological effects, indications, adverse effects).
59. Drugs used to treat hypersensitivity reactions of immediate type (classification, mechanism of action, pharmacological effects, indications, adverse effects).
60. Blockers of histamine H₁-receptors (classification, mechanism of action, pharmacological effects, indications, adverse effects).
61. General principles of antimicrobial chemotherapy.
62. Immunosuppressive and immunomodulating drugs (drugs, mechanism of action, pharmacological effects, indications, adverse effects).
63. Antibiotics: classifications based on mechanisms of action, spectrum and activity. Classification of adverse effects.
64. Penicillins (classification, spectrum, activity, mechanism of action, indications, adverse effects).
65. Biosynthetic penicillins (classification, spectrum, activity, mechanism of action, indications, adverse effects).
66. Semi-synthetic penicillins (classification, spectrum, activity, mechanism of action, indications, adverse effects).
67. Cephalosporins (classification, spectrum, activity, mechanism of action, indications, adverse effects).
68. Carbapenems and monobactams (drugs, spectrum, activity, mechanism of action, indications, adverse effects).
69. Glycopeptides and lincosamides (drugs, spectrum, activity, mechanism of action, indications, adverse effects).
70. Macrolides and azalides (drugs, spectrum, activity, mechanism of action, indications, adverse effects).
71. Aminoglycosides (classification, spectrum, activity, mechanism of action, indications, adverse effects).
72. Tetracyclines (drugs, spectrum, activity, mechanism of action, indications, adverse effects).
73. Synthetic antimicrobial drugs from fluoroquinolone group (classification, spectrum, activity, mechanism of action, indications, adverse effects).
74. Synthetic antimicrobial drugs from sulfonamide group (classification, spectrum, activity, mechanism of action, indications, adverse effects).
75. Synthetic antimicrobial drugs from nitroimidazole and nitrofurane group (drugs, spectrum, activity, mechanism of action, indications, adverse effects).
76. Drugs used to treat tuberculosis (classification, mechanism of action, adverse effects)
77. Antiviral drugs (classification by indications).
78. Antifungal drugs (classification by indications).

List of drugs for pharmacological characteristic.

Acetaminophen (Paracetamol)	Domperidone	Neostigmine
Acetylcysteine	Doxazosin	Nifedipine
Acetylsalicylic acid	Doxycycline	Nitroglycerin
Acyclovir	Enalapril	Omeprazole
Amiodarone	Epinephrine	Ondansetron
Amitriptyline	Gentamicin	Oxitocin
Amlodipine	Glibenclamide	Penicillin G (Benzylpenicillin-sodium)
Amoxicillin	Haloperidol	Phenylephrine
Atropine	Heparin	Pilocarpine
Azitromicin	Hydrochlorothiazide	Prednisolone
Beclomethasone	Ibuprofen	Prenoxdiazine
Bisoprolol	Indapamide	Propranolol
Carbamazepine	Insulin	Ranitidine
Carvedilol	Ipratropium	Rivaroxaban
Celecoxib	Ketamine	Salbutamol
Cefotaxime	Levodopa	Simvastatin
Chlorpromazine	Lidocaine	Spironolactone
Ciprofloxacin	Losartan	Terbinafine
Clonidine	Loperamide	Tramadol
Clopidogrel	Loratadine	Fluconazole
Clozapine	Metformin	Fluoxetine
Co-trimoxazole	Metoprolol	Furosemide
Diazepam	Morphine	Vancomycin
Diclofenac	Metoclopramide	Verapamil
Digoxin	Metronidazole	Warfarin
Diphenhydramine	Moxifloxacin	Xylometasoline
Dobutamine	Nadroparin	Zolpidem

Pharmacological characteristic includes pharmacological group, main therapeutical and adverse effects and their mechanism, indications, contraindications and restrictions for drug use in clinical practice.