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Full-time consultations schedule and place according to the schedule of the department.

On-line consultations, schedule and place by prior arrangement with the teacher.

Location: classes are held on the base of the polyclinic Government Institution "L.T.Malaya Therapy National Institute of the National Academy of Medical Sciences of Ukraine" (GI "L.T.Mala NIT NAMSU") (Lyubov Malaya Avenue, 2A, Kharkiv, Kharkiv region, 61039)

INTRODUCTION

The syllabus of the discipline "Clinical Pharmacology" is compiled in accordance with the educational-professional program (hereinafter - EPP) 221 "Dentistry" and the Standard of Higher Education of Ukraine (hereinafter - the Standard), the second (master's) level, field of knowledge 22 "Health".

The program of the course determines the prerequisites for access to learning, orientation and the main focus of the program, the amount of ECTS credits required to obtain an educational master's degree, a list of general and special (professional) competencies, the normative and variable content of specialist training, formulated in terms of learning outcomes and control requirements quality of higher education.

The department accepts qualified students of any race, national or ethnic origin, gender, age, persons with special needs, any religion, sexual orientation, gender identity, veteran status or marital status for all rights, privileges, programs and activities provided to university students.

Page of educational course in Moodle:

<http://distance.KhNMU.edu.ua/course/view.php?id=4146>

Description of the discipline (abstract).

The course in clinical pharmacology is designed for 4th year medical students. During the course, practical classes are held, covering a wide range of important medical issues. Clinical pharmacology includes the studying of medicinal agents and their group affiliation, their main mechanisms of action, features of pharmacokinetics, pharmacodynamics, manifestations of side effects and symptoms of overdose, the main indications for use and interaction with other drugs.

Knowledge of clinical pharmacology is based on both experimental data and theoretical positions of pharmacology and other medical and biological sciences, and on the actual material of clinical disciplines.

Discipline status: the main format of the discipline is mixed - the course, which is supported in the Moodle system, teaching the course, provides for a combination of traditional forms of classroom studying with elements of distance studying, which uses available information interactive technologies (Google Meet, Google Teams, ZOOM, Moodle), resident and correspondence counseling.

The subject of study of the discipline

The subject of the discipline is drugs and their relationship with the human organism.

Interdisciplinary links

Clinical pharmacology as a discipline:

a) is based on the study by students of medical biology, normal and pathological physiology, microbiology, medical chemistry, pharmacology, clinical

disciplines, laboratory and functional diagnostics and is integrated with these disciplines;

b) lays the foundations for students to study clinical disciplines, which involves the integration of teaching with these disciplines and the formation of skills to apply knowledge of clinical pharmacology in the process of further study and professional activities;

c) lays the foundations for the formation of ideas about the general principles of drug therapy of major diseases and their individual manifestations.

Prerequisites

The study of the discipline involves the prior mastering of credits in normal anatomy, normal physiology, pathological physiology, medical genetics, biophysics, biochemistry, clinical biochemistry, microbiology, virology and immunology, infectious diseases, pharmacology, internal medicine, resuscitation, principles of evidence-based medicine.

Postrequisites.

Internal medicine, emergency and urgent medical care, infectious diseases, clinical immunology, clinical allergology should be studied together with the discipline.

1. The aim of teaching the discipline " Clinical Pharmacology "

1.1 The aim of teaching the discipline "Clinical Pharmacology" is to train specialists who have sufficient theoretical knowledge and practical skills to conduct rational drug therapy in a particular patient, have a methodology for selecting the most cost-effective and safe drugs and their combinations, taking into account individual characteristics, the course and form of the disease, the presence of concomitant pathology, based on evidence-based medicine.

1.2 The main objectives of the discipline "Clinical Pharmacology" are the acquisition by students of competencies in accordance with the general and professional competencies of the educational-professional program "Dentistry" of the second (master's) level of higher education in 221 Dentistry qualification Master of Medicine: prevention of complications of diseases of the internal system organs, determination of emergency medical care tactics, patient management tactics in comorbid pathology, medical records, ability to apply knowledge in practical situations, understanding of subjective and professional activity, ability to adapt and act in new situations, acceptance in informed decision, ability to work in a team, act socially responsibly and consciously.

1.3 Results of the education.

The course contains the main aspects of training a future doctor by "Dentistry" specialty.

According to the educational program for the academic course "Clinical pharmacology", an applicant for higher education will acquire theoretical

knowledge, methodological education, practical skills in the following areas:

- rational drug therapy in a particular patient,
- methodology for selecting the most effective and safe drugs, as well as their combinations, taking into account individual characteristics, course and form of the disease, the presence of comorbidities, based on evidence-based medicine.
- determination of principles and nature of treatment and prevention of complications of internal organs diseases,
- principles of drugs interactions,
- clinical pharmacology of emergencies in dentistry practice.

1.3.1. Integral competencies.

The ability to solve typical and complex specialized tasks and practical problems in professional activities in the field of health care, or in the learning process, involves research and(or) implementation of innovations and is characterized by the complexity and uncertainty of conditions and requirements. The ability of an individual to organize an integral humanitarian educational space, to form a single image of culture or a holistic picture of the world.

Common competencies

ability to apply the acquired knowledge, skills and understanding to solve typical problems of the doctor, the scope of which is provided by lists of syndromes and symptoms, diseases, emergencies, laboratory and instrumental research, medical manipulations; collection of patient information; evaluation of survey results, physical examination, laboratory and instrumental research data; establishing a preliminary clinical diagnosis of the disease; determining the nature, principles of treatment of diseases; diagnosing emergencies, determining the tactics of emergency medical care; the formation of a specialist with appropriate personal qualities, who adheres to the code of ethics of the doctor.

Special competencies

ability to establish a preliminary and clinical diagnosis of the disease, the ability to determine the principles and nature of treatment of diseases, the ability to maintain medical records.

1.3.2 The study of the discipline ensures that students acquire the following program learning outcomes

PRN 1– acquisition by a person of general and special fundamental and professionally-oriented knowledge, skills, competencies, necessary to perform typical professional tasks related to it activities in the medical field in the relevant position

PRN 2 - knowledge of psychophysiological features of the person, health human health, disease prevention, treatment

human health

Application of knowledge and understanding:

PRN 3 - the ability to apply the acquired knowledge, skills and understanding to solve typical problems of the doctor, the scope of which is provided by lists of syndromes and symptoms, diseases,

emergencies, laboratory and instrumental research,

medical manipulations

PRN 4 - collection of patient information

PRN 5 - evaluation of survey results, physical examination, laboratory and instrumental research data

PRN 6 - establishing a preliminary clinical diagnosis of the disease

PRN 7 - determining the nature, principles of treatment of diseases.

1.3.3 The study of the discipline provides students with the following social skills (soft skills)

Ability to abstract thinking, analysis and synthesis, the ability to learn and be modernly trained. Ability to apply knowledge in practical situations. Knowledge and understanding of the subject area and understanding of professional activity. Ability to adapt and act in a new situation. Ability to make an informed decision; work in a team; interpersonal skills. Ability to communicate in the state language both orally and in writing; ability to communicate in a foreign language. Skills in the use of information and communication technologies. Definiteness and persistence in terms of tasks and responsibilities. Ability to act socially responsibly and consciously.

2. Information volume of the discipline

Name of indices	Branch of knowledge, direction of training, educational-qualification level	Characteristics of the course	
		Day tuition	
Number of credits – 1	Direction of training 22 «Health Protection»	Normative component	
Total number of hours - 30	Specialty 221 «Dentistry»	Year of study:	
		IV-th	
		Term	
		VII-th	VIII-th
Number of hours for day tuition: Practical classes – 20, Independent work - 10	Educational-qualification level: «second (master's) level»	Lectures	
		0 hours	
		Practical classes	
		20 hours	
		Independent work	
10 hours			
		Type of control: Credit	

2.1 Description of the discipline

2.2.1 Lectures- not provided by the program.

2.2.2 Seminars- not provided by the program.

2.2.3 Practical classes.

№	The topic practical lesson	Hours	Education methods	Methods of control
1	Subject and tasks of clinical pharmacology. The main dispositions of pharmacokinetics and pharmacodynamics. Interaction of medication, types of side effects, complications of drug therapy	2	story- explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
	Clinico-pharmacological characteristics of medications that affect the vascular tone	3	story- explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
2.	Clinico-pharmacological characteristics of antianginal and antiischemic medical agents	2	story- explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
	Clinical pharmacology of drugs that affect blood clotting (anti-	3	story- explanation,	oral examination

	platelet drugs, anticoagulants, fibrinolytics, coagulants)		conversation, illustration, demonstration, presentation, videos, educational video films discussion	(individual and frontal); written survey; test control; creative tasks
3.	Clinico-pharmacological characteristics of antibacterial and antimicrobial medical agents	3	story-explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
	Clinical pharmacology of anti-inflammatory drugs (corticosteroids and non-steroidal)	2	story-explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
4.	Clinico-pharmacological characteristics of local anesthetics and antiseptics.	3	story-explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
	Clinico-pharmacological characteristics of antiallergic medications.	1	story-explanation, conversation, illustration, demonstration, presentation, videos,	oral examination (individual and frontal); written survey; test control;

			educational video films discussion	creative tasks
	Final lesson, the protection of "Protocol efficiency..."	1	story-explanation, conversation, illustration, demonstration, presentation, videos, educational video films discussion	oral examination (individual and frontal); written survey; test control; creative tasks
Total		20		

2.2.4 Labs- not provided by the program.

2.2.5 Independent work of students:

Independent work	Hours	Education methods	Methods of control
Independent work of students: Preparation for practical classes Writing an abstract	10	Independent work with literature and Internet resources	oral examination (individual and frontal); written survey; test control; creative tasks

3. Assessment Policy

3.1 Current training activity. Evaluation of the success of education of students is carried out on the basis of the current "Instructions for evaluating the educational activities of students of KNMU"

Teachers shall ensure that each master receives the necessary competences in the areas covered by the practical classes. Mastering the topic (current control) is controlled by practical lessons according to specific goals, tests, solution of situational tasks, control of the acquisition of practical skills.

When assessing the mastering of each discipline subject (current training activity - CTA) and the final session (software), the master is awarded an assessment according to the traditional 4-point system: "excellent", "good", "satisfactory" and "unsatisfactory".

Score from discipline. The final lesson (FL) is conducted according to the program of the discipline during the semester on a schedule, during the classes. Assessment of the discipline is given to the master at the last (final) class. The total score for the CTA and the final lesson (FL) is defined as the arithmetic mean of the traditional scores for each lesson and the software, rounded to 2 decimal places (to

the nearest hundredths), which are converted into points according to the "Instructions for Assessment of Master Learning Activities" "Using Table or the average score (up to one hundredth) and its conversion to ECTC points is automatically obtained by the teacher through from the Electronic journal. The minimum number of points that a master must earn for his / her current activity while studying the discipline is 120 points, and the maximum number of points is 200 points.

The maximum number of points that a master can gain in studying the discipline is - 200, the minimum is 120 points. The type of final control is credit.

After completing the teaching of the discipline the master gets a credit.

Assessment of masters' independent work. Independent work of masters, which is provided by the topic of the lesson along with the classroom work, is assessed during the ongoing control of the topic at the relevant lesson.

**Recalculation of the average for current activity in a multi-scale scale
(for disciplines ending with credit)**

4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale
5	200	4.22-4,23	169	3.45-3,46	138
4.97-4,99	199	4.19-4,21	168	3.42-3,44	137
4.95-4,96	198	4.17-4,18	167	3.4-3,41	136
4.92-4,94	197	4.14-4,16	166	3.37-3,39	135
4.9-4,91	196	4.12-4,13	165	3.35-3,36	134
4.87-4,89	195	4.09-4,11	164	3.32-3,34	133
4.85-4,86	194	4.07-4,08	163	3.3-3,31	132
4.82-4,84	193	4.04-4,06	162	3.27-3,29	131
4.8-4,81	192	4.02-4,03	161	3.25-3,26	130
4.77-4,79	191	3.99-4,01	160	3.22-3,24	129
4.75-4,76	190	3.97-3,98	159	3.2-3,21	128
4.72-4,74	189	3.94-3,96	158	3.17-3,19	127
4.7-4,71	188	3.92-3,93	157	3.15-3,16	126
4.67-4,69	187	3.89-3,91	156	3.12-3,14	125
4.65-4,66	186	3.87-3,88	155	3.1-3,11	124
4.62-4,64	185	3.84-3,86	154	3.07-3,09	123
4.6-4,61	184	3.82-3,83	153	3.05-3,06	122
4.57-4,59	183	3.79-3,81	152	3.02-3,04	121
4.54-4,56	182	3.77-3,78	151	3-3,01	120
4.52-4,53	181	3.74-3,76	150	Less 3	Not enough
4.5-4,51	180	3.72-3,73	149		
4.47-4,49	179	3.7-3,71	148		
4.45-4,46	178	3.67-3,69	147		
4.42-4,44	177	3.65-3,66	146		
4.4-4,41	176	3.62-3,64	145		

4.37-4,39	175	3.6-3,61	144
4.35-4,36	174	3.57-3,59	143
4.32-4,34	173	3.55-3,56	142
4.3-4,31	172	3.52-3,54	141
4,27-4,29	171	3.5-3,51	140
4.24-4,26	170	3.47-3,49	139

**Correspondence of discipline
assessment in points assessment
in ECTS and traditional
assessment**

Assessment of discipline in points	Assessment on the ECTS scale	Traditional assessment from the discipline
180–200	A	5
160–179	B	4
150–159	C	4
130–149	D	3
120–129	E	3
Less than 120	F, FX	2

3.2. Questions for credit

1. Clinical pharmacodynamics, definition, place and role in the choice of pharmacotherapy.
2. Clinical pharmacokinetics, definitions, basic concepts, role in the choice of pharmacotherapy.
3. Classification of lipid-lowering drugs.
4. Mechanism of action, pharmacokinetics and pharmacodynamics, indications and contraindications to the appointment of statins.
5. Mechanism of action, pharmacokinetics and pharmacodynamics, indications and contraindications to the appointment of fibrates.
6. Omega-3-polyunsaturated fatty acids. Mechanism of action. Features of application.

7. Classification of dyslipidemias. Differentiated approach to the use of lipid-lowering drugs.
8. Groups of drugs related to antianginal and antiischemic drugs.
9. Mechanism of action, pharmacological effects, indications and contraindications to the appointment of nitrates.
10. Mechanism of action, pharmacological effects, indications and contraindications to the appointment of beta-blockers.
11. Mechanism of action, pharmacological effects, indications and contraindications to the appointment of calcium channel blockers.
12. Classification of calcium channel blockers. Features of application. Dosage.
13. Classification of beta-blockers. Features of application. Dosage.
14. Antiplatelet drugs. Classification. Mechanisms of action. Dosage methods.
15. Thrombolytic agents. Indications and contraindications to thrombolysis. Schemes of appointment.
16. Anticoagulants. Classification. Mechanisms of action. Side effects.
17. Principles of drug selection for the treatment of angina pectoris, acute myocardial infarction.
18. Classification of antihypertensive drugs.
19. Differentiated approach to the appointment of antihypertensive therapy in the presence of comorbidities (diabetes, bronchial asthma, pregnancy, old age, pheochromocytoma, etc.).
20. The mechanism of antihypertensive action, side effects when prescribing calcium channel blockers. Principles of dosing.
21. The mechanism of antihypertensive action, side effects when prescribing beta-blockers. Principles of dosing.
22. The mechanism of antihypertensive action, pharmacological effects, indications and contraindications, side effects when prescribing angiotensin-converting enzyme inhibitors. Principles of dosing.
23. The mechanism of antihypertensive action, pharmacological effects, indications and contraindications, side effects when prescribing angiotensin II receptor antagonists. Principles of dosing.
24. Principles of combined use of antihypertensive drugs.
25. Differentiated choice of drugs for the treatment of hypertensive crises.
26. Classification of antiarrhythmic drugs.
27. Differentiated approach to the appointment of antiarrhythmic drugs.
28. Classification of cardiac glycosides. Principles of dosing. Cardiac and noncardiac effects of cardiac glycosides. Indications for use.
29. Clinical and ECG signs of cardiac glycoside intoxication. Principles of treatment of intoxication with cardiac glycosides.
30. Differentiated choice of drugs for the treatment of cardiac asthma, pulmonary edema.
31. Non-glycosidic positive inotropic drugs. Indications for use.
32. Classification of diuretic drugs.
33. Mechanism of action, pharmacokinetics and pharmacodynamics, indications and contraindications to the appointment of loop diuretics.

34. Mechanism of action, pharmacokinetics and pharmacodynamics, indications and contraindications for thiazide and thiazide-like diuretics. Principles of dosing.
35. Mechanism of action and pharmacological effects of potassium-sparing diuretics. Indications and contraindications to use. Dosing mode.
36. Differentiated approach to the choice of diuretic drug depending on the presence of comorbidities (effects on lipid and carbohydrate metabolism).
37. Classification of drugs that affect bronchial patency.
38. Mechanism of action, pharmacokinetics, indications and contraindications to the appointment of short-acting beta-2-agonists. Principles of dosing.
39. Mechanism of action, pharmacokinetics, indications and contraindications to the appointment of long-acting beta-2 agonists. Principles of dosing.
40. Methylxanthines, mechanism of action, pharmacological effects, side effects. Principles of dosing.
41. Glucocorticosteroids. Pharmacokinetics and pharmacodynamics. Advantages of inhaled glucocorticoids. Dosage regimens.
42. Side effects that occur with long-term use of glucocorticosteroids
43. Mucolytic drugs. Pharmacokinetics and pharmacodynamics. Dosage regimens.
44. Interaction of drugs. See. Clinical examples.
45. Types of side effects when using drugs.
46. Clinical and pharmacological classification of nonsteroidal anti-inflammatory drugs.
47. Mechanism of action, pharmacological effects of nonsteroidal anti-inflammatory drugs.
49. Modern principles of selection of antimicrobial drugs.
50. Adverse effects of antibacterial therapy, their prevention and treatment.
51. Classification, spectrum of activity, mechanism of action, features of clinical use of penicillins. Principles of dosing.
52. Classification, spectrum of activity, mechanism of action, features of clinical use of cephalosporins. Principles of dosing.
53. Spectrum of activity, mechanism of action, features of clinical application of carbapenems. Principles of dosing.
54. Classification, spectrum of activity, mechanism of action, features of clinical use of aminoglycosides. Principles of dosing.
55. Classification, spectrum of activity, mechanism of action, features of clinical application of macrolides. Principles of dosing.
56. Classification, spectrum of activity, mechanism of action, features of clinical use of fluoroquinolones. Principles of dosing.
57. Spectrum of activity, mechanism of action, features of clinical application of glycopeptides. Principles of dosing.
58. Spectrum of activity, mechanism of action, features of clinical application of nitroimidazoles and nitrofurans. Principles of dosing.
59. Clinical and pharmacological characteristics of drugs that stimulate gastrointestinal motor function. Principles of dosing.
60. Clinical and pharmacological characteristics of drugs that inhibit the motor-evacuatory function of the gastrointestinal tract. Principles of dosing.

61. Drugs with antispasmodic activity, mechanisms of action, pharmacological properties, indications and contraindications for use, principles of application.
62. Classification of drugs with antisecretory activity.
63. Clinical and pharmacological characteristics of proton pump inhibitors. Principles of dosing.
64. Clinical and pharmacological characteristics of H₂-blockers of histamine receptors. Principles of dosing.
65. Clinical and pharmacological M-cholinoblockers. Principles of dosing.
66. Antacids. Classification, pharmacokinetics and pharmacodynamics. Principles of clinical application and dosage.
67. Gastrocytoprotectors. Classification, pharmacokinetics and pharmacodynamics, dosing principles.
68. Hepatoprotectors. Classification. Pharmacokinetics and pharmacodynamics. Indications and contraindications to the appointment. Principles of dosing.
69. Choleric and cholekinetics. Clinical and pharmacological features. Indications and contraindications to the appointment. Principles of dosing.
70. Polyenzyme substitution therapy. Pharmacological features. Indications for use. Side effects. Principles of dosing.
71. Antienzyme agents. Classification. Pharmacological features. Indications for use. Principles of dosing.
72. Classification, mechanism of action, pharmacokinetics, indications and contraindications for use, side effects of antiallergic drugs. Principles of dosing.

3.3. Control questions

Consists in methodical recommendations from each lesson.

The list of drugs that are submitted for the final lesson in clinical pharmacology

Calcium channel blockers

Amlodipine	Pills 5 or 10 mg
Nifedipine	Pills 10 mg
Verapamil	Pills 40 or 80 mg; Solution (1 ml – 2,5 mg)
Diltiazem	Pills 60 or 90 mg

Adrenergic receptor blockers (alpha and beta)

Bisoprolol	Pills 5 or 10 mg
Metoprolol	Pills 50 or 100 mg
Nebivolol	Pills 5 mg
Carvedilol	Pills 12,5 or 25 mg
Labetalol	Pills 100 or 200 mg; Solution (1 ml – 10 mg)

Doxazosin	Pills 2, 4 or 8 mg
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ACE inhibitors

Captopril	Pills 25 or 50 mg
Enalapril	Pills 5, 10 mg; Solution (1 ml – 1,25 mg)
Lisinopril	Pills 10 or 20 mg
Perindopril	Pills 4 mg
Ramipril	Capsulas 2,5 or 5 mg

Angiotensin II receptor antagonists

Valsartan	Capsulas 80 or 160 mg
Candesartan	Pills 4, 8 or 16 mg
Losartan	Pills 50 mg
Telmisartan	Pills 40 or 80 mg

Combined antihypertensive drugs

Enalapril/Hydrochlorothiazide	Pills 10/25 mg
Lisinopril/Hydrochlorothiazide	Pills 10/12,5 mg
Lisinopril/Amlodipine	Pills 10/5 mg

Central sympatholytics

Alpha-methyldopa	Pills 250 mg
Clonidine	Pills 75 or 100 micrograms; Solution (1 ml – 150 micrograms)

Nitrates and synonyms

Isosorbide 5-mononitrate	Pills 10, 20 or 40 mg
Isosorbide dinitrate	Pills 20 or 40 mg; Solution (1 ml – 1 mg)
Nitroglycerin	Pills 500 micrograms; Solution (1 ml – 5 mg)
Molsidomine	Pills 2 or 4 mg

F-channel blockers

Ivabradine	Pills 5 or 7,5 mg

Antiarrhythmic drugs

Amiodarone	Pills 200 mg; Solution (1 ampulla – 150 mg)
Aethacizinum	Pills 50 mg
Lidocaine	Solution (1 ml – 10, 20, 40 ađo 100 mg)
Propafenone	Pills 150 or 300 mg; Solution (1 ml – 3,5 mg)
Procainamide	Pills 250 micrograms; Solution (1 ml – 100 mg)
Sotalol	Pills 80 or 160 mg; Solution (1 ml – 10 mg)

Cardiac glycosides and non-glycosidic cardiotoxic drugs

Digoxin	Pills 100 or 250 micrograms; Solution (1 ml – 125 micrograms)
Corgliconum	Solution (1 ml- 600 micrograms)
Dobutamine	Dry substance for injection (1 ampulla – 250 mg)
Dopamine	Solution (1 ml- 5 mg)

Hypolipidemic drugs

Atorvastatin	Pills 10 or 20 mg
Rosuvastatin	Pills 10 or 20 mg
Simvastatin	Pills 10 or 20 mg
Fenofibrate	Capsulas 200 mg

Diuretic drugs

Hydrochlorothiazide	Pills 25, 50 or 100 mg
Indapamidum	Pills 1,5 or 2,5 mg
Spirolactone	Pills 25, 50 or 100 mg
Torasemide	Pills 10, 20, 50 or 100 mg; Solution (1 ml – 10 mg)
Furosemide	Pills 40 mg; Solution (1 ml – 10 mg)
Moduretic	Pills 5/50 mg
Mannitol	Solution for intravenous administration (1 ml-150 mg)

Antiallergic drugs

Ketotifen	Pills 1 mg
Cromolin sodium	Capsulas 100 mg
Diphenhydramine	Pills 20 or 50 mg; Solution(1 ml – 10 mg)
Clemastine	Pills 1 mg; Solution(1 ml – 1 mg)
Loratadine	Pills 10 mg
Fexofenadine	Pills 120 or 180 mg
Chloropyramine	Pills 25 mg; Solution (1 ampulla – 20 mg)
Cetirizine	Pills 10 mg

Drugs that affect bronchial patency

Epinephrine	Solution (1 ml- 1 mg)
Ambroxol	Pills 30 mg; Solution (1 ml – 7,5 mg)
Acetylcysteine	Pills 100 mg; Solution (1 ml – 100 mg)
Euphyllin	Pills 150 mg; Solution for intravenous administration (1 ml – 24 mg)
Salbutamol	Pills 2, 4 or 8 mg); Aerosol for inhalation (1 доза – 100 micrograms)
Salmeterol	Aerosol for inhalation(1 доза – 25 micrograms)
Fenoterol	Pills 5 mg; Aerosol for inhalation (1 доза – 100 micrograms)
Tiotropium bromide	powder for inhalation(1 Capsulas-18 micrograms)
Beclometasone	Aerosol for inhalation(1 доза – 50, 100 micrograms)
Fluticasone	Aerosol for inhalation(1 доза – 25, 50, 125 micrograms)
Montelukast	Pills 5 or 10 mg

Anti-inflammatory drugs

Hydrocortisone	Suspension for injection (1 bottle-125 mg)
Dexamethasone	Pills 4 mg; Solution (1 ml – 4 mg)
Prednisolone	Pills 5 mg; Solution (1 ml – 30 mg)
Diclofenac sodium	Pills 50 or 100 mg; Solution (1 ml – 25 mg)
Meloxicam	Pills 7,5 or 15 mg
Nimesulide	Pills 100 mg

Acetaminophen	Pills 325 or 500 mg
Celecoxib	Capsulas 100 or 200 mg
Methylprednisolone	Pills 4, 16 or 32 mg
Chloroquine	Pills 250 mg; Solution (1 ml – 50 mg)

Antibacterial drugs

Azithromycin	Pills 500 mg
Amicacin	Solution(1 ml – 50, 125 or 250 mg)
Amoxicillin	Pills 500 mg; dry substance for intravenous injection(1 bottle – 500 mg)
Amoxicillin/Clavulanic acid	Pills 500/125 mg; Dry substance for injection (1 bottle -1000/200 mg)
Benzylpenicillin	Dry substance for injection (1 bottle -1000000 OД)
Vancomycin	Dry substance for injection (1 bottle -500 mg)
Gentamicin	Solution(1 ml- 40 mg)
Doxycycline	Pills 100 or 200 mg; dry substance for injection (1 bottle – 100 mg)
Ertapenem	Dry substance for injection (1 bottle-1000 mg)
Imipenem	Dry substance for injection (1 bottle-500 mg)
Clarithromycin	Pills 250 mg; dry substance for injection (1 bottle – 500 mg)
Clindamycin	Capsulas 150 or 300 mg; Solution (1 ml – 150 mg)
Levofloxacin	Pills 250 or 500 mg
Linezolid	Pills 400 or 600 mg
Moxifloxacin	Pills 400 mg
Rifampicin	Pills 150 or 30 mg
Streptomycin	powder for injection(1 bottle-1000 mg)
Co-trimoxazolium	Pills 480 mg
Sulfasalazin	Pills 500 mg
Tetracycline	Capsulas 250 mg
Fluconazole	Capsulas 50 or 100 mg
Cefepim	Dry substance for injection (1 bottle-500 or 1000 mg)
Cefotaxime	Dry substance for injection (1 bottle-500 or 1000 mg)

Ceftriaxone	Dry substance for injection (1 bottle – 250 or 500 mg)
Cefuroxim	Pills 250 or 500 mg; dry substance for injection (1 bottle – 750 or 1500 mg)
Ceftazidime	Dry substance for injection (1 bottle-500 or 1000 mg)
Ciprofloxacin	Pills 500 mg; Solution(1 ml – 2 mg)

Antiviral drugs

Aciclovir	Pills 200, 400 or 800 mg; dry substance for injection (1 ampulla – 250 mg)
Interferon alpha	Solution(1 ml- 1000000, 3000000, 6000000 IU)
Remantadin	Pills 50 mg
Ribavirin	Dry substance for inhalation(1 bottle-6 r)

Drugs that affect gastrointestinal function

Atropine sulphate	Solution (1 ml-1 mg)
Bismuth subcitrate	Pills 120 mg
Domperidone	Pills 10 mg
Drotaverine hydrochloride	Pills 40 mg; Solution (1 ml – 20 mg)
Lactulose	Cipon (15 ml – 10 r)
Loperamide	Pills 2 mg
Metoclopramide	Pills 5 or 10 mg; Solution (1 ml – 5 mg)
Omeprazole	Capsulas 20 mg; dry substance for injection (1 bottle – 40 mg)
Pantoprazole	Capsulas 40 mg
Rabeprazole	Pills 10 or 20 mg
Pirenzepine	Pills 25 or 50 mg; Solution(1 ml – 5 mg)
Sucralfate	Pills 1000 mg
Famotidine	Pills 20 or 40 mg; dry substance for injection (1 bottle – 20 mg)
Almagel	Suspension for internal use (1 ml-100 mg)

Drugs that affect the functions of the hepatobiliary system

Ademetionine	Pills 400 mg; dry substance for injection (1 bottle – 400 mg)
Essential phospholipids	Capsulas 300 mg; ampoules 5 ml

Octreotide	Solution(1 ml – 50 or 100 micrograms)
Pancreatin	Capsulas 150 or 300 mg
Silymarin	Drage 35 mg; Capsulas 70 mg
Ursodeoxycholic acid	Capsulas 250 mg
Holagogum	Capsulas 40 mg

Drugs that affect the coagulation system

Alteplase	Dry substance for injection (1 bottle- 20 or 50 mg)
Aminocaproic acid	Solution (1 ml – 50 mg)
Acetylsalicylic acid	Pills 100 mg
Warfarin	Pills 2,5 or 3 mg
Vicasolum	Pills 15 mg; Solution (1 ml – 10 mg)
Heparin	Solution(1 ml – 5000 IU)
Etamsylate	Pills 250 mg; Solution(1 ml – 125 mg)
Enoxaparin sodium	Solution(1 ml – 100 mg)
Rivaroxaban	Pills 10 mg
Streptokinase	Dry substance for injection (1 bottle-100000 IU or 250000 IU)
Clopidogrel	Pills 75 mg

3.4. Individual tasks

Preparation for a practical lesson. Writing essays, preparing presentations on a particular topic.

Assessment of individual tasks of the masters is carried out under the conditions of the teacher's tasks (report of a lecture at a practical lesson, a report with a presentation at a practical lesson, a report at scientific and practical conferences of the department, university, writing abstracts, articles, participation in the All-Ukrainian Olympiad). Points (no more than 10) are added as an incentive extra point to the final grade for the current learning activity. The total amount of points for the current educational activity may not exceed 200 points.

3.5. Rules for appealing the assessment

According to the provision on the appeal of the results of the final control of students of KhNMU

http://files.KhNMU.edu.ua:8181/upload/redakt/doc_uchproc/polog_apel.pdf

4. Course politics.

Academic expectations of students and female students. Course requirements.

Students and female students are expected to attend all practical classes. If they missed classes, it is necessary to complete it (according to the schedule at the information stand of the department).

Written and homework assignments must be completed in full and on time, if students have questions, they can contact the teacher personally.

In order to achieve the learning goals and successfully complete the course, it is necessary: from the first day to join the work; read the material beforehand before considering it in a practical session; not to be late or miss classes; to come to the department dressed in a medical gown, to have replaceable shoes, to have a phonendoscope, a notebook, a pen; complete all necessary tasks and work daily; be able to work with a partner or as part of a group; seek help and receive it when you need it.

Practical classes

Active participation in the discussion in the classroom, students / female students should be ready to understand in detail the material, ask questions, express their point of view, discuss. During the discussion, the following are important:

- respect for colleagues,
- tolerance towards others and their experiences,
- sensitivity and impartiality,
- the ability to disagree with opinions, but respect the personality of the opponent,
- careful argumentation of your opinion and the courage to change your position under the influence of evidence,
- “I am” a statement when a person avoids unnecessary dressing up, describes his feelings and formulates his wishes based on his own thoughts and emotions,
- compulsory acquaintance with primary sources.

Creative approach in its various forms is encouraged. Students are expected to be interested in participating local, all-Ukrainian and international conferences, competitions and other events with a subject profile.

Students can discuss various tasks, but their implementation is strictly individual. Cheating, using various software tools, prompts, using a mobile phone, tablet or other electronic gadgets during the class for purposes not related to the educational process are not allowed. Students are not allowed to be late for practical classes.

Visiting patients during supervision in the hospital is possible, provided that students have the appropriate uniform.

Students with special needs can meet with the teacher or warn him before the start of classes, at the request of the student this can be done by the head of the

group. If you have any questions, please contact the teacher.

Students are encouraged to participate in scientific research and conferences on this topic.

All students of KhNMU are protected by the Regulation on the Prevention, Prevention and Management of Cases of Sexual Harassment and Discrimination at Kharkiv National Medical University, designed to determine an effective mechanism for resolving conflict situations related to discrimination and sexual harassment. This Regulation was developed on the basis of such regulatory legal acts of Ukraine: the Constitution of Ukraine; Law of Ukraine "On Education"; Law of Ukraine "On Higher Education"; Law of Ukraine "On the principles of preventing and combating discrimination in Ukraine"; Law of Ukraine "On ensuring equal rights and opportunities for women and men"; Convention for the Protection of Human Rights and Fundamental Freedoms; The Convention against Discrimination in Education; The Convention on the Elimination of All Forms of Discrimination against Women; General Recommendation No. 25 to article 4, paragraph 1, of the Convention on the Elimination of All Forms of Discrimination against Women; General Comment No. 16 (2005) "Exactly for men and women the right to enjoy economic, social and cultural rights" (Article 3 of the International Covenant on Economic, Social and Cultural Rights; UN Committee on Economic, Social and Cultural Rights) Recommendations on education in the spirit international understanding, cooperation and peace and education in the spirit of respect for human rights and fundamental freedoms (UNESCO) Concept of the State social program for ensuring equal rights and opportunities for women and men for the period until 2021. Kharkiv National Medical University provides education and employment free from discrimination, sexual harassment, intimidation or exploitation. The university recognizes the importance of confidentiality. All persons responsible for the implementation of this policy (employees / -these dean's offices, faculties, institutes and the Center for Gender Education, members of the student government and ethics committee, vice-rector for scientific and pedagogical work) respect the confidentiality of persons who report or are accused of discrimination or sexual harassment (excluding situations where legislation requires the disclosure of information and / or when disclosure of circumstances by the University is necessary to protect the safety of others).

KhNMU creates a space of equal opportunities, free from discrimination of any national, racial or ethnic origin, gender, age, disability, religion, sexual orientation, gender, or marital status. All rights, privileges, programs and activities that are granted to students / female students or university staff apply to all, without exception, subject to proper qualifications. The anti-discrimination policy and the policy of counteracting sexual harassment of KhNMU is confirmed by the Code of Corporate Ethics and the Charter of KhNMU.

Classroom Behavior (Basic "yes" and "no")

It is important for students to follow the rules of proper conduct at the university. These rules are general for everyone, they also apply to the entire faculty and staff, and do not fundamentally differ from generally accepted norms.

During classes it is not prohibited:

- to leave the audience for a short time if necessary and with the permission of the teacher;
- drink soft drinks;
- take pictures of presentation slides;
- actively participate in the lesson

Prohibited:

- to eat (except for persons whose special medical condition requires another - in this case, medical confirmation is required)
- to smoke, consume alcoholic and even low-alcohol drinks or drugs;
- to use obscene language or use words that offend the honor and dignity of colleagues and faculty;
- to play gambling;
- to damage the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter premises and territories)
- to make noise, shout or listen to loud music in classrooms and even corridors during class.

Occupational Safety and Health

At the first class of the course, the basic principles of labor protection will be explained by conducting appropriate instructions. It is expected that each and every one should know where the emergency exit closest to the audience is, where the fire extinguisher is located, how to use it, and the like.

The procedure for informing about changes in the Syllabus: the necessary changes in the Syllabus are approved by the methodological commission of the KHNMU on the problems of professional education of the surgical profile and are published on the website of the KhNMU, the website of the Clinical pharmacology department of the KHNMU.

5. Academic integrity.

The Department of Clinical Pharmacology and Internal Medicine maintains zero tolerance for plagiarism.

This position grounded at the requirements of Regulations on Academic Integrity and Ethics of Academic Relations at Kharkiv National Medical University

http://files.KNMU.edu.ua:8181/upload/redakt/doc_uchproc/polog_ad_etyka_text.pdf

Regulations on the Commission on Academic Integrity, Ethics and Conflict Management of KhNMU

http://files.KNMU.edu.ua:8181/upload/redakt/doc_uchproc/polog_komis_ad_text.pdf

ACADEMIC INTEGRITY:

[http://www.KhNMU.kharkov.ua/index.php?option=com_content&view=article&id=2520%3A2015-04-30-08-10-46&catid=20%3A2011-05-17-09-30-17&Itemid=40 & lang = uk](http://www.KhNMU.kharkov.ua/index.php?option=com_content&view=article&id=2520%3A2015-04-30-08-10-46&catid=20%3A2011-05-17-09-30-17&Itemid=40&lang=uk)

http://files.KhNMU.edu.ua:8181/upload/redakt/doc_uchproc/kodex_AD.docx

In the first lessons, informational events will be held on what exactly is considered plagiarism and how to correctly carry out an experimental scientific search.

6. Recommended literature

Basic

1. Клінічна фармакологія, 2021 / за ред. О.М. Біловола.- Нова книга, Вінниця 2021.-544с.
2. Компендиум 2017 – лекарственные препараты / д. ред. В.Н. Коваленко. – К.: ІУРІОН, 2017. – 2560 с. – ISBN 978-966-2066-71-5.
3. Клінічна фармакологія невідкладних станів у практиці стоматолога: навч. сіб. / О. М. Біловола, Л. Р. Боброннікова, І. І. Вакалюк та ін.; за ред. О. М. Біловола. – К.: Медицина, 2018. – 296 с.
4. A Textbook of Clinical Pharmacology and Therapeutics/DerekWaller AnthonySampson- Elsevier.-2017.-P.744 - ISBN: 9780702071676
5. Basic & Clinical Pharmacology.11th ed. Norwalk, Conn: Appleton and Lange, 2010.
6. ClinicalPharmacology.12th Edition/MorrisBrownPankaj,Sharma Fraz,Mir PeterBennett.-Elsevier.-2018-P.720- ISBN: 9780702073281

7. Information resources

1. Page of educational course in Moodle:
<http://distance.KNMU.edu.ua/course/view.php?id=4146>
2. <http://nbuv.gov.ua> - site of the National Library of Ukraine named after VI Vernadsky.
3. <http://korolenko.kharkov.com> - site of Kharkiv State Scientific Library named after VG Korolenko
4. Konoplyova EVK linear pharmacology. – 2015-
https://stud.com.ua/45145/meditsina/klinichna_farmakologiya

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