APPROVED
by the decision of the Academic Council
Institute of Medicine, Ecology
andPhysical culture
USU

Of"16" _May_ 2024, Protocol No.9/260
Chairman __ _ _ _ _V.V Mashin

nature, transcript of signature

"_16_" ___05_____ 2024

approved in the division that implements the OPOP in the Higher Education Institution

WORKING PROGRAM OF THE DISCIPLINE

Discipline	MEDICAL REHABILITATION
Faculty	Medical Center
Department	Neurology, Neurosurgery, Physical therapy, and physical therapy
Course	3

Direction (specialty)____31.05.01_____
code of the direction (specialty), full name

Orientation (profile/specialization) _31.05.01Medical
full name

Form of training_____full-time job

_____
full-time, part-time, part-time (specify only those that are being implemented)

Date of introduction to the educational process of USU: "01_"_09.---2024

The program was updated at the meeting of the department: minutes no. _ _ _ _ _ from _____ 20_____city of
The program was updated at the meeting of the department: minutes no. _ _ _ _ _ from _____ 20_____city of

Information about developers:

FULL NAME	Department	Position, academicdegree, title
MashinViktorVladimirovich	Department of Neurology, Neurosurgery and Medical Rehabilitation.	Zav. Department , Doctor of Medical Sciences, Professor
Abdelbagui Mahamat Abba Nana	Department of Neurology, Neurosurgery and Medical Rehabilitation.	Senior teacher

APPROVED	APPROVED
Head of the Department of Neurology, Neurosurgery and Medical Rehabilitation implementing the discipline	Head of the graduating Department hospital therapy
_____/V. V. Mashin/ *Signature* *transcript of signature* __16___"_____05_____2024	(_____/Vize -Khripunova M. A./ *Signature* *transcript of signature* "_16_____"__05_____2024

1. GOALS AND OBJECTIVES OF MASTERING THE DISCIPLINE:

Goals of mastering the discipline: "Medical rehabilitation":

Promote the development of a doctor's professional competence in the field of medical rehabilitation through the formation of a holistic view of its current capabilities, based on an understanding of the structure and essence of the rehabilitation process.

Promote the acquisition of knowledge and skills necessary to solve professional problems

Tasks of mastering the discipline:

- learn the basics of medical rehabilitation;
- study the principles of organization and operation of medical rehabilitation departments of medical institutions, medical rehabilitation centers, and health resorts;
- acquire knowledge and skills in the main methods of medical rehabilitation: physical therapy, physiotherapy;
- to study the basics of the following methods: reflexology, manual therapy, psychological rehabilitation, therapeutic nutrition;
- acquire knowledge and skills in evaluating the effectiveness of medical rehabilitation methods;
- master the rules for completing medical documentation;
- to acquire knowledge and skills in drawing up individual programs of medical rehabilitation at the inpatient, polyclinic, sanatorium - resort stages of medical rehabilitation for patients with the main types of pathologies;
- acquire knowledge and skills in the organization and operation of a multidisciplinary team in the conditions of the department and medical rehabilitation center;
- acquire knowledge and skills on medical supervision in medical rehabilitation;
- to form students ' readiness to use the acquired knowledge in their professional activities;

2. PLACE OF THE DISCIPLINE IN THE STRUCTURE OF OPOP:

2.1 The discipline "Medical rehabilitation" belongs to the Block "Variable disciplines" of the mandatory variable part of the main professional educational program of higher education in the specialty "31.05.01. Medical business", developed in accordance with the Federal State Educational Standard of Higher Education (FSES HE) for training highly qualified personnel, approved by the orderMinistry of Education and Science Russian Federation No. 95 of " 9 " February2016..

2.2. Requirements for the student's entrance knowledge, skills and competencies required for its study;

Physics and mathematics. Medical informatics. Medical Biophysics

Know:

Fundamentals of the use of physical factors for diagnosis and treatment: ultrasound, sound, electromagnetic waves, radionuclides, ionizing radiation.

Physical parameters that characterize the functional state of organs and tissues: mechanical, electrical, electromagnetic, optical.

Physical phenomena and processes underlying the vital activity of the body and their characteristics.

The most general biophysical patterns underlying the processes occurring in the body. Physical and chemical properties of biological tissues.

The main characteristics of factors affecting the body, biophysical mechanisms of such impact.

Physical and chemical essence of the processes occurring in a living organism at the molecular, cellular, tissue and organ levels.

Functional systems of the human body, their regulation and self-regulation when exposed to the external environment in normal and pathological conditions.
Mathematical methods of solving intellectual tasks and their application in medicine; the theoretical basis informatyki, collection, storage, retrieval, processing, transformation, and dissemination of information in medical and biological systems, the use of computer information systems in medicine and health; principles of operation and the device of the equipment used in medicine, the foundations of physical and mathematical laws that receives the mapping inmedicine.
Be able to:
use educational, scientific, popular science literature, the Internet for professional activities, work with equipment in accordance with safety regulations.

Biochemistry.
As a result of mastering the discipline, the student should: Know:
structure and biochemical properties of the main classes of biologically important compounds: proteins, nucleic acids, carbohydrates, lipids, vitamins;
main metabolic pathways of their transformation; enzymatic catalysis; basics of bioenergetics;
the role of cell membranes and their transport systems in metabolism in the human body;
chemical and biological essence of processes occurring at the molecular and cellular levels in the human body;
basic mechanisms of regulation of metabolic transformations of proteins, nucleic acids, carbohydrates, lipids;
Be able to:
use educational, scientific, popular science literature, and the Internet for professional activities;
perform test tasks in any form, solve situational problems based on theoretical knowledge.
Own:
basic technologies of information transformation: text and table editors; techniques of working on the Internet for professional activities;
medical and functional conceptual apparatus.

Anatomy.
As a result of mastering the discipline, the student should: Know:
fundamentals of anatomical terminology in Russian and Latin equivalents; general laws of the structure of the human body, structural and functional relationships of parts of the body;
anatomical and topographical relationships of organs and parts of the body in adults, children and adolescents;
basic details of the structure and topography of organs, their systems, and their main functions in different age periods;
possible variants of the structure, main anomalies and malformations of organs and their systems;
Be able to:
find and probe the main bone and muscle landmarks on the body of a living person, apply a projection of the main vascular-nerve bundles of areas of the human body; correctly name and demonstrate movements in the joints of the human body; use scientificliterature;
show organs, their parts and structural details in images obtained by various imaging methods (X-rays, computer and magnetic resonance imaging, etc.)строения
Own:
basic technologies of information transformation: independent work with educational literature on paper and electronic media, online resources on human anatomy.

Normal physiology.

As a result of mastering the discipline, the student should: Know:
basic properties and conditions of excitable tissues, mechanisms of bioelectric phenomena;
structural and functional properties and features of regulation of the processes of contraction of striated and smooth muscles;
the role of various departments and structures of the central nervous system in the regulation of somatic and visceral functions of the body. Reflex arcs with visceral and somatic components;
individual features of the organization and reflex activity of the autonomic nervous system, its participation in the formation of holistic behaviors;
mechanisms of functioning and principles of regulation of endocrine cells, endocrine glands and features of their interaction in conditions of purposeful behavior and pathology;
the blood system and its role in maintaining and regulating the body's homeostatic constants, blood functions, characteristics and functional features of physiological blood constants;
the main stages and indicators of the function of external respiration, the respiratory center and its structure, features of respiratory regulation under various loads;
the role of proteins, fats, carbohydrates, minerals, vitamins and water in ensuring the vital activity of the body;
physiological features of the regulation of metabolism and energy in the body under the influence of extreme environmental factors and professional activity; features and patterns of structural and functional organization of the functions of the gastrointestinal tract;
main stages of urine formation and mechanisms of their regulation; main mechanisms of regulation of heart activity, cardiac cycle;
physiological role of vascular system divisions, linear and volumetric velocity

blood flow, neurohormonal mechanisms of regulation of vascular tone and systemic hemodynamics;
features of the structural and functional organization of the microcirculatory bed of various regions of the body of a healthy person, transcapillary metabolism and its regulation;
the main morpho-functional features of the organization of various departments of sensory systems;
mechanisms of conditioned reflex formation and its inhibition, role in clinical practice, components of the functional system of a behavioral act;
the concept and classification of pain;
features of morpho-functional organization of nociceptive and antinociceptive systems;
mechanisms and features of the formation of the main functional systems of the body (maintaining a constant level of nutrients in the blood, blood pressure, temperature of the internal environment, preserving the integrity of the body, etc.).
Be able to:
use knowledge about:
methodological approaches (analytical and systematic) for understanding the patterns of activity of an integral organism;
theory of functional systems for understanding the mechanisms of self-regulation of homeostasis and the formation of useful results in adaptive activity;
properties and functions of various body systems in the analysis of patterns of formation of functional systems of the body of a healthy person; mechanisms of formation of specific and integrative functions;
Own methods:
assessment of the influence of environmental factors based on changes in the functional state of the body.
evaluation of the results of a general blood test; evaluation of the results of a general urinalysis;
palpation of the pulse;
blood pressure measurements.

Pathological anatomy.
As a result of mastering the discipline, the student should: Know:
basic laws of development and vital activity of the human body based on the structural organization of cells, tissues and organs; histofunctional features of tissue elements; methods of their research, sexual and individual features of the structure and development of the human body; concepts of etiology, pathogenesis, morphogenesis, pathomorphosis of the disease, principles of classification of diseases; basic concepts of general nosology;
functional systems of the human body, their regulation and self-regulation when exposed to the external environment in normal and pathological processes; structure and functions of the immune system, its age-related features, mechanisms
development and functioning, basic methods of immunodiagnostics, methods for assessing the immune status and indications for the use of immunotropic therapy;
Be able to:substantiate the nature of the pathological process and its clinical manifestations, the principles of pathogenetic therapy of the most common diseases,

Pathophysiology.
As a result of mastering the discipline, the student should: Know:
functional systems of the human body, their regulation and self-regulation in interaction with the external environment in normal and pathological processes; substantiate the nature of the pathological process and its clinical manifestations; principles of pathogenetic therapy of the most common diseases.
Be able to:
substantiate the nature of the pathological process and its clinical manifestations, the principles of pathogenetic therapy of the most common diseases.

Propaedeutics of internal diseases.
As a result of mastering the discipline, the student must::
Know:
etiology, pathogenesis, diagnosis, treatment of major diseases of internal organs that occur in a typical classical form
Be able to:
identify causal relationships between the development of the disease, prescribe etiopathogenetictreatment;
recognize the manifestations of the disease in a particular patient with impaired function of various organs and systems.
Own:
a method of collecting a medical history of the disease and a life history with the identification of risk factors for this disease

Physical education.
Know:
principles of healthy lifestyle and physical development in rehabilitationBeableto:
apply methods of physical culture to improve the level of health, performance and well-being.

2.3 Disciplines for which this discipline is the previous one:
- hospitaltherapy;
- outpatientandemergencytreatment;
- hospitalsurgery;
- obstetricsandgynecology;

- traumatologyandorthopedics**;**
- neurology;
- endocrinology;
- pediatrics.

3. LIST OF PLANNEDRESULTS OF TRAINING IN THE DISCIPLINE, CORRELATED WITH THE PLANNED RESULTS OF MASTERING THE MAIN PROFESSIONAL EDUCATIONAL PROGRAM

Code and name of the implemented competence	List of planned results of training in the discipline (module), correlated with indicators of achievement
of PC-4 competenciesreadiness to determine the need for the use of natural therapeutic factors, drug, non-drug therapy and other methods in patients in need of medical rehabilitation and spa treatment	Know:Withthe benefits of drug administration in patients wi various diseases in need of medical rehabilitation and s treatment. Be able to: ПUse different methods of drug administration in patients with various diseases who need medical rehabilitation and spa treatment. Master:The skillsof using different methods of dr administration in sanatorium-resort conditions in patients need of medical rehabilitation and sanatorium-resort treatmen
PC-5 Ability and willingness to implement the set of measures aimed at preserving and strengthening the health and incorporating a healthy lifestyl prevent and (or) the spread of diseases, their early diagnosis, identification of the causes and conditions of their emergence and development, as well as to eliminate the harmful effects o human health and the factors o its habitat	to Know: the technique of wet cleaning, ventilation chambers, equipment, current and final disinfection; methods and techniques for sanitary treatment of patients in the emergency Department; - the method of treatment of patients with pediculosis; the method of anthropometry; dietary tables and their significance in therapeutic measures for the recovery of patients; the method of measuring blood pressure; the method of studying the pulse on the arteries and its properties; the method of counting respiratory movements. Be able to: perform wet cleaning of wards, current and final disinfection; perform sanitary treatment of the patient in the emergency department; perform anthropometry; count respiratory movements and evaluate the result; measure blood pressure; examine the pulse on the arteries and evaluate the result. Possess: techniques of wet cleaning of wards, current and fina disinfection; methods of sanitary treatment of patients in the emergency department; methods of anthropometry; methods of counting respiratory movement methods of measuring blood pressure; methods of studying pulse on the arteries.

4. GENERAL LABOR INTENSITY OF THE DISCIPLINE

4.1. Scope of the discipline in credit units (total) 2

4.2. Scope of the discipline by type of academic work (in hours)72

Type of academic work	Number of hours (form of training full-timecourse)	
	Total according to the plan	B Incl.by semester
		5
1	2	3
Contact work of students with the teacher in accordance with UP	72	72
Classroom sessions:	72	72
lectures	18	18
Seminars and practical exercises	54	54
laboratory work, workshops	-	-
Independent work	36	36
Form of current knowledge control and independent work control: testing, counter. work, colloquium, abstract, etc.(at least 2 types)	testing, situational tasks, abstract	testing, situational tasks, abstract
Course work	--	-
Types of intermediate certification (exam, credit)	offsetting	offsetting
Total hours in the discipline	108	108

4.3. Content of the discipline (module.) Distribution of hours by topic and type of academicwork:

Formof study full-time

Name of sections and topics	All about	Types of training sessions					Current knowledge control form
		Classroom activities			Employment activities in Active classesnterassetin the new form	Independent work	
		All Lecture Center	Practical classes, and seminars	Laboratory Laboratory work, practice			
1	2	3	4	5	6	7	

Section1.Fundamentalsof medicalrehabilitation.Methods and meansof medical rehabilitation.							
Topic 1. 1.1 Fundamentals of medicalrehabilitation. 1.2 Fundamentals of physical therapy.	12	2	6	--	-	4	Test tasks. Survey. Defending a report (abstract) Evaluating the performance of the project implementation th of a practical skill or solving situational tasks
Topic 2. 2.1 Electrotherapy. 2. 2 Magnetic therapy. .	12	2	6	--	-	4	Test tasks. Survey. Defending a report (abstract) Evaluating the performance of a practical skill or solving a situational problem. situational tasks
Topic 3. 3.1 Phototherapy 3.2 Therapeutic usefactors of mechanical factors nature. 3. 3 Hydrotherapy. 3. 4 Thermotherapy.	12	2	6			4	Test tasks. Survey. Protection of the report (abstract) Assessment of the implementation of practical skill performanceor situational situationalproble m solving

Topic 4. 4.1 Spatherapy. 4.2 Medical rehabilitation in the structure of sanatorium-resortcare. 4.3 Manualtherapy. 4.4 Therapeutic nutrition.	12	2	6			4	Test tasks. Survey. Defending a report (abstract) Evaluating the performance of a practical skill or solving situational tasks
Topic 5. **5.1** Reflexology. **5.2** Psychological rehabilitation. **5.3** Medical supervision in medical rehabilitation.	12	2	6	-	-	4	Test tasks. Survey. Defending a report (abstract) Evaluating the performance of a practical skill or solving a situational problem. situational tasks
Topic 6. 6.1 Therapeutic physical culture(physical therapy). 6.2 Wellnessmethods 6.3 Rehabilitation of isabled people.	12	2	6	-	-	4	Test tasks. Survey. Protection of the report (abstract) Assessment of a completedpractical skill or solving situationalproblems
Section 2. Medical rehabilitation in clinical practice.							

Topic 7. 7.1 Medical rehabilitation incardiology. 7.2 Medical rehabilitation in pulmonology.	12	2	6	-	-	4	Test tasks. Survey. Protection of the report (abstract) Assessment of the implementation of a practical skill or solving situationaltasks
Topic 8. 8.1 Medical rehabilitation in gastroenterology andendocrinology. 8.2 Medical rehabilitationinoncology. 8.3 Medical rehabilitation for infectiousdiseases. 8.4 Medical rehabilitation in neurology.	12	2	6	-	-	4	Test tasks. Survey. Protection of the report (abstract) Assessment of the implementation of a practical skill or solving situationaltasks

Topic 9. 9.1 Medical rehabilitation in traumatology andorthopedics. 9.2 Medical rehabilitation insurgery. 9.3 Medical rehabilitation in auscherism and gynecology. 9.4 Medical rehabilitation in pediatrics.	12	2	6	--	-	4	Test tasks. Survey. Defending a report (abstract) Evaluating the implementation of a practical skill or solving situational situationaltasks
Total:	108	18	54	--	-	36	

Interactive forms of conducting classes

n/ a number	**Name раздела of the discipline section**	**Interactive forms of conducting classes**	**Duration (hour)**
1.	Section 1. Fundamentals of medical rehabilitation. Methods and means of medical rehabilitation**.** Topics:# 1-6	Work in small groups when solving situational problems. Working in small groups: "Patient-physiotherapist" "Patient - doctor of physical therapy "	3
2	Section 2. Medical rehabilitation in clinical practice. Topics: #7-8	Work in small groups when solving situational problems. Working in small groups: "Patient-multidisciplinary team "	3
TOTAL			6

5. CONTENT OF THE DISCIPLINE (MODULE) MEDICAL REHABILITATION

Section1.Fundamentalsof medicalrehabilitation. Methods and means of medicalrehabilitation.

Topic 1.

1.2 **Fundamentalsofmedicalrehabilitation.**

1.3 **Fundamentals of physical therapy. Content of the topic.**

1.1. Fundamentalsofmedicalrehabilitation.

1.1.1. Basic concepts

1.1.1.1. Scientific background

1.1.1.2. Medical rehabilitation as a clinicalspecialty

1.1.1.3. Medical rehabilitation as an academicdiscipline

1.1.2. History of the development of the doctrine of medicalrehabilitation

1.1.3. Methodologicalfoundationsofmedicalrehabilitation

1.1.3.1. Basic principles

1.1.3.2. Evidence-basedmedicineandrehabilitation

1.1.3.3. Innovativerehabilitationtechnologies

1.1.4. Organization ofmedicalrehabilitation

1.2. Fundamentalsofphysicaltherapy.

1.2.1 Main provisions. Basic concepts inphysical therapy.

1.2.2 Basic principles of therapeutic use of physicalfactors.

Topic 2.

2.1 Electrotherapy.

2.2 Magnetictherapy.

Content ofthetopic.

2.1 Electrotherapy.

2.1.1. Directcurrentelectrotherapy

2.1.2. Pulsedelectrotherapy

2.1.3. Low-frequencyelectrotherapy

2.1.4. Mid-frequencyelectrotherapy

2.1.5. Ultra-highfrequencytherapy

2.1.6 Ultrahighfrequencyelectrotherapy

2.2.7. Extremelyhigh-frequencytherapy

2.2. Magnetictherapy.

2.2.1 Transcerebralmagnetictherapy

2.2.2 Low-frequencymagnetictherapy

2.2.3 High-frequencymagnetictherapy

Topic 3.

Content ofthetopic.

3.1 Phototherapy.

3.1.1 Infraredradiation.

3.1.2 Chromotherapy.

3.1.3 Ultravioletradiation.

3.1.4 Laser therapy.

3.2 Therapeutic use of mechanical factors.

3.2.1 Therapeuticmassage.

3.2.2 Tractiontherapy.
3.2.3 Vibrotherapy.
3.2.4 Remote shock-wavetherapy.
3.2.5 Therapeuticuseofultrasound.
3.2.6 Aeroionotherapy.
3.2.7 Aerosoltherapy.
3.2.8 Haloaerosoltherapy.
3.2.9 Aerialphytotherapy.

3.3 Hydrotherapy.

3.3.1 Souls
3.3.2 Baths
3.3.3 Colonohydrotherapy
3.3.4 Baths

3.4 Thermotherapy

3.4.1 Heattherapy.
3.4.2 Cryotherapy.

Topic 4.

4.4 ***Spatherapy.***
4.5 **Medical rehabilitation in the structure of sanatorium-resortcare.**
4.6 **Manualtherapy.**
4.4 Therapeutic nutrition. Content of the topic.

4.1 Spatherapy.

4.1.1 Climatotherapy
4.1.2 Balneotherapy
4.1.3 Peloidotherapy.

4.2 Medical rehabilitation in the structure of sanatorium-resortcare.

4.2.1 Spatreatment.
4.2.2 Medical rehabilitationinresorts

4.3 Manualtherapy.

4.3.1. Basic concepts and principles of manual therapy.
4.3.2 Methodsofmanualtherapy.

4.4 Therapeuticnutrition

4.4.1 Basicsoftherapeuticnutrition
4.4.2 Assessment of the nutritional status and determination of the need for nutritionalsupport.
4.4.3 Therapeutic nutrition in medicalrehabilitation programs.

Topic 5.

5.4 Reflexology.
5.5 Psychologicalrehabilitation.
5.6 Medical supervision in medical rehabilitation. Content ofthetopic.

5.1 Reflexology.

5.1.1 Basic conceptsandprinciples.
5.1.2 МетодыReflexologymethods

5.2 Psychologicalrehabilitation.

5.2.1 Basic conceptsandprinciples

5.2.2 Methodsofpsychologicalrehabilitation.
5.2.3 Traditionalmethods
5.3 Medical supervision in medicalrehabilitation.
5.3.1 Basic conceptsandprinciples.
5.3.2 Typesofmedicalsupervision
5.3.3 Methods for assessing the initial levelof patient adaptation reserves.
5.3.4 Standard assessment scales for integral assessmentof the patient's condition

Topic 6.

6.4 **Therapeutic physical culture(physical therapy).**
6.5 **Wellnessmethods**
6.6 **Rehabilitation of disabled people. Content of the topic.**

6.1 Therapeutic physical culture(physical therapy).
6.1.1 Basic provisions and principlesof physical therapy. 6.1.1.1.Basicconcepts
6.1.1.2 Principles of therapeutic use of physical exercises
6.1.2 Methods of therapeutic physicalculture.
6.1.2.1 Kinesitherapy.
6.1.2.1.1 Therapeuticgymnastics
6.1.2.1.2 Morningexercises
6.1.2.1.3 Therapeuticmotormode
6.1.2.1.4 Otherformsofkinesitherapy
6.1.3 Therapeuticwalking
6.1.4 Mechanokinesitherapy
6.1.5 Bio-controlledmechanokinesitherapy
6.1.6 Hydrokinesitherapy
6.1.7 Roboticmechanotherapy
6.1.8 OccupationalTherapy
6.1.9 Sports exercises
6.1.10 Orthotictherapy
6.2 Wellnessmethods
6.2.1 Health assessmentздоровья
6.2.2 Wellnesstrainingsessions
6.2.3 Health-improvingphysicalmethods
6.3 Rehabilitationofdisabledpeople.
6.3.1 Fundamentals of rehabilitation assistancefor disabled people
6.3.2 Individualrehabilitationprogram
6.3.3 Technicalmeansofrehabilitation.

Topic 7.

7.3 **Medical rehabilitationincardiology.**
7.4 **Medical rehabilitation in pulmonology. Content of the topic.**

7.1 Medical rehabilitationincardiology.
7.1.1 Myocardialinfarction
7.1.2 Coronaryheartdisease
7.1.3 Conditionafterреваскуляризацииmyocardialrevascularization

7.2 Medical rehabilitationinpulmonology.

7.2.1 Pneumonia

7.2.2 Chronicobstructive болезньpulmonarydisease

7.2.3 Bronchialasthma

Topic 8.

8.5 **Medical rehabilitation in gastroenterology andendocrinology.**

8.6 **Medical rehabilitationinoncology.**

8.7 **Medical rehabilitation for infectiousdiseases.**

8.8 **Medical rehabilitation in neurology. Content of the topic.**

8.1 Medical rehabilitation in gastroenterology andendocrinology.

8.1.1 Diseases of the operated stomach and gallbladderпузыря

8.1.2 Diabetesmellitus

8.2 Medical rehabilitationinoncology.

8.2.1 Mainprovisionsandprinciples

8.3 Medical rehabilitation for infectiousdiseases.

8.3.1 Viralhepatitis

8.3.2 Tuberculosis

8.4 Medical rehabilitationinneurology.

7.5.1 Acutecerebrovascularaccidentкровообращения

7.5.2 Vertebrogenic diseases of the peripheral nervoussystem

Topic 9.

9.5 **Medical rehabilitation in traumatology andorthopedics.**

9.6 **Medical rehabilitationinsurgery.**

9.7 **Medical rehabilitation in auscherism and gynecology.**

9.8 **Medical rehabilitation in pediatrics.Content of the topic.**

9.1 Medical rehabilitation in traumatology andorthopedics.

9.1.1 Fundamentals of medical rehabilitation in traumatology andorthopedics

9.1.2 Post-traumatic and postoperative syndromes.

9.1.3. Features of rehabilitation in conservative and operative methods of treating injuries and deformities of the musculoskeletal system.

9.2 Medical rehabilitationinsurgery.

9.2.1 Pathophysiological features of surgicaltrauma.

9.2.2 Medical rehabilitationforlungsurgery

9.2.3 Medical rehabilitation during operations onthe abdominal organs

9.3 Medical rehabilitation in auscherism andgynecology.

9.3.1 Pregnancy with extragenital and obstetricpathology

9.3.2 Inflammatory diseases of the female genitalorgans..

9.4 Medical rehabilitationinpediatrics.

9.4.1 Features of medical rehabilitation of children with deformities of the musculoskeletal system, flat feet, diseases of the respiratory system, gastrointestinal tract,kidney diseases.

9.4.2 Age-related terms of prescribing physical methodsof treatment.

6. Lecture topics

Section1. Fundamentalsof medicalrehabilitation.

Methods and means of medicalrehabilitation.

Topic 1.

1.1 Fundamentalsofmedicalrehabilitation.

1.2 Fundamentalsofphysicaltherapy.

(The form of conducting is a lecture).

Questions on the topics of the section (for discussion in class, for self-study).

1.1. Fundamentals of medical rehabilitation(MR).

1.1.1. Basic concepts

1.1.1.1. Scientific background

1.1.1.2. Medical rehabilitation as a clinicalspecialty

1.1.1.3. Medical rehabilitation as an academicdiscipline

1.1.2. History of the development of the doctrine of medicalrehabilitation

1.1.3. Methodologicalfoundationsofmedicalrehabilitation

1.1.3.1. Basic principles

1.1.3.2. Evidence-basedmedicineandrehabilitation

1.1.3.3. Innovativerehabilitationtechnologies

1.1.4. Organization ofmedicalrehabilitation

1.1.4.1 Legal basis and features of the organization of medical rehabilitation inthe Russian Federation: Federal Law No. 323-FZ of 21.11.2011 "On the basics of protecting the health of citizens of the Russian Federation" Article40.

Pr-z of the Ministry of Health of the Russian Federation No. 1705n dated 29.12.2012. "On the procedure for providing medical rehabilitation" (in outpatient settings, in a day hospital, in hospitals).

Order of the Ministry of Labor of the Russian Federation No. 572n of 03.09.2018 "On approval of the professional standard "Specialist in Medical Rehabilitation"

1.1.4.2 Basic provisions of medical, social and professional rehabilitation.

1.1.4.3 Structure of the department of medical rehabilitation in a polyclinic, hospital, rehabilitation center, sanatorium-resort complex.

1.1.4.4 Stagesofmedicalrehabilitation.

1.1.4.5 Modern concept of the consequences of the disease on threelevels.

1.1.4.6 International Classification of Functioning (ICF), Disability and Health (WHO, 2007) and its significance in medicalrehabilitation

1.1.4.7 Patient's vital activity criteria and theirevaluation parameters.

1.1.4.8 The conceptofdisability.

1.1.4.9 Rehabilitation diagnosis, rehabilitation potential, and rehabilitation prognosis. Individual rehabilitation program (IPR). Definition of the concept, goals, and principles of implementing the IPR.

1.1.4.10 Methodological approaches to the preparation of IPR for patients and disabled people:the formation of a rehabilitation program, a comprehensive drug and non-drug technologies: physical therapy, physical therapy, massage, therapeutic and preventive nutrition, manual therapy and psychotherapy, reflexology and methods with the use of natural healing factors, and means, adapting the environment to the functional capabilities of the patient and (or) functional classes with Helicobacter pylori the ability of the patient to the environment, including through the use of mobility AIDS, prosthetics andorthotics.

1.1.4.11 Algorithms for drawing up an IPR and conducting medical rehabilitation: diagnosis

of the patient's clinical condition; formation of the goalof conducting the IPR.

assessment of risk factors for carrying out rehabilitation measures; factors limiting the implementation of rehabilitation measures; morphological parameters; functional reserves of the body; the state of higher mental functions and the emotional sphere; violation of household and professional skills; restrictions on activity and participation in significant events of private and public life for the patient; environmental factors affecting the outcome

rehabilitation process, the purpose of funds and methods

1.1.4.12 Organization and specifics of the work of a multidisciplinaryteam.

1.1.4.13 Routing of patients during medicalrehabilitation.

1.1.4.13 Methods for evaluating the effectiveness of medical rehabilitation.Activityscalesusedinmedicalrehabilitation.

1.1.4.14 Contraindicationstorehabilitationmeasures

1.2. Fundamentalsofphysicaltherapy.

1.2.1 The main provisions inphysical therapy.

1.2.1.1 Basic concepts in physical therapy.

1.2.1.1.1 Physicaltherapy.

1.2.1.1.2 Categories of physical therapy: therapeutic physical factors, physicalmethod treatment options. Method of physiotherapy procedure.

1.2.1.1.3 Subjectofstudy

1.2.1.1.4 Physicalmethods

1.2.1.1.5 Lawsofphysicaltherapy

1.2.1.2 . Basic principles of therapeutic use of physicalfactors.

1.2.1.2.1 The principle of unity of syndromic-pathogenetic and clinical-functional approaches.

1.2.1.2.2 The principle of individual treatment by physicalfactors.

1.2.1.2.3 The principle of course treatment by physicalfactors.

1.2.1.2.4 The principle of optimal treatment by physicalfactors.

1.2.1.2.5 The principle of complex treatment by physicalfactors.

1.2.1.2.6 The principle of dynamic treatment by physicalfactors.

1.2.1.3 General contraindications forphysical therapy.

Topic 2.

2.1 Electrotherapy.

2.2 Magnetictherapy.

(The form of conducting is a lecture).

Questions on the topics of the section (for discussion in class, for self-study)

2.1 Electrotherapy. Therapeutic effect. Therapeutic effects.Indications. Contraindications.Parameters.

2.1.1. Direct current electrotherapy: electroplating, medicinalelectrophoresis

2.1.2 Central impact pulsed electrotherapy:.electrocontherapy, transcranialelectrical stimulation

2.1.3. Pulsed peripheral electrotherapy: diadinamotherapy, short-pulse electroanalgesiaэлектроаналгезия.

2.1.4. Low-frequency electrotherapy: amplipulsetherapy,myoelectric stimulation, interference therapy

2.1.5 Mid-frequency electrotherapy: local darsonvalization,ultra-tonotherapy

2.1.6 Ultra-highfrequencytherapy

2.1.7 Ultrahigh-frequency electrotherapy: decimeter-wave therapy (DMV-therapy), centimeter-wave therapy (SMV-therapy), extremely high-frequency therapy (EHF-therapy).

2.2 Magnetictherapy. Therapeutic effect.Therapeutic effects. Indications.

Contraindications.Parameters.
2.2.1. Transcerebralmagnetictherapy.
2.2.2. Pulsedmagnetictherapy.
2.2.3 Low-frequency magnetictherapy: alternatinglow-frequency electromagnetic field (PeMP), pulsating (PuMP) of the magneticfield.
2.2.4 High-frequency magnetic fields(MF)

Topic 3.

3.1 Phototherapy
3.2 Therapeutic use of mechanical factors.
3.3 Hydrotherapy.
3.4 Thermotherapy.

(The form of conducting is a lecture).
Questions on the topics of the section (for discussion in class, for self-study**)**

3.1 Phototherapy.
3.2 Therapeuticeffect.Therapeuticeffects.Indications.Contraindications. Parameters.
3.2.1 Infraredradiation.
3.2.2 Chromotherapy.
3.2.3 Ultraviolet radiation: Long-, Medium-and Short-wave radio equipment. Irradiation of blood with a short-wave spectrum of ultraviolet radiation (autotransfusion of irradiated blood-AUFOC).
3.2.4 Laser radiation: red and infrared. Intravenous laser irradiation of blood.(ВЛОК).
3.3 Therapeutic use of mechanical factors.
3.4 Therapeutic effect. Therapeutic effects.Indications.Contraindications. Parameters.
3.4.1 Therapeuticmassage.
3.2.2. Traction therapy.
3.2.3 Vibrotherapy.
3.2.4 Remote shock-wavetherapy.
3.2.5 Therapeutic useof ultrasound.
3.2.6 Medicinalultraphonophoresis.
3.2.7 Aeroionotherapy.
3.2.8 Aerosoltherapy. Modern equipment. Medicinalsubstances used foraerosoltherapy.
3.2.9 Haloaerosoltherapy.
3.2.10 Aerialphytotherapy.
3.5 Hydrotherapy. Therapeutic effect. Therapeutic effects.Indications. Contraindications. Parameters.
3.5.1 Showers: low, medium and high pressure; indifferent, warm and hot showers, contrast showers, underwatermassage showers.
3.5.2 Baths: fresh baths (warm, cold), contrast baths.Aromaticbaths. Gasbaths.
3.5.3 Colonohydrotherapy.
3.5.4 Baths: steam bath, dry-air bath (sauna).
3.6 Thermotherapy.
3.7 Therapeutic effect. Therapeutic effects.Indications. Contraindications.Parameters.
3.7.1 Heattherapy: paraffin-ozokeritolechenie.
3.7.2 Cryotherapy: water-containing cryoagents: ice cubes, cryopackages, cryoapplicators, hypo-thermal thermalpads; cold metal junction of thermoelectric contact devices, gases or mixtures thereof (chloroethyl, carbon dioxide, nitrogen and air), cold pencils. General cryotherapy (extremecryotherapy).

Topic 4.

4.1 Spatherapy.

4.2 Medical rehabilitation in the structure of sanatorium-resortcare.

4.3 Manualtherapy.

4.4 Therapeuticnutrition.

(The form of conducting is a lecture).

Questions on the topics of the section (for discussion in class, for self-study)

4.1 Spa therapy.

4.2 Therapeutic effect. Therapeutic effects.Indications.Contraindications. Parameters.

4.2.1 Climatotherapy: aerotherapy, speleotherapy, airbaths, heliotherapy, thalassotherapy.

4.2.2 Balneotherapy.. Mineral waters for external use: sodium chloride baths, iodine-bromine baths, mineral-gas baths, carbon dioxide baths, hydrogen sulfide baths, radon baths. Drinking mineral waters: total mineralization, ionic composition and presence of biologically active components, natural table, medicinal table and medicinal mineral waters. Chemical composition and physical properties of mineral water according to the Kurlov M formula:.City of Method of receiving mineralwaters.

4.2.3 Peloidotherapy. Classification of therapeutic mud by origin: sulfide-silt, sapropel, peat,and hill mud.

4.3 Medical rehabilitation in the structure of sanatorium-resortcare.

4.3.1 Spatreatment.

4.3.1.1 Definition of spa treatment. Procedure for organizing spatreatment

4.3.1.2 Categories of citizens sent for sanatoriumtreatment

4.3.1.3 Types of sanatorium-resort organizations: balneological hospital; mud clinic; resort polyclinic; sanatorium for children, including for children with parents; sanatorium-preventorium; sanatorium health camp of year-roundoperation.

4.3.1.4 Sanatorium, as the main type of medical and preventive organization in the resort. Medical profileofsanatoriums

4.3.1.5 Principles of operation of a health resort organization. Modes of health and wellness activities in a health resort organization: sparing, sparing-training and training, theircontent.

4.3.1.6 Selection and referral of patients for sanatorium treatment, registration of documentation.

4.3.2 Medical rehabilitation athealth resorts.

4.3.2.1 Mainprovisions.

4.2.2.2. Rehabilitation programs in sanatoriums, as forms of after-treatment in the conditions of specialized (rehabilitation) departments of sanatoriums after inpatient treatment of patients with disabling diseases on freevouchers.

4.2.2.3. The main tasks of medical rehabilitation ina sanatorium.

4.2.2.4 Procedure for issuing vouchers for post-treatment of patients

4.2.2.5. Documents for referral for further treatment (rehabilitation) to a sanatorium, which are issuedto the patient.

4.2.2.6. The list of diseases after which patients are sent for further treatment to rehabilitation departments of sanatoriums at the expense of socialinsurance funds.

4.4 Manualtherapy.

4.3.1. Basic concepts and principles of manual therapy.

4.3.2 Indications and contraindications for the appointment of manualtherapy.

4.3.3 Parameters and methods of treatment in manual therapy: massage movements, mobilization,manipulation.

4.3.4 Myofascialrelease.

4.5 Therapeuticnutrition.

4.5.1.1 Basics of therapeuticnutritionThe law of energy adequacy of nutrition, the law of qualitative (plastic)4

4.5.1.2 The law of enzymatic activity, the law of biotic adequacy,the law of compliancewith the food intake regime.

4.5.2 Nutrition assessment and identification of nutritionalsupport needs

4.5.2.1 Integrated nutrition assessment indicatorsPr-z MZMinistry of Health and Social Development Russian Federation No. 330 dated 05.08.2003.

4.5.2.2 Criteria for protein and energy insufficiency: mild, moderate, severe degreeof insufficiency

4.5.2.3 Therapeutic nutrition in medicalrehabilitation programs.

4.5.2.4 Standard diets,dietregimen

Topic 5.

5.1 Reflexology.

5.2 Psychologicalrehabilitation.

5.3 Medical supervision in medical rehabilitation.

(The form of conducting is a lecture).

Questions on the topics of the section (for discussion in class, for self-study)

5.1 Reflexology.

5.1.1 Basicconcepts.

5.1.1 Modern ideas about the mechanisms дейтствияof reflexology.

5.1.2 Concepts of meridians and biologically active points(BAT).

5.1.3 Ancient Chinese concepts of Zhen-jutherapy . Classification of BAHT. Five standard points on the meridian, the principles of their use, the principles of drawing up a reflexotherapyprescription.

5.1.4 Modern methods of reflexology. Physiopuncture. Therapeutic effect. Therapeutic effects. Indications. Contraindications.Parameters

5.1.5 Computer electro-pulsescanning.

5.2 Psychologicalrehabilitation.

5.2.1 Basic conceptsandprinciples

5.2.1.1 Psychologicalcorrection

5.2.2 The main tasks of psychologicalrehabilitation.

5.2.1. Basic principles of psychological rehabilitation. Therapeuticeffects. Indications.Contraindications.

5.2.2 Methodsofpsychologicalrehabilitation.

5.2.3 Traditional methods. Apitherapy. Ampelotherapy, Hirudotherapy. Psammotherapy. Enotherapy.Herbalmedicine

5.3 Medical supervision in medicalrehabilitation.

5.3.1 Basicconcepts.

5.3.1.1 Goals and objectives of medicalsupervision

5.3.2 Types of medical control and theircontent.

5.3.2.1 Diagnostics of the patient's physical development and functional state.

5.3.2.2 Features of choosing a physicalactivity mode.

5.3.2.2.1 6-minutewalktest

5.3.2.2.2 Assessment of the patient's condition on the scale ofThe Borg.

5.3.2.2.3 Heart rate monitoring. The maximum allowable heart rate during exercise, depending on the age. Dynamics ofbloodpressureduringphysicalexertion

5.3.2.2.4 Estimation of the load value based onbody weight dynamics

5.3.2.2.5 SampleMartinet. Types of reactions to physical activity based on the resultsof the test

5.3.2.2.6 Submaximalbicycleergometrictest

5.3.2.2.7 A test recommended by WHO for determining the physical performance of athletes and physical athletesPWC170.

5.3.2.2.8 Determinationoftherespiratoryrate

5.3.2.2.9 Determination of vital capacity of lungs(VEL).

5.3.2.2.10 Breath-holding tests. Sample of the Bar. SampleGenchi

5.3.2.2.11 КистеваяHanddynamometry

5.3.2.2.12 Drawing up the physiological curveof the lesson

5.3.2.2.13 Evaluation scales for integral assessment of the patient's condition. Standard: severity scores for acute and chronic diseases (APACHE III), quantitative pain scale (NPRS), physiological index (PI),respiratory index
index (ResI).

5.3.2.2.14 The importance of medical supervision in medicalrehabilitation.

Topic 6.

6.1 Therapeutic physical culture(physical therapy).

6.2 Wellnessmethods

6.3 Rehabilitationofdisabledpeople.

(The form of conducting is a lecture).

Questions on the topics of the section (for discussion in class, for self-study)

6.1 Therapeuticphysicalculture (LFK).

6.1. Basic provisions and principlesof physical therapy.

6.1.1 Main provisions. Organization of physical therapy in the Russian Federation:Decree No. 337 of the Ministry of Health of the Russian Federation dated 20.08.2001 "On measures for further development and improvement of sports medicine and physical therapy". Subject of physical therapy study. Object of physical therapy study. Medical documentation in departments and physical therapy rooms (f.0.42/y).

6.1.2. Principles of physical therapy. Principles of therapeutic use of physical exercises. The principle of active participation of the patient in physical training. The principle of individual physical activity. The principle of regular exercise. The principle of adequacy of physical activity. The principle of gradual and consistent increase in physical activity.

6.2. Methods of therapeutic physicalculture.
6.2.1 Kinesitherapy.
6.2.1.1 Methodology of kinesotherapy. Types of exercises. Mechanisms of action of physical exercises on the body: formation of integrated motor reflexes, correction of the tone of the central nervous system, formation of temporary and permanent compensations, development of new compensatory reactions, stimulating effect of physical exercises on various body systems, restoration of trophism, increased reactivity and resistance to pathogenic environmental factors. Therapeutic effects: Tonic, trophostimulating, reconstructive, compensatory. Indications for kinesitherapy. Contraindications. DosageKinesitherapy. Classificationofphysicalexercises.
6.2.1.2 Various forms of kinesitherapy.Proprioceptive Neuromuscular Facilitation(Neuromuscular FacilationPNF) methodKabata). MethodBobat. Voight'smethod. Passivesuspensionsystems. Activestretchsystems.
6.2.1.3 Therapeutic gymnastics as a form of kinesotherapy. Methods of conducting therapeutic gymnastics. Introductory, main and final parts. Curve of physiological load during therapeutic gymnastics. Typesofexercises
used in the water and final part комлексаof the LG complex.
6.2.1.4 Morning exercises as a form of kinesotherapy. Goals andobjectives. Approximate set of physical exercises in the morninggymnastics.
6.2.1.5 Therapeutic motor mode as a form of kinesotherapy. Therapeutic effects: training, correcting, toning, compensatory. Motor modes in the hospital and their content. Criteria for transferring from one motor mode to another. Functional tests performed when switching from one motor mode to another. Therapeuticmotormodesinhealthresorts.
6.2.2. Therapeutic walking.Types of therapeutic walking. Dosed physical activity during normal and Nordic walking. Indicationsandcontraindications
6.2.3 Mechanokinesitherapy. Movements on motorizedsimulators. Therapeutic effects. Indications. Contraindications. Parameters.
6.2.4 Bio-controlled mechanokinesitherapy.Therapeutic effects. Locomotor-corrective, tonic, metabolic. Indications. Contraindications. Computerized simulators (HUBER, IMOOVE, etc.) Features of training methods. Indications.Contraindications.
6.2.5 Hydrokinesitherapy.Therapeutic effects. Trofo-, myostimulating, tonic, locomotor-correcting, actoprotective. Indications. Contraindications. Parameters. Therapeutic swimming. Aquagymnastics. Aquastep. Aquafitness, dosage of procedures. Indicationsandcontraindications.
6.2.6 Robotic mechanotherapy. Therapeutic effects. Locomotor-correcting, tropho-and myo-stimulating. Indications. Contraindications. Parameters. Robots classified according to the principle of operation: end-effector robots (Mit-Manus, ARM Guide, MIME),exoskeleton robots: walking training robots (Gait trainer GT II). вертикализаторErigoverticalizer robot, Робот- , ANYMOV verticalizer robot, Lokomoat Computerized robot, and VR robots: CAREN robot. Robots-compensators CON-TREX, Biodex. Principles of physical activity dosing inrobotics.
6.2.7 Occupationaltherapy. Mechanisms of action. Parameters:patient occupancy. Typesofemployment. Occupationaltherapystrategies: - developmental(recovery

impaired function) and compensatory (replacement of a lost function). Labor operations. Therapeutic effects. Motor-correcting, tonic, psychostimulating, actoprotective. Evaluation of the effectiveness of the course of procedures on the scales of assessment of the International Classification of Functioning-ICF. Indicationsandcontraindications.

6.2.8 Sports exercises. Therapeutic effects. Motor-correcting, psychostimulating. Parameters. Activities: Skiing. Medium and heavy load mode. Swimming. Medium and heavy load mode. Breaststroke or freestyle swimming without taking your hands out of the water. Volleyball. Lawntennis. Tabletennis.Badminton.

6.2.9 Orthotherapy. Tasks of orthotherapy. Therapeutic effects. Locomotor-correcting, myotonic, muscle relaxant. Indications. Contraindications. Parameters. Types of orthoses. Static orthoses (passive splints) Dynamic orthoses. Functionalorthoses. Active-passive buses. Bio-controlled tires in rehabilitation. ОртезыRobotorthosesforjoints. Termsofusingorthoses.

6.2. Wellnessmethods

6.2.1 Health assessmentздоровья

6.2.1.1 Health and its diagnostics. Assessment of the energy potential by the MPC indicator (Maximum oxygen consumption).KerdoVegetative Index
(Coefficient of vegetative equilibrium according to A.M.To Vane,).

6.2.1.2 Somatic health and methods for assessing the functional and morphological properties of the body. Height-weight ratio (indexQuetelet). Life index. A double product. Martinet's test-Kushelevsky. Physicalperformanceof a person. Calculatingthe IPC.

6.2.2 Wellness training sessions. Health-improving physical activity andadaptation mechanisms.

6.2.2.1 Physicalactivityparameters

6.2.2.2 Structure of wellness training. Training phases. Frequency of training sessions. General endurance training,dosing.

6.2.2.3. Health training in modern health programs. Aerobics (rhythmic gymnastics). Step-aerobics (using step exercises).
platforms), fitball-aerobics (aerobics on fitballs). Fitness. Wellnessfacilities.

6.2.3. Health-improvingphysicalmethods.

6.2.3.1 Methods. Staminostimulatingagents. Protectiveones. Actoprotectivemethods

6.2.3.2 Methods.Non-specific ones.Specific features

6.3 Rehabilitationofdisabledpeople.

6.3.1 Fundamentals of rehabilitation assistancefor disabled people.

6.3.1.1 Three-dimensional concept of disease impact assessment (according to WHO recommendations, 1989).

6.3.1.2 Tasks of medical and socialexpertise.

6.3.1.3 The main directions of rehabilitation of disabled people. "Medical and social rehabilitation". Professional rehabilitation. Socialrehabilitation

6.3.2 Individual rehabilitation programfor a disabled person.

6.3.2.1 A complex of rehabilitation measures optimal for a disabled person in an individual program. Form of an individual rehabilitation program for a disabled person, Пр-з Ministry of Health and Social Development Russian Federation No. 379n dated 04.08.2008. Sectionsof the IPR.Evaluation of the results проведенойof rehabilitation performed.

6.3.3 Technical means for rehabilitationof disabled people.

6.3.3.1. A new socially-oriented model of disability implemented by WHO.

6.3.3.2 TCP MainFeature

Section 2. Medical rehabilitation in clinical practice.

Topic 7.

7.1 Medical rehabilitationincardiology.

7.2 Medical rehabilitationinpulmonology.

(The form of conducting is a lecture).

Questions on the topics of the section (for discussion in class, for self-study).

7.1 Medical rehabilitationincardiology.

7.1.1 Model of cardiorehabilitation inthe Russian Federation.

7.1.2 Standard of medical care for patients with acute myocardial infarctionПр-з Ministry of Health and Social Development of the Russian Federation No.548 dated 06.09.2005

7.1.3 Groups of patients who need medicalrehabilitation.

7.1.4 Stages of activity in patients with myocardial infarction in ahospital setting.

7.1.5 Stages of activity in patients with myocardial infarction in a polyclinic or spa.

7.1.6 Tasks of medical rehabilitation in patients with myocardial infarction. Kinesiotherapy.Physical methods of treatment. Psychotherapy. Therapeutic nutrition. Contraindications. Performance evaluation.

7.1.7 Tasks of medical rehabilitation inCHD.

7.1.8 Characteristics of functional classes of CHD patients. Kinesiotherapy. Dosage of physical activity, depending on the functional class. Therapeutic swimming modes. Physical methods of treatment. Psychotherapy. Therapeutic nutrition. Performance evaluation.Contraindications.

7.1.9 Tasks of rehabilitation of operated patients with CHD. Condition after реваскуляризацииcardiac revascularization. Kinesiotherapy. Principles of physical activity dosing. Physical methods of treatment. Psychotherapy. Therapeuticnutrition. Contraindications. Performance evaluation.

7.1.10 Tasks of rehabilitation for hypertension. Standards of primary health care for primary arterial hypertension (hypertension) approved by Order of the Ministry of Health of the Russian Federation No. 708n of 9.11.202. Kinesiotherapy, dosage of physical activity.. Physical methods of treatment. Psychotherapy. Therapeuticnutrition. Contraindications. Performance evaluation.

7.2 Medical rehabilitationinpulmonology.

7.2.1 Fundamentals of pulmonary rehabilitation in the Russian Federation, the procedure for providing medical care to patients in the "pulmonology" profile approved by the order of the Ministry of HealthRussian Federation from15.11.2012 No. 916n.

7.2.2 Tasks of rehabilitation for pneumonia. Kinesiotherapy. Physical methods of treatment. Psychotherapy. Therapeuticnutrition. Contraindications.Performance evaluation.

7.2.3 Purpose and objectives of medical rehabilitation of patients with COPD. Standards of medical care for patients with COPD (chronic obstructive pulmonary disease). Stages of COPD development. System of functional classes of COPD patients. Physical methods of treatment. Kinesiotherapy. Psychotherapy. Therapeutic nutrition. .Contraindications.Performance criteria.

7.2.4 Tasks of rehabilitation of patients with bronchial asthma. Kinesiotherapy, principles of physical activity dosage. Special breathingexercises. Psychotherapy. Therapeuticnutrition. Performance criteria.Contraindications.

Topic 8.

8.1 Medical rehabilitation in gastroenterology andendocrinology.
8.2 Medical rehabilitationinoncology.
8.3 Medical rehabilitation for infectiousdiseases.
8.4 Medical rehabilitationinneurology.
(The form of conducting is a lecture).
Questions on the topics of the section (for discussion in class, for self-study .

8.1 Medical rehabilitation in gastroenterology andendocrinology.
8.1.1 Fundamentals of medical rehabilitation in gastroenterology. Tasks of medical rehabilitation in gastroenterology. Procedure for providing medical care to the population, Pr-z of the Ministry of Health of the Russian Federation from 12.11.2012, 906n. Procedureforprovidingmedicalcaretothepopulationbyprofile "gastroenterology "
8.1.2 Medical rehabilitation for diseases of the operated stomach andgallbladder..Physicalmethodsoftreatment. Kinesiotherapy. Psychotherapy. Therapeuticnutrition.
8.1.3 Fundamentals of medical rehabilitation in endocrinology. Tasks of medical rehabilitation in endocrinology. Pr-z of the Ministry of Health of the Russian Federation No. 899n dated 12.11.2012. Procedure for providing medical care to the adult population inthe "endocrinology" profile.
8.1.4 Diabetes mellitus, major syndromes. Indications and contraindicationsfor the appointment of medical rehabilitation. Physical methods of treatment. Kinesiotherapy. Psychotherapy. Therapeutic nutrition. Performance criteria.
8.1.5 Fundamentals of medical rehabilitation in oncology. Kinesiotherapy. Physical methods of treatment. Psychotherapy. Therapeuticnutrition. Social rehabilitation. Efficiencycriteria.
8.1.6 Fundamentals of medical rehabilitation for infectiousdiseases.
8.1.6.1 Tasks of medical rehabilitation for viral hepatitis. Kinesiotherapy. Psychotherapy. Therapeutic nutrition.Efficiency criteria.
8.1.6.2 Tasks of medical rehabilitation for tuberculosis. Procedure for providing medical careto the population, Pr-z of the Ministry of Health of the Russian Federation from 15.11.2012, 932n. on approval of the Procedure for providing medical care to tuberculosis patients. The main syndromes intuberculosis. Physical methods of treatment. Kinesiotherapy. Psychotherapy. Therapeuticnutrition.Efficiencycriteria.
8.1.7 Medical rehabilitation in neurology. World model of neurorehabilitation.Organization of neurorehabilitation in the Russian Federation: Pr-z of the Ministry of Health of the Russian Federation No. 926n. and No. 928n. " Procedure for providing medical care to adults with diseases of the nervous system and providing medical care to patients with acute cerebrovascular accident.". Patient groups indicated for medical rehabilitation. Contraindications formedical rehabilitation.
8.1.8 Medical rehabilitation for acute cerebrovascular accident (ACV). Pathophysiological features of ONMC. Tasks of medical rehabilitation. Treatment by position. Early verticalization. Correction of swallowing disorders. Ontogenetic kinesitherapy. Kinesitherapy. Physical methods of treatment. Psychotherapy. Therapeuticnutrition.Efficiencycriteria.
8.1.9 Medical rehabilitation for vertebrogenic diseases of the peripheral nervous system.

Pathophysiologicalfeaturesofperipheralnervoussystemdiseases

systems. The main syndromes of diseases. Rehabilitation tasks. Kinesitherapy. Physical methods of treatment. Reflexology. Manual therapy. Psychotherapy. Therapeutic nutrition. Contraindications to medical rehabilitation. Efficiencycriteria. Contraindicationsformedicalrehabilitation.

Topic 9.

9.1 Medical rehabilitation in traumatology andorthopedics.
9.2 Medical rehabilitationinsurgery.
9.3 Medical rehabilitation in auscherism and gynecology.
9.4 Medical rehabilitationinpediatrics

(The form of conducting is a lecture).

Questions on the topics of the section (for discussion in class, for self-study).

9.1 Medical rehabilitation in traumatology andorthopedics.

9.1.1 Fundamentals of medical rehabilitation in traumatology and orthopedics. Procedure for providing medical care in the field of traumatology and orthopedics. Pr-z of the Ministry of Health of the Russian Federation No. 901n dated 12.11.2012. On approval of the procedure. Providing medical care to the population by profile. "Traumatology and orthopedics". Indications and contraindications for the appointment of medical rehabilitation. Pathophysiological bases костноof musculoskeletal system injuries. Periods of the treatment process for injuries of the musculoskeletal system. Post-traumaticandpostoperativesyndromes.

9.1.2 Tasks of medical rehabilitation related to damage or surgery of the musculoskeletal system. Features of rehabilitation in conservative and operative methods of treating injuries and deformities of the musculoskeletal system. Physical methods of treatment. Kinesiotherapy. Psychotherapy. Therapeutic nutrition. Social rehabilitation .Performance criteria.Contraindications.

9.2 Medical rehabilitationinsurgery.

9.2.1 Fundamentals of medical rehabilitation in surgery. Procedure for providing medical care to the population in the "surgery" profile. Pr-z of the Ministry of Health of the Russian Federation from 15.11.2012. Pathophysiological features of surgical trauma. Indications and contraindications for the appointment of medical rehabilitation.

9.2.2 Features of medical rehabilitation during lung surgery. Kinesiotherapy. Physical methods of treatment. Psychotherapy. Therapeuticnutrition. Social rehabilitation Performance criteria.Contraindications.

9.2.3 Features of medical rehabilitation during operations on the abdominal organs. Kinesiotherapy. Physical methods of treatment. Psychotherapy. Therapeutic nutrition. Social rehabilitation .Performance criteria.Contraindications.

9.3 Medical rehabilitation in auscherism and gynecology.

9.3.1 Fundamentals of medical rehabilitation in obstetrics and gynecology. Procedure for providing medical care in the "obstetrics and gynecology" profile. Pr-z of the Ministry of Health of the Russian Federation No. 572n dated 01.11.2012. Indications and contraindications for the appointment of medical rehabilitation. The most common extragenital diseases duringpregnancy.

9.3.2 Features of medical rehabilitation during pregnancy with extragenital andobstetric pathology: pregnant women with arterial hypertension; pregnant women with heart defects; pregnant women with kidney diseases; pregnant women with diabetes mellitus; stress urinary incontinence in pregnant women. Individual rehabilitation programs. Criteria for effectiveness in pregnancy with extragenital and obstetricpathology.

9.3.3 Threat of termination of pregnancy. Individualrehabilitationprograms.

Performance criteria.
9.3.4 Features of medical rehabilitation in inflammatory diseases of the female genital organs. Pathophysiological bases of inflammatory processes in the female genital organs. Indications and contraindications for medical rehabilitation. Kinesiotherapy. Physical methods of treatment. Psychotherapy. Therapeuticnutrition.Performance criteria.

9.4 Medical rehabilitationinpediatrics

9.4.1 Medical rehabilitation in pediatrics. Procedure for providing medical care in the pediatrics profile. Pr-z of the Ministry of Health of the Russian Federation No. 366n dated 16.04.2012."On approval of the Procedure for providing pediatric care". Indications and contraindications for the appointment of medical rehabilitation. Features of the physiology of the child's body.
9.4.2 Psychotherapeutic preparation of a child formedical rehabilitation methods. Featuresoftheuseofphysiotherapyinchildhood.
9.4.3 Leading means of medical rehabilitation in children with severe deformities of the musculoskeletal system due to mainly static deformities (flat feet, posture disorders, scoliosis, muscle imbalance, musclehypertonus).
9.4.4 Leading means of medical rehabilitation in children with respiratory diseases.
9.4.5 Leading means of medical rehabilitation in children with diseasesof the gastrointestinal tract
9.4.6 Age-related terms for prescribing physicalrehabilitation methods.

7. PRACTICAL TRAINING TOPICS

Section1. Fundamentalsof medicalrehabilitation. Methods and means of medicalrehabilitation.

Topic 1.
1.3 Fundamentalsofmedicalrehabilitation.
1.4 Fundamentalsofphysicaltherapy.
(The form of conducting is a practical lesson).
Questions on the topics of the section (for discussion in class, for self-study).

1.3. Fundamentals of medical rehabilitation(MR).

1.3.1. Basic concepts
1.3.1.1. Scientific background
1.3.1.2. Medical rehabilitation as a clinicalspecialty
1.3.1.3. Medical rehabilitation as an academicdiscipline
1.3.2. History of the development of the doctrine of medicalrehabilitation
1.3.3. Methodologicalfoundationsofmedicalrehabilitation
1.3.3.1. Basic principles
1.3.3.2. Evidence-basedmedicineandrehabilitation
1.3.3.3. Innovativerehabilitationtechnologies
1.3.4. Organization ofmedicalrehabilitation

1.1.4.14 Legal basis and features of the organization of medical rehabilitation inthe Russian Federation: Federal Law No. 323-FZ of 21.11.2011 "On the basics of protecting the health of citizens of the Russian Federation" Article40.

Pr-z of the Ministry of Health of the Russian Federation No. 1705n dated 29.12.2012. "On the procedure for providing medical rehabilitation" (in outpatient settings, in a day hospital, in hospitals).

Order of the Ministry of Labor of the Russian Federation No. 572n of 03.09.2018 "On approval of the professional standard "Specialist in Medical Rehabilitation"

1.1.4.15 Basic provisions of medical, social and professional rehabilitation.

1.1.4.16 Structure of the department of medical rehabilitation in a polyclinic, hospital, rehabilitation center, sanatorium-resort complex.

1.1.4.17 Stagesofmedicalrehabilitation.

1.1.4.18 Modern concept of the consequences of the disease on threelevels.

1.1.4.19 International Classification of Functioning (ICF), Disability and Health (WHO, 2007) and its significance in medicalrehabilitation

1.1.4.20 Patient's vital activity criteria and theirevaluation parameters.

1.1.4.21 The conceptofdisability.

1.1.4.22 Rehabilitation diagnosis, rehabilitation potential, and rehabilitation prognosis. Individual rehabilitation program (IPR). Definition of the concept, goals, and principles of implementing the IPR.

1.1.4.23 Methodological approaches to the preparation of IPR for patients and disabled people:the formation of a rehabilitation program, a comprehensive drug and non-drug technologies: physical therapy, physical therapy, massage, therapeutic and preventive nutrition, manual therapy and psychotherapy, reflexology and methods with the use of natural healing factors, and means, adapting the environment to the functional capabilities of the patient and (or) functional classes with Helicobacter pylori the ability of the patient to the environment, including through the use of mobility AIDS, prosthetics andorthotics.

1.1.4.24 Algorithms for drawing up an IPR and conducting medical rehabilitation: diagnosis of the patient's clinical condition; formation of the goalof conducting the IPR.

assessment of risk factors for carrying out rehabilitation measures; factors limiting the implementation of rehabilitation measures; morphological parameters; functional reserves of the body; the state of higher mental functions and the emotional sphere; violation of household and professional skills; restrictions on activity and participation in significant events of private and public life for the patient; environmental factors affecting the outcome

rehabilitation process, the purpose of funds and methods

1.1.4.25 Organization and specifics of the work of a multidisciplinaryteam.

1.1.4.26 Routing of patients during medicalrehabilitation.

1.1.4.15 Methods for evaluating the effectiveness of medical rehabilitation.Activityscalesusedinmedicalrehabilitation.

1.1.4.16 Contraindicationstorehabilitationmeasures

1.4. Fundamentalsofphysicaltherapy.

1.2.2 The main provisions inphysical therapy.

1.2.2.1 Basic concepts in physical therapy.

1.2.2.1.1 Physicaltherapy.

1.2.2.1.2 Categories of physical therapy: therapeutic physical factors, physicalmethod treatment options. Method of physiotherapy procedure.

1.2.2.1.3 Subjectofstudy

1.2.2.1.4 Physicalmethods

1.2.2.1.5 Lawsofphysicaltherapy

1.2.2.2 . Basic principles of therapeutic use of physicalfactors.

1.2.2.2.1 The principle of unity of syndromic-pathogenetic and clinical-functional approaches.

1.2.2.2.2 The principle of individual treatment by physicalfactors.

1.2.2.2.3 The principle of course treatment by physicalfactors.

1.2.2.2.4 The principle of optimal treatment by physicalfactors.

1.2.2.2.5 The principle of complex treatment by physicalfactors.

1.2.2.2.6 The principle of dynamic treatment by physicalfactors.
1.2.2.3 General contraindications forphysical therapy.

Topic 2.
2.3 Electrotherapy.
2.4 Magnetictherapy.
(The form of conducting is a practical lesson).
Questions on the topics of the section (for discussion in class, for self-study)

2.3 Electrotherapy. Therapeutic effect. Therapeutic effects.Indications. Contraindications.Parameters.
2.3.1. Direct current electrotherapy: electroplating, medicinalelectrophoresis
2.1.2 Central impact pulsed electrotherapy:.electrocontherapy, transcranialelectrical stimulation
2.1.5. Pulsed peripheral electrotherapy: diadinamotherapy, short-pulse electroanalgesiaэлектроаналгезия.
2.1.6. Low-frequency electrotherapy: amplipulsetherapy,myoelectric stimulation, interference therapy
2.1.8 Mid-frequency electrotherapy: local darsonvalization,ultra-tonotherapy
2.1.9 Ultra-highfrequencytherapy
2.1.10 Ultrahigh-frequency electrotherapy: decimeter-wave therapy (DMV-therapy), centimeter-wave therapy (SMV-therapy), extremely high-frequency therapy (EHF-therapy).
2.4 Magnetictherapy. Therapeutic effect.Therapeutic effects. Indications. Contraindications.Parameters.
2.4.1. Transcerebralmagnetictherapy.
2.4.2. Pulsedmagnetictherapy.
2.2.5 Low-frequency magnetictherapy: alternatinglow-frequency electromagnetic field (PeMP), pulsating (PuMP) of the magneticfield.
2.2.6 High-frequency magnetic fields(MF)

Topic 3.
3.5 Phototherapy
3.6 Therapeutic use of mechanical factors.
3.7 Hydrotherapy.
3.8 Thermotherapy.
The form of conducting is a practical lesson**.**
Questions on the topics of the section (for discussion in class, for self-study**)**

3.8 Phototherapy.
3.9 Therapeuticeffect.Therapeuticeffects.Indications.Contraindications. Parameters.
3.9.1 Infraredradiation.
3.9.2 Chromotherapy.
3.9.3 Ultraviolet radiation: Long-, Medium-and Short-wave radio equipment. Irradiation of blood with a short-wave spectrum of ultraviolet radiation (autotransfusion of irradiated blood-AUFOC).
3.9.4 Laser radiation: red and infrared. Intravenous laser irradiation of blood.(ВЛОК).
3.10 Therapeutic use of mechanical factors.
3.11 Therapeutic effect. Therapeutic effects.Indications.Contraindications. Parameters.
3.11.1 Therapeuticmassage.
3.2.2. Traction therapy.
3.2.11 Vibrotherapy.

3.2.12 Remote shock-wavetherapy.
3.2.13 Therapeutic useof ultrasound.
3.2.14 Medicinalultraphonophoresis.
3.2.15 Aeroionotherapy.
3.2.16 Aerosoltherapy. Modern equipment. Medicinalsubstances used foraerosoltherapy.
3.2.17 Haloaerosoltherapy.
3.2.18 Aerialphytotherapy.
3.12 Hydrotherapy. Therapeutic effect. Therapeutic effects.Indications. Contraindications. Parameters.
3.12.1 Showers: low, medium and high pressure; indifferent, warm and hot showers, contrast showers, underwatermassage showers.
3.12.2 Baths: fresh baths (warm, cold), contrast baths.Aromaticbaths. Gasbaths.
3.12.3 Colonohydrotherapy.
3.12.4 Baths: steam bath, dry-air bath (sauna).
3.13 Thermotherapy.
3.14 Therapeutic effect. Therapeutic effects.Indications. Contraindications.Parameters.
3.14.1 Heattherapy: paraffin-ozokeritolechenie.
3.14.2 Cryotherapy: water-containing cryoagents: ice cubes, cryopackages, cryoapplicators, hypo-thermal thermalpads; cold metal junction of thermoelectric contact devices, gases or mixtures thereof (chloroethyl, carbon dioxide, nitrogen and air), cold pencils. General cryotherapy (extremecryotherapy).

Topic 4.
4.5 Spatherapy.
4.6 Medical rehabilitation in the structure of sanatorium-resortcare.
4.7 Manualtherapy.
4.8 Therapeuticnutrition.
The form of conducting is a practical lesson**.**
Questions on the topics of the section (for discussion in class, for self-study)

4.6 Spa therapy.
4.7 Therapeutic effect. Therapeutic effects.Indications.Contraindications. Parameters.
4.7.1 Climatotherapy: aerotherapy, speleotherapy, airbaths, heliotherapy, thalassotherapy.
4.7.2 Balneotherapy.. Mineral waters for external use: sodium chloride baths, iodine-bromine baths, mineral-gas baths, carbon dioxide baths, hydrogen sulfide baths, radon baths. Drinking mineral waters: total mineralization, ionic composition and presence of biologically active components, natural table, medicinal table and medicinal mineral waters. Chemical composition and physical properties of mineral water according to the Kurlov M formula:.City of Method of receiving mineralwaters.
4.7.3 Peloidotherapy. Classification of therapeutic mud by origin: sulfide-silt, sapropel, peat,and hill mud.
4.8 Medical rehabilitation in the structure of sanatorium-resortcare.
4.8.1 Spatreatment.
4.8.1.1 Definition of spa treatment. Procedure for organizing spatreatment
4.8.1.2 Categories of citizens sent for sanatoriumtreatment
4.8.1.3 Types of sanatorium-resort organizations: balneological hospital; mud clinic; resort polyclinic; sanatorium for children, including for children with parents; sanatorium-preventorium; sanatorium health camp of year-roundoperation.
4.8.1.4 Sanatorium, as the main type of medical and preventive organization in the resort.

Medical profileofsanatoriums
4.8.1.5 Principles of operation of a health resort organization. Modes of health and wellness activities in a health resort organization: sparing, sparing-training and training, theircontent.
4.8.1.6 Selection and referral of patients for sanatorium treatment, registration of documentation.
4.8.2 Medical rehabilitation athealth resorts.
4.8.2.1 Mainprovisions.
4.2.2.4. Rehabilitation programs in sanatoriums, as forms of after-treatment in the conditions of specialized (rehabilitation) departments of sanatoriums after inpatient treatment of patients with disabling diseases on freevouchers.
4.2.2.5. The main tasks of medical rehabilitation ina sanatorium.
4.2.2.4 Procedure for issuing vouchers for post-treatment of patients
4.2.2.7. Documents for referral for further treatment (rehabilitation) to a sanatorium, which are issuedto the patient.
4.2.2.8. The list of diseases after which patients are sent for further treatment to rehabilitation departments of sanatoriums at the expense of socialinsurance funds.

4.9 Manualtherapy.
4.3.1. Basic concepts and principles of manual therapy.
4.3.5 Indications and contraindications for the appointment of manualtherapy.
4.3.6 Parameters and methods of treatment in manual therapy: massage movements, mobilization,manipulation.
4.3.7 Myofascialrelease.
4.10 Therapeuticnutrition.
4.10.1.1 Basics of therapeuticnutritionThe law of energy adequacy of nutrition, the law of qualitative (plastic)4
4.10.1.2 The law of enzymatic activity, the law of biotic adequacy,the law of compliancewith the food intake regime.
4.10.2 Nutrition assessment and identification of nutritionalsupport needs
4.10.2.1 Integrated nutrition assessment indicatorsPr-z MZMinistry of Health and Social Development Russian Federation No. 330 dated 05.08.2003.
4.10.2.2 Criteria for protein and energy insufficiency: mild, moderate, severe degreeof insufficiency
4.10.2.3 Therapeutic nutrition in medicalrehabilitation programs.
4.10.2.4 Standard diets,dietregimen

Topic 5.
5.4 Reflexology.
5.5 Psychologicalrehabilitation.
5.6 Medical supervision in medical rehabilitation. The form of conducting is a practicallesson.
Questions on the topics of the section (for discussion in class, for self-study)

5.4 Reflexology.
5.4.1 Basicconcepts.
5.1.6 Modern ideas about the mechanisms дейтствияof reflexology.
5.1.7 Concepts of meridians and biologically active points(BAT).

5.1.8 Ancient Chinese concepts of Zhen-jutherapy . Classification of BAHT. Five standard points on the meridian, the principles of their use, the principles of drawing up a reflexotherapyprescription.

5.1.9 Modern methods of reflexology. Physiopuncture. Therapeutic effect. Therapeutic effects. Indications. Contraindications.Parameters

5.1.10 Computer electro-pulsescanning.

5.5 Psychologicalrehabilitation.

5.5.1 Basic conceptsandprinciples

5.5.1.1 Psychologicalcorrection

5.5.2 The main tasks of psychologicalrehabilitation.

5.2.1. Basic principles of psychological rehabilitation. Therapeuticeffects. Indications.Contraindications.

5.2.4 Methodsofpsychologicalrehabilitation.

5.2.5 Traditional methods. Apitherapy. Ampelotherapy, Hirudotherapy. Psammotherapy. Enotherapy.Herbalmedicine

5.6 Medical supervision in medicalrehabilitation.

5.6.1 Basicconcepts.

5.6.1.1 Goals and objectives of medicalsupervision

5.6.2 Types of medical control and theircontent.

5.6.2.1 Diagnostics of the patient's physical development and functional state.

5.6.2.2 Features of choosing a physicalactivity mode.

5.6.2.2.1 6-minutewalktest

5.6.2.2.2 Assessment of the patient's condition on the scale ofThe Borg.

5.6.2.2.3 Heart rate monitoring. The maximum allowable heart rate during exercise, depending on the age. Dynamics ofbloodpressureduringphysicalexertion

5.6.2.2.4 Estimation of the load value based onbody weight dynamics

5.6.2.2.5 SampleMartinet. Types of reactions to physical activity based on the resultsof the test

5.6.2.2.6 Submaximalbicycleergometrictest

5.6.2.2.7 A test recommended by WHO for determining the physical performance of athletes and physical athletesPWC170.

5.6.2.2.8 Determinationoftherespiratoryrate

5.6.2.2.9 Determination of vital capacity of lungs(VEL).

5.6.2.2.10 Breath-holding tests. Sample of the Bar. SampleGenchi

5.6.2.2.11 КистеваяHanddynamometry

5.6.2.2.12 Drawing up the physiological curveof the lesson

5.6.2.2.13 Evaluation scales for integral assessment of the patient's condition. Standard: severity scores for acute and chronic diseases (APACHE III), quantitative pain scale (NPRS), physiological index (PI),respiratory index
index (ResI).

5.6.2.2.14 The importance of medical supervision in medicalrehabilitation.

Topic 6.

6.4 Therapeutic physical culture(physical therapy).

6.5 Wellnessmethods

6.6 Rehabilitationofdisabledpeople.

The form of conducting is a practical lesson.

Questions on the topics of the section (for discussion in class, for self-study)

6.1 Therapeuticphysicalculture (LFK).

6.3. Basic provisions and principlesof physical therapy.

6.3.1 Main provisions. Organization of physical therapy in the Russian Federation:Decree No. 337 of the Ministry of Health of the Russian Federation dated 20.08.2001 "On measures for further development and improvement of sports medicine and physical therapy". Subject of physical therapy study. Object of physical therapy study. Medical documentation in departments and physical therapy rooms (f.0.42/y).

6.1.2. Principles of physical therapy. Principles of therapeutic use of physical exercises. The principle of active participation of the patient in physical training. The principle of individual physical activity. The principle of regular exercise. The principle of adequacy of physical activity. The principle of gradual and consistent increase in physical activity.

6.4. Methods of therapeutic physicalculture.
6.4.1 Kinesitherapy.
6.4.1.1 Methodology of kinesotherapy. Types of exercises. Mechanisms of action of physical exercises on the body: formation of integrated motor reflexes, correction of the tone of the central nervous system, formation of temporary and permanent compensations, development of new compensatory reactions, stimulating effect of physical exercises on various body systems, restoration of trophism, increased reactivity and resistance to pathogenic environmental factors. Therapeutic effects: Tonic, trophostimulating, reconstructive, compensatory. Indications for kinesitherapy. Contraindications. DosageKinesitherapy. Classificationofphysicalexercises.
6.4.1.2 Various forms of kinesitherapy.Proprioceptive Neuromuscular Facilitation(Neuromuscular FacilationPNF) methodKabata). MethodBobat. Voight'smethod. Passivesuspensionsystems. Activestretchsystems.
6.4.1.3 Therapeutic gymnastics as a form of kinesotherapy. Methods of conducting therapeutic gymnastics. Introductory, main and final parts. Curve of physiological load during therapeutic gymnastics. Typesofexercises
used in the water and final part комлексаof the LG complex.
6.4.1.4 Morning exercises as a form of kinesotherapy. Goals andobjectives. Approximate set of physical exercises in the morninggymnastics.
6.4.1.5 Therapeutic motor mode as a form of kinesotherapy. Therapeutic effects: training, correcting, toning, compensatory. Motor modes in the hospital and their content. Criteria for transferring from one motor mode to another. Functional tests performed when switching from one motor mode to another. Therapeuticmotormodesinhealthresorts.
6.2.4. Therapeutic walking.Types of therapeutic walking. Dosed physical activity during normal and Nordic walking. Indicationsandcontraindications
6.2.10 Mechanokinesitherapy. Movements on motorizedsimulators. Therapeutic effects. Indications. Contraindications. Parameters.
6.2.11 Bio-controlled mechanokinesitherapy.Therapeutic effects. Locomotor-corrective, tonic, metabolic. Indications. Contraindications. Computerized simulators (HUBER, IMOOVE, etc.) Features of training methods. Indications.Contraindications.
6.2.12 Hydrokinesitherapy.Therapeutic effects. Trofo-, myostimulating, tonic, locomotor-correcting, actoprotective. Indications. Contraindications. Parameters. Therapeutic swimming. Aquagymnastics. Aquastep. Aquafitness, dosage of procedures. Indicationsandcontraindications.
6.2.13 Robotic mechanotherapy. Therapeutic effects. Locomotor-correcting, tropho-and myo-stimulating. Indications. Contraindications. Parameters. Robots classified according to the principle of operation: end-effector robots (Mit-Manus, ARM Guide, MIME),exoskeleton robots: walking training robots (Gait trainer GT II). вертикализаторErigoverticalizer robot, Робот- , ANYMOV verticalizer robot, Lokomoat Computerized robot, and VR robots: CAREN robot. Robots-compensators CON-TREX, Biodex. Principles of physical activity dosing inrobotics.
6.2.14 Occupationaltherapy. Mechanisms of action. Parameters:patient occupancy. Typesofemployment. Occupationaltherapystrategies: - developmental(recovery

impaired function) and compensatory (replacement of a lost function). Labor operations. Therapeutic effects. Motor-correcting, tonic, psychostimulating, actoprotective. Evaluation of the effectiveness of the course of procedures on the scales of assessment of the International Classification of Functioning-ICF. Indicationsandcontraindications.

6.2.15 Sports exercises. Therapeutic effects. Motor-correcting, psychostimulating. Parameters. Activities: Skiing. Medium and heavy load mode. Swimming. Medium and heavy load mode. Breaststroke or freestyle swimming without taking your hands out of the water. Volleyball. Lawntennis. Tabletennis.Badminton.

6.2.16 Orthotherapy. Tasks of orthotherapy. Therapeutic effects. Locomotor-correcting, myotonic, muscle relaxant. Indications. Contraindications. Parameters. Types of orthoses. Static orthoses (passive splints) Dynamic orthoses. Functionalorthoses. Active-passive buses. Bio-controlled tires in rehabilitation. ОртезыRobotorthosesforjoints. Termsofusingorthoses.

6.3. Wellnessmethods

6.3.1 Health assessmentздоровья

6.3.1.1 Health and its diagnostics. Assessment of the energy potential by the MPC indicator (Maximum oxygen consumption).KerdoVegetative Index
(Coefficient of vegetative equilibrium according to A.M.To Vane,).

6.3.1.2 Somatic health and methods for assessing the functional and morphological properties of the body. Height-weight ratio (indexQuetelet). Life index. A double product. Martinet's test-Kushelevsky. Physicalperformanceof a person. Calculatingthe IPC.

6.3.2 Wellness training sessions. Health-improving physical activity andadaptation mechanisms.

6.3.2.1 Physicalactivityparameters

6.3.2.2 Structure of wellness training. Training phases. Frequency of training sessions. General endurance training,dosing.

6.2.2.3. Health training in modern health programs. Aerobics (rhythmic gymnastics). Step-aerobics (using step exercises).
platforms), fitball-aerobics (aerobics on fitballs). Fitness. Wellnessfacilities.

6.2.5. Health-improvingphysicalmethods.

6.2.5.1 Methods. Staminostimulatingagents. Protectiveones. Actoprotectivemethods

6.2.5.2 Methods.Non-specific ones.Specific features

6.4 Rehabilitationofdisabledpeople.

6.4.1 Fundamentals of rehabilitation assistancefor disabled people.

6.4.1.1 Three-dimensional concept of disease impact assessment (according to WHO recommendations, 1989).

6.4.1.2 Tasks of medical and socialexpertise.

6.4.1.3 The main directions of rehabilitation of disabled people. "Medical and social rehabilitation". Professional rehabilitation. Socialrehabilitation

6.4.2 Individual rehabilitation programfor a disabled person.

6.4.2.1 A complex of rehabilitation measures optimal for a disabled person in an individual program. Form of an individual rehabilitation program for a disabled person, Пр-з Ministry of Health and Social Development Russian Federation No. 379n dated 04.08.2008. Sectionsof the IPR.Evaluation of the results проведенойof rehabilitation performed.

6.4.3 Technical means for rehabilitationof disabled people.

6.3.3.1. A new socially-oriented model of disability implemented by WHO.

6.3.3.2 TCP MainFeature

Section 2. Medical rehabilitation in clinical practice.

Topic 7.

7.3 Medical rehabilitationincardiology.

7.4 Medical rehabilitationinpulmonology.

(The form of conducting is a practical lesson).

Questions on the topics of the section (for discussion in class, for self-study).

7.3 Medical rehabilitationincardiology.

7.3.1 Model of cardiorehabilitation inthe Russian Federation.

7.3.2 Standard of medical care for patients with acute myocardial infarctionПр-з Ministry of Health and Social Development of the Russian Federation No.548 dated 06.09.2005

7.3.3 Groups of patients who need medicalrehabilitation.

7.3.4 Stages of activity in patients with myocardial infarction in ahospital setting.

7.3.5 Stages of activity in patients with myocardial infarction in a polyclinic or spa.

7.3.6 Tasks of medical rehabilitation in patients with myocardial infarction. Kinesiotherapy.Physical methods of treatment. Psychotherapy. Therapeutic nutrition. Contraindications. Performance evaluation.

7.3.7 Tasks of medical rehabilitation inCHD.

7.3.8 Characteristics of functional classes of CHD patients. Kinesiotherapy. Dosage of physical activity, depending on the functional class. Therapeutic swimming modes. Physical methods of treatment. Psychotherapy. Therapeutic nutrition. Performance evaluation.Contraindications.

7.3.9 Tasks of rehabilitation of operated patients with CHD. Condition after реваскуляризацииcardiac revascularization. Kinesiotherapy. Principles of physical activity dosing. Physical methods of treatment. Psychotherapy. Therapeuticnutrition. Contraindications. Performance evaluation.

7.3.10 Tasks of rehabilitation for hypertension. Standards of primary health care for primary arterial hypertension (hypertension) approved by Order of the Ministry of Health of the Russian Federation No. 708n of 9.11.202. Kinesiotherapy, dosage of physical activity.. Physical methods of treatment. Psychotherapy. Therapeuticnutrition. Contraindications. Performance evaluation.

7.4 Medical rehabilitationinpulmonology.

7.4.1 Fundamentals of pulmonary rehabilitation in the Russian Federation, the procedure for providing medical care to patients in the "pulmonology" profile approved by the order of the Ministry of HealthRussian Federation from15.11.2012 No. 916n.

7.4.2 Tasks of rehabilitation for pneumonia. Kinesiotherapy. Physical methods of treatment. Psychotherapy. Therapeuticnutrition. Contraindications.Performance evaluation.

7.4.3 Purpose and objectives of medical rehabilitation of patients with COPD. Standards of medical care for patients with COPD (chronic obstructive pulmonary disease). Stages of COPD development. System of functional classes of COPD patients. Physical methods of treatment. Kinesiotherapy. Psychotherapy. Therapeutic nutrition. .Contraindications.Performance criteria.

7.4.4 Tasks of rehabilitation of patients with bronchial asthma. Kinesiotherapy, principles of physical activity dosage. Special breathingexercises. Psychotherapy. Therapeuticnutrition. Performance criteria.Contraindications.

Topic 8.

8.5 Medical rehabilitation in gastroenterology andendocrinology.
8.6 Medical rehabilitationinoncology.
8.7 Medical rehabilitation for infectiousdiseases.
8.8 Medical rehabilitationinneurology.
(The form of conducting is a practical lesson).
Questions on the topics of the section (for discussion in class, for self-study .

8.2 Medical rehabilitation in gastroenterology andendocrinology.
8.2.1 Fundamentals of medical rehabilitation in gastroenterology. Tasks of medical rehabilitation in gastroenterology. Procedure for providing medical care to the population, Pr-z of the Ministry of Health of the Russian Federation from 12.11.2012, 906n. Procedureforprovidingmedicalcaretothepopulationbyprofile "gastroenterology "
8.2.2 Medical rehabilitation for diseases of the operated stomach andgallbladder..Physicalmethodsoftreatment. Kinesiotherapy. Psychotherapy. Therapeuticnutrition.
8.2.3 Fundamentals of medical rehabilitation in endocrinology. Tasks of medical rehabilitation in endocrinology. Pr-z of the Ministry of Health of the Russian Federation No. 899n dated 12.11.2012. Procedure for providing medical care to the adult population inthe "endocrinology" profile.
8.2.4 Diabetes mellitus, major syndromes. Indications and contraindicationsfor the appointment of medical rehabilitation. Physical methods of treatment. Kinesiotherapy. Psychotherapy. Therapeutic nutrition. Performance criteria.
8.2.5 Fundamentals of medical rehabilitation in oncology. Kinesiotherapy. Physical methods of treatment. Psychotherapy. Therapeuticnutrition. Social rehabilitation. Efficiencycriteria.
8.2.6 Fundamentals of medical rehabilitation for infectiousdiseases.
8.2.6.1 Tasks of medical rehabilitation for viral hepatitis. Kinesiotherapy. Psychotherapy. Therapeutic nutrition.Efficiency criteria.
8.2.6.2 Tasks of medical rehabilitation for tuberculosis. Procedure for providing medical careto the population, Pr-z of the Ministry of Health of the Russian Federation from 15.11.2012, 932n. on approval of the Procedure for providing medical care to tuberculosis patients. The main syndromes intuberculosis. Physical methods of treatment. Kinesiotherapy. Psychotherapy. Therapeuticnutrition.Efficiencycriteria.
8.2.7 Medical rehabilitation in neurology. World model of neurorehabilitation.Organization of neurorehabilitation in the Russian Federation: Pr-z of the Ministry of Health of the Russian Federation No. 926n. and No. 928n. " Procedure for providing medical care to adults with diseases of the nervous system and providing medical care to patients with acute cerebrovascular accident.". Patient groups indicated for medical rehabilitation. Contraindications formedical rehabilitation.
8.2.8 Medical rehabilitation for acute cerebrovascular accident (ACV). Pathophysiological features of ONMC. Tasks of medical rehabilitation. Treatment by position. Early verticalization. Correction of swallowing disorders. Ontogenetic kinesitherapy. Kinesitherapy. Physical methods of treatment. Psychotherapy. Therapeuticnutrition.Efficiencycriteria.
8.2.9 Medical rehabilitation for vertebrogenic diseases of the peripheral nervous system.

Pathophysiologicalfeaturesofperipheralnervoussystemdiseases

systems. The main syndromes of diseases. Rehabilitation tasks. Kinesitherapy. Physical methods of treatment. Reflexology. Manual therapy. Psychotherapy. Therapeutic nutrition. Contraindications to medical rehabilitation. Efficiencycriteria. Contraindicationsformedicalrehabilitation.

Topic 9.

9.5 Medical rehabilitation in traumatology andorthopedics.
9.6 Medical rehabilitationinsurgery.
9.7 Medical rehabilitation in auscherism and gynecology.
9.8 Medical rehabilitationinpediatrics

(The form of conducting is a practical lesson).

Questions on the topics of the section (for discussion in class, for self-study).

9.5 Medical rehabilitation in traumatology andorthopedics.

9.5.1 Fundamentals of medical rehabilitation in traumatology and orthopedics. Procedure for providing medical care in the field of traumatology and orthopedics. Pr-z of the Ministry of Health of the Russian Federation No. 901n dated 12.11.2012. On approval of the procedure. Providing medical care to the population by profile. "Traumatology and orthopedics". Indications and contraindications for the appointment of medical rehabilitation. Pathophysiological bases костноof musculoskeletal system injuries. Periods of the treatment process for injuries of the musculoskeletal system. Post-traumaticandpostoperativesyndromes.

9.5.2 Tasks of medical rehabilitation related to damage or surgery of the musculoskeletal system. Features of rehabilitation in conservative and operative methods of treating injuries and deformities of the musculoskeletal system. Physical methods of treatment. Kinesiotherapy. Psychotherapy. Therapeutic nutrition. Social rehabilitation .Performance criteria.Contraindications.

9.6 Medical rehabilitationinsurgery.

9.6.1 Fundamentals of medical rehabilitation in surgery. Procedure for providing medical care to the population in the "surgery" profile. Pr-z of the Ministry of Health of the Russian Federation from 15.11.2012. Pathophysiological features of surgical trauma. Indications and contraindications for the appointment of medical rehabilitation.

9.6.2 Features of medical rehabilitation during lung surgery. Kinesiotherapy. Physical methods of treatment. Psychotherapy. Therapeuticnutrition. Social rehabilitation Performance criteria.Contraindications.

9.6.3 Features of medical rehabilitation during operations on the abdominal organs. Kinesiotherapy. Physical methods of treatment. Psychotherapy. Therapeutic nutrition. Social rehabilitation .Performance criteria.Contraindications.

9.7 Medical rehabilitation in auscherism and gynecology.

9.7.1 Fundamentals of medical rehabilitation in obstetrics and gynecology. Procedure for providing medical care in the "obstetrics and gynecology" profile. Pr-z of the Ministry of Health of the Russian Federation No. 572n dated 01.11.2012. Indications and contraindications for the appointment of medical rehabilitation. The most common extragenital diseases duringpregnancy.

9.7.2 Features of medical rehabilitation during pregnancy with extragenital andobstetric pathology: pregnant women with arterial hypertension; pregnant women with heart defects; pregnant women with kidney diseases; pregnant women with diabetes mellitus; stress urinary incontinence in pregnant women. Individual rehabilitation programs. Criteria for effectiveness in pregnancy with extragenital and obstetricpathology.

9.7.3 Threat of termination of pregnancy. Individualrehabilitationprograms.

Performance criteria.
9.7.4 Features of medical rehabilitation in inflammatory diseases of the female genital organs. Pathophysiological bases of inflammatory processes in the female genital organs. Indications and contraindications for medical rehabilitation. Kinesiotherapy. Physical methods of treatment. Psychotherapy. Therapeuticnutrition.Performance criteria.

9.8 Medical rehabilitationinpediatrics

9.8.1 Medical rehabilitation in pediatrics. Procedure for providing medical care in the pediatrics profile. Pr-z of the Ministry of Health of the Russian Federation No. 366n dated 16.04.2012."On approval of the Procedure for providing pediatric care". Indications and contraindications for the appointment of medical rehabilitation. Features of the physiology of the child's body.
9.8.2 Psychotherapeutic preparation of a child formedical rehabilitation methods. Featuresoftheuseofphysiotherapyinchildhood.
9.8.3 Leading means of medical rehabilitation in children with severe deformities of the musculoskeletal system due to mainly static deformities (flat feet, posture disorders, scoliosis, muscle imbalance, musclehypertonus).
9.8.4 Leading means of medical rehabilitation in children with respiratory diseases.
9.8.5 Leading means of medical rehabilitation in children with diseasesof the gastrointestinal tract
9.8.6 Age-related terms for prescribing physicalrehabilitation methods.

8. LABORATORY PRACTICE - This type of work is not providedfor by the UE.

9. **Topics of term papers and test papers** — *This type of work is not providedUP*

10. SUBJECTOF RESEARCH PAPERS

1. Fundamentalsofmedicalrehabilitation.
2. Medical, socialandprofessionalrehabilitation
3. International Classification of Functioning, Disability and Health (ICF) as a basis for the work of a multidisciplinaryteam
4. Contents of the Order of the Ministry of Health of the Russian Federation No. 1705n dated 29.12.2012 "On the procedure for providing medical rehabilitation" (in outpatient settings, in a day hospital,in hospitals).
5. Contents of the Order of the Ministry of Labor of the Russian Federation No. 572n dated 03.09.2018 "On approval of the professional standard "Specialist in Medicalrehabilitation"
6. Fundamentalsofphysicaltherapy.
7. Constant and pulsed currents inphysiotherapy
8. Ultra-high frequency and ultra-high frequency therapy inphysical therapy
9. Magnetictherapy.
10. Infrared radiation, chromotherapy and ultraviolet radiationin physical therapy
11. Laser therapy.
12. Therapeuticmassage
13. Aerosol therapy haloaerosol therapy,aerophytotherapy.
14. Hydrotherapy.
15. Thermotherapy.
16. Spatherapy.
17. Medical rehabilitation in the structure of sanatorium-resortcare.

18. Manualtherapy.
19. Therapeuticnutrition.
20. Fundamentalsofreflexology.
21. Wellnessmethods
22. Physical therapy in the system of medicalrehabilitation
23. Rehabilitationofdisabledpeople.
24. Kinesotherapy in medical rehabilitation and medicalrehabilitation.
25. Medical rehabilitationincardiology.
26. Medical rehabilitationinpulmonology.
27. Medical rehabilitation in gastroenterology andendocrinology.
28. Medical rehabilitation for infectiousdiseases.
29. Medical rehabilitationinneurology.
30. Medical rehabilitation in traumatology andorthopedics.
31. Medical rehabilitationinsurgery.
32. Medical rehabilitation in obstetrics andgynecology.
33. Medical rehabilitationinpediatrics

Requirements for writing an abstract: the abstract should reflect the goals and objectives set, as well as disclose the issue being studied, combining capacity and conciseness. The volume of the abstract is 10-12 sheets of typewritten text, 1-2 sheets – introduction, 8-10-main material, 1-2-conclusion. The list of references is given in accordance with the standard requirements.

11. LIST OF QUESTIONS FOR THETEST

1. The concept of rehabilitation and medical rehabilitation. Indications and contraindications for the use of medical rehabilitation equipment. Guidelines for providing rehabilitation care to patients: Pr-z of the Ministry of Health of the Russian Federation No. 1705n dated 29.12.2012. "On the procedure for providing medical rehabilitation" (in outpatient settings, in a day hospital,in hospitals).
2. Carrying out rehabilitation activities at various stages of the rehabilitationprocess. List the factors that limit the implementationof rehabilitationmeasures. Formationofgoalsandobjectivesofrehabilitationactivities.
3. Formation of a rehabilitation program, integrated use of drug andnon-drugtherapy. Evaluation of the effectiveness of rehabilitation measures and theirprognosis.
4. Research and evaluation of daily activities. Functional Independence Scale (FIM), Bartel, and Katzscales. The concept of a functional class. Organization and principles of work of a multidisciplinaryteam
5. International classificationoffunctioning,limitations life and health (ICF). Classification structure and its significance in the work of a multidisciplinary team.
6. Principles of developing an individual rehabilitation program (IPR). Evaluationoftheeffectivenessofrehabilitationmeasures.
7. Modern means andtechnologiesof physical therapy. Classificationofphysicalentities

exercises usedin physical therapy. Mechanisms of therapeutic action of movements. Principles of prescribing physical therapy Indications and contraindications for prescribingphysical therapy.

8. Forms and methods of conducting physical therapy classes, principles of dosing physical exercises in physical therapy classes Schemes for building therapeutic gymnastics complexes Motor modes at various stagesof rehabilitation.

9. Organizational structure of physical therapy departments and offices. Medical documentation of physical therapy rooms. (f. 0. 42/y). The concept of reflexology (RT). Mechanismsof actionof reflexotherapy. Classification of methods of classical reflexology Classification of physiopuncture methods of reflexology.

10. Theoretical foundations of physical therapy. Definition and subject of physiotherapy study. Classification of physical factors. Physiological mechanisms of action of physical factors. Theoretical foundations of the influence of physical factors on the body in the light of the latest achievements in biophysics, biochemistry and physiology.

11. The concept of local, reflex-segmental and general reactions of the body to the action of physical factors. Basic principles of therapeutic use of physical factors. General contraindications to the useof physical therapy.

12. Features of the use of physiotherapy in the elderly. Features of the use of physiotherapyin children.

13. Organization of physical therapy services. Organization of work of the physiotherapy department, office. Safety precautions for physiotherapy procedures. Medical documentation of physiotherapy rooms and departments. Accounting documentationforms. F. 0/44.

14. Electroplating. Characteristics and physiological effects of direct current. Treatment methods. Therapeutic effects. Indications and contraindications. Modern devices andtreatment parameters.

15. Drug electrophoresis. Principles of introduction of medicinal substances into the body by direct current. Therapeutic effects of drug electrophoresis. Indicationsandcontraindications.

Features of the method of drug electrophoresis.Mechanismof action. Therapeutic effects. Indications and contraindications. Technique and methodology of performing procedures. Parameters and devices. What are the features and advantages of drug electrophoresis over other methods ofdrug administration?

16. Pulsed electrotherapy of peripheral influence, generalcharacteristics. Diadynamictherapy. Physical characteristics and mechanism of action applied current. Therapeutic effects. Indications and contraindications. Techniqueandmethodologyofperformingprocedures. Parametersanddevices.

17. Amplipulstherapy. Physical characteristics and mechanismof action applied current. Therapeutic effects. Indications and contraindications. Techniqueandmethodologyofperformingprocedures. Parametersanddevices.

18. Medium-frequency electrotherapy with high-voltage alternating electric current: local darsonvalization. Physical characteristic of the current. Mechanism of action. Therapeutic effects. Indications and contraindications. Techniqueand methodology of performing procedures. Parameters anddevices

19. Ultrahigh frequency alternating electric field: UHF therapy. Physical characteristics of the electrical system used for medical purposesэлектрической

component of the electromagnetic field. Oscillatory and thermal components of the mechanism of therapeutic action of UHF oscillations, patterns of energy distribution in tissues,

20. The main therapeutic effects of UHF therapy. Indications and contraindications, devices, parameters of therapeutic effect. Methods of conducting procedures depending on the stage of the pathological process, dosageof procedures.

21. Electromagnetic fields. Microwave ultra-high frequency therapy. What are the physical characteristics of DMV and SMV therapy methods? What is the reason for the penetrating power of microwave effects? When using which method it is more pronounced — with DMV or CMV therapy? Why? In which tissues does the maximum heat release occur during microwave therapy? Explain the therapeutic effects of CMV and DMV therapy. Name the indications and contraindications for theiruse.

22. The main therapeutic effects of DMV therapy, indications and contraindications, parameters of therapeutic effects, methods of procedures depending on the stage of the pathologicalprocess.

23. Centimeter-wave, millimeter-wave therapy. Physical characteristics of the active factors. Oscillatory and thermal components of the mechanism of therapeutic action of microwave oscillations. The main therapeutic effects of, centimeter-wave, millimeter-wave therapy, parameters of therapeutic effects, methods of procedures depending on the stage of the pathological process. Name theindicationsandcontraindicationsfortheiruse.

24. Magnetic fields.Variable low-frequency magnetic field: PeMPtherapy. Mechanisms of formation of the main therapeutic effects, indications and contraindications, devices, parameters of therapeutic effects, the main types of low-frequency magnetic fields used. Methods of conducting medical procedures and selecting the exposure mode, dosing of variable low-frequency magnetic fields ? What is the effect of a low-frequency magnetic field on the liquid crystal structures of the membrane and the cytoplasm of cells? Explain the significance of the changes that occur in these structures for the functioningof cells.

25. High-frequencymагнитотерапияmagnetic therapy: inductothermy. Mechanisms of heat generation in the body under the action of high-and ultrahigh-frequency magnetic field fluctuations, patterns of energy distribution in tissues. The main therapeutic effects, indications and contraindications, devices, parameters of therapeutic effects, methods of procedures depending on the stage of the pathological process, dosage. Physical characteristics of fields. Mechanism of action. Therapeutic effects. Treatment methods. Parameters. Indicationsandcontraindications.Mobile devices.

26. Therapeutic use of ultraviolet radiation. The main types of ultraviolet radiation (long - medium - and short-wave) and their brief characteristics. Physico-chemical effects of UFOs in tissues. Mechanisms of biological and therapeutic-preventive action, indications and contraindications. Parameters of therapeutic effect, devices forthe Ural Federal District.

27. Methods and basic schemes of general UFOs. PUVA therapy. Treatment methods. Krovi UFD. Principles of UFD dosimetry, biodose, types of biodosimeters. Compatible with other types of phototherapy andelectrotherapy.

28. Therapeutic use of laser irradiation. Laser therapy. Physical characteristics of monochromatic and coherent radiation.Fiziko-

chemical effects of laser radiation on biological tissues. Regularities of energy distribution in tissues under the action of laser radiation and the main mechanisms of its biological action. The main biological effects, indications and contraindications, devices, parameters of therapeutic action, methods of procedures, their dosage and compatibility with other methods of physiotherapy.

29. Medicinal ultraphonophoresis, main features and advantages of drug administration by ultrasound, dosageof procedures.

30. Therapeutic massage. Types of massage. Anatomical bases and mechanisms of physiological action of massage, indications, contraindications, rules of massage, characteristics of the main techniques, techniqueof performing.

31. Aeroiono-and aerosoltherapy. Physical characteristics of the applied factors. Mechanisms of therapeutic action. Therapeutic effects. Technique and methodology of procedures. Indications and contraindications for use Medicinal substances used foraerosoltherapy.

32. Hydrotherapy. Showers, baths, and baths. Characteristics of the methods, therapeutic effects, Indications, contraindications to the appointment, dosage methods, treatment methods. Give a classification of water procedures based on the temperature of the water used. Give a brief description of the main types of shower procedures.

33. Balneotherapy. Definition and classification of mineral waters. Theories of the origin of mineral waters, their composition. General principlesoftherapeuticuseofmineralizedwater.

34. What is the mechanism of action of sodium chloride baths? Justify the cardiotropic effect of carbon dioxide baths. What is its focus? Explain the significance of water temperature for the development of vascular effects of carbondioxide baths.

35. Mechanism of action of radon baths. What factors are responsible for the therapeutic effects of radon baths? List the main indications for the appointment of radonbaths.

36. The use of heat formedicinalpurposes. Thermotherapy. Physiological bases of therapeutic use of heat carriers. Paraffin therapy. The physical properties of paraffin, the mechanism of therapeutic action, indications and contraindications, methods of procedures, dosage principles, compatibility with other methods of physiotherapy, safety duringprocedures.

37. Peloidotherapy - therapeutic mud, definition, composition, physical and chemical properties, classification. Origin of therapeutic mud. Physical and chemical factors of therapeutic action of mud — mechanical, thermal, chemical and biological. Mechanisms of physiological action and therapeutic effects of peloidtherapy. Indications and contraindications formud treatment.

38. Climatotherapy. Basic methods of climate therapy. Indications and contraindications for use. Balneotherapy. Basic methods of balneotherapy. Indications and contraindications forthe appointment.

39. List the main types of health resorts. Is it possible to locate sanatoriums outside the resort? What isthereasonforthespecializationofsanatoriums?

40. Comprehensive rehabilitation programs for patients with myocardial infarction at the inpatient stageof rehabilitation.

41. Comprehensive rehabilitation programs for patients with myocardial infarction at the sanatorium stage of rehabilitation.

42. Comprehensive rehabilitation programs for patients with acute and chronic pneumonia at the polyclinic stageof rehabilitation
43. Comprehensive rehabilitation programs for patients with bronchial asthma and bronchiectaticdisease.
44. Comprehensive rehabilitation programsfor patients with spinal scoliosis and flat feet
45. Comprehensive rehabilitation programs for patients withspinal osteochondrosis
46. Comprehensive rehabilitation programs for patients with limb fractures
47. Comprehensive rehabilitation programs for patients with ischemicstroke
48. Comprehensive rehabilitation programs for patients with diabetesmellitus.
49. Comprehensive rehabilitation programs for patients undergoinglung surgery
50. Comprehensive rehabilitation programs for patients with chronic inflammatory diseasesof the female genital organs
51. Method of conducting the Stange test, Gence, orthostatic test. Determination of physical performance by the Harvard step test. Basic principles of RF assessment and its relation tohealth indicators.
52. Types of health-improving training. Clinical effects of wellness training.
53. Characteristics of low, medium, and high rehabilitation potential. Rehabilitation prognosis. Assessment of the effectiveness of rehabilitation measures on the FIM scale (FunctionalIndependence Scale).
54. Justification of the use of rehabilitation tools and methods. Disabilitycriteria.
55. Basic principles of medical rehabilitation. Indicationsandcontraindications.
56. Categories of life activity. Types of disabling consequences of the disease. Basic concepts in rehabilitation: stages of rehabilitation, rehabilitation diagnosis, rehabilitation potential, rehabilitation prognosis, functional classes.
57. Diadynamictherapy. Therapeutic effects, indications, contraindications to the appointment of equipment and methods ofprocedures.
58. Scheme of the complex of therapeutic gymnastics. Principles of dosage of physical exercises. Indicationsandcontraindicationsfortheappointmentofphysicaltherapy.
59. Classification of kinesotherapyagents. Characteristicsof kinesotherapy tools.
60. External and internal use of mineral waters. Treatment methods, indications andcontraindications.

12. INDEPENDENT WORKOF STUDENTS

Name of sections and topics	**Type of independent work** ***(studyof educational material, problem solving, abstract, report, testwork, preparation for passing the test, exam, etc.)***	**Volume in hours**	**Form of control (*verification of problem solving, abstract, etc.)***
Section #1. Fundamentals of medical rehabilitation. Methods and means of medical rehabilitation.			
Topic 1. 1.1 Fundamentals of medical rehabilitation. 1.2 Basics of physical therapy	Development of educational material, problem solving, writing a lesson summary, abstract, report, preparation for passingthe test	2	Verification of problem solving, abstract, and synopsis.
Topic 2. 2.1 Electrotherapy. 2.2 Magnetic therapy	Working out the training material, writing a lesson summary, solving problems, abstract, report, registration of f. 044/y preparation for passingthe test	2	Checking решениярр oblem solving, physiotherapy prescriptions, abstract, and synopsis.
Topic 3. 3.1 Phototherapy 3.2 Therapeutic use of mechanical factors. 3.3 Hydrotherapy. 3.4 Thermotherapy.	Study of educational material, lectures, writing a summary for the lesson, solving problems, abstract, report, registration of f. 044/y preparation for passingthe test.	2	Checking решениярр oblem solving, physiotherapy prescriptions, abstract, and synopsis.
Topic 4. 4.1Spa therapy.	Working out the curriculum material, writing a lesson summary,solving a problem	2	Checking the solution problem abstract, solving, synopsis.

4.2Medical rehabilitation in structure of sanatorium-resort care. 4. 3Manual therapy. 4. 4Therapeutic nutrition.	tasksRussia, abstract, report,		
Topic 5. 5.1 Reflexology. 5.2 Psychological rehabilitation. 5.3 Medical control in medical rehabilitation.	Working out the curriculum material, writing a lesson summary, problem solving, abstract,report,	2	Checking the solution tasks, abstract, summary.
Topic 6. 5.1 Physical therapy (physical therapy) 5.2 Health-improving methods 5.3Rehabilitation of disabledpeople.	Working out the curriculum material, writing a summary for the lesson, solving problems, abstract, report, registration of f. 042/y preparation for passingthe test.	2	Checking the solution tasks, abstract, and synopsis.
Section 2. Medical rehabilitation in clinical practice.			
Topic 7.7.1 7.1 Medical rehabilitation in cardiology. 7.2 Medical rehabilitationinpulmonology.	Study of educational material, writing a summary for the lesson, solving problems, abstract, report, registration of f. 042/y, f. 044/y, drawing up an individual rehabilitation program (IPR) preparation for passing the test.	2	Verification of problem solving, abstract, and synopsis.

Topic 8.8.1 8.1 Medical rehabilitation in gastroenterology and endocrinology. 8.2 Medical rehabilitation in oncology. 8.3 Medical rehabilitation for infectious diseases. 8.4 Medical rehabilitation in neurology.	Study of educational material, writing a summary for the lesson, solving problems, abstract, report, registration of f. 042/y, f. 044/y, drawing up an individual rehabilitation program (IPR) preparation for passingthe test.	2	Verification of problem solving, abstract, and synopsis.
Topic 9. 9.1 Medical rehabilitation in traumatology and orthopedics. 9.2 Medical rehabilitation in surgery. 9.3 Medical rehabilitation	Working out the training material, writing a summary for the lesson. Registration of f. 042/y, f. 044/y,, problem solving, abstract,report.	2	Verification of problem solving, abstract, and synopsis.
in auscherism and gynecology. 9.4 Medical rehabilitation in pediatrics.			
Total		18	

13. EDUCATIONAL, METHODICAL AND INFORMATIONAL SUPPORT OF THE DISCIPLINE

Медицинскаяреабилитация

a) Listofrecommendedliterature.

Basic:

1. Хованская Г. Н. Generalprinciplesofmedicalrehabilitationandphysiotherapy = Общие основы медицинской реабилитации и физиотерапии : пособие для студентов учреждений высшегообразования, обучающихся по специальности 1-79 01 01 «Лечебное дело» [на англ. яз.] : manualfortheMedicalFacultyforInternationalStudents (Courseofstudiesin English) / Г. Н. Хованская. -Гродно :ГрГМУ, 2019. - 212 с. - ISBN 9789855950944. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : https://www.books-up.ru/ru/book/general-principles-of-medical-rehabilitation-and-physiotherapy-12068689/

2. Medical rehabilitation :textbook / editedbyA. V. Epifanov, E. E. Achkasov, V. A. Epifanov. - Москва :ГЭОТАР-Медиа, 2022. - 664 с. - ISBN 978-5-9704-6688-9. - Текст :электронный// ЭБС "Консультантстудента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9785970466889.html

Additional:

1. Kruchkova, A. V. Care for Surgical Patients / A. V. Kruchkova, Yu. V. Kondusova, I. A. Poletayeva and others; edited by A. V. Kruchkova. - Москва :ГЭОТАР-Медиа, 2020. - 144 с. - ISBN 978-5-9704-5664-4. - Текст :электронный // ЭБС "Консультантстудента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9785970456644.html

2. Manual to practical sessions on medical supervision in physical exercise, sports and clinical practice :учебноепособие / A. N. Vykhodtsev, N. V. Grebenkina, V. K. Pashkov [идр.]. — 2-еизд. — Томск :СибГМУ, 2019. — 83 с. — Текст :электронный // Лань : электронно-библиотечнаясистема. — URL: https://e.lanbook.com/book/138710

3. Pavlova J. M.
The practical use of ICF in rehabilitation for various pathologies: methodical guidelines for independent work of students / J. M. Pavlova; Ulyanovsk state university. - Ulyanovsk :UlSU, 2019. - Загл. сэкрана; Неопубликованныйресурс; Наангл. яз. - Электрон. текстовыедан. (1 файл : 152 КБ). - Текст : электронный.
URL : http://lib.ulsu.ru/MegaPro/Download/MObject/6224

Educationalandmethodical:

1. Pavlova Yu. M.
Methodological instructions for independent work of students on the discipline "Medical rehabilitation" for the specialty 31.05.01 "General Medicine" full-time education / Pavlova Yu. M. ; Ulyanovsk state university. - Ulyanovsk :UlSU, 2019. - Загл. сэкрана; Неопубликованныйресурс; Наангл. яз. - Текст :электронный.
URL :http://lib.ulsu.ru/MegaPro/Download/MObject/8707

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The position of the worker scientific library Full name signature date

Профессиональные базы данных, информационно-справочные системы

1. Электронно-библиотечные системы:

1.1. Цифровой образовательный ресурс IPRsmart : электронно-библиотечная система : сайт / ООО Компания «Ай Пи Ар Медиа». - Саратов, [2024]. – URL: http://www.iprbookshop.ru. – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.2. Образовательная платформа ЮРАЙТ : образовательный ресурс, электронная библиотека : сайт / ООО Электронное издательство «ЮРАЙТ». – Москва, [2024]. - URL: https://urait.ru . – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.3. База данных «Электронная библиотека технического ВУЗа (ЭБС «Консультант студента») : электронно-библиотечная система : сайт / ООО «Политехресурс». – Москва, [2024]. – URL: https://www.studentlibrary.ru/cgi-bin/mb4x. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.4. Консультант врача. Электронная медицинская библиотека : база данных : сайт / ООО «Высшая школа организации и управления здравоохранением-Комплексный медицинский консалтинг». – Москва, [2024]. – URL: https://www.rosmedlib.ru. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.5. Большая медицинская библиотека : электронно-библиотечная система : сайт / ООО «Букап». – Томск, [2024]. – URL: https://www.books-up.ru/ru/library/ . – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.6. ЭБС Лань : электронно-библиотечная система : сайт / ООО ЭБС «Лань». – Санкт-Петербург, [2024]. – URL: https://e.lanbook.com. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.7. ЭБС Znanium.com : электронно-библиотечная система : сайт / ООО «Знаниум». - Москва, [2024]. - URL: http://znanium.com . – Режим доступа : для зарегистрир. пользователей. - Текст : электронный.

2. КонсультантПлюс [Электронный ресурс]: справочная правовая система. / ООО «Консультант Плюс» - Электрон. дан. - Москва : КонсультантПлюс, [2024].

3. eLIBRARY.RU: научная электронная библиотека : сайт / ООО «Научная Электронная Библиотека». – Москва, [2024]. – URL: http://elibrary.ru. – Режим доступа : для авториз. пользователей. – Текст : электронный

4. Федеральная государственная информационная система «Национальная электронная библиотека» : электронная библиотека : сайт / ФГБУ РГБ. – Москва, [2024]. – URL: https://нэб.рф. – Режим доступа : для пользователей научной библиотеки. – Текст : электронный.

5. Российское образование : федеральный портал / учредитель ФГАУ «ФИЦТО». – URL: http://www.edu.ru. – Текст : электронный.

6. Электронная библиотечная система УлГУ : модуль «Электронная библиотека» АБИС Мега-ПРО / ООО «Дата Экспресс». – URL: http://lib.ulsu.ru/MegaPro/Web. – Режим доступа : для пользователей научной библиотеки. – Текст : электронный.

Инженер ведущий  Щуренко Ю.В. 2024

14. MATERIAL AND TECHNICAL SUPPORT OF THE DISCIPLINE:

Classroomsforconductinglectures,practicalclasses,forconductingcurrent control and intermediate certification are equipped with furniture, a blackboard and multimedia equipment to provide information to a large audience.

Rooms for independent work are equipped with computer equipment with the ability to connect to the Internet and provide access to an electronic information and educational environment, an electronic library system.

УчебныеThe classroomsare equippedwith computerequipmentwiththe abilityto connect to the Internet and provide access to an electronic information and educational environment, an electronic librarysystem.

Equipped with physiotherapy and physical therapy rooms. Equipment of rehabilitation halls of the CenterBubnovsky.

The list of equipment used in the educational process is indicated in accordance with the information on material and technical support and equipment of the educational process posted on the official website of USU in the section

"Information about the educational organization".

15. SPECIAL CONDITIONS FOR STUDENTS WITH DISABILITIES

If necessary, students from among persons with disabilities (at the request of the student) can be offered one of the following options for information perception, taking into account their individual psychophysical characteristics::

– forpeoplewithнарушениямиvisual impairments:inprinted formin enlargedfont;inthe form of an electronic document; in the form of an audio file (translation of educational materials into audioformat); in printed form in Braille; individual consultations with the involvement of a tiflosurd interpreter; individual tasks andconsultations;

– for people with hearing impairments: in printed form; in the form of an electronic document; video materials with subtitles; individual consultations with the involvement of a sign language interpreter; individual tasks andconsultations;

– forpeoplewithнарушениямиmusculoskeletal disorders:inprintedform;inthe form of an electronic document; in the form of an audio file; individual tasks andconsultations.

Developer Senior teacher Abdulbasit M.A.N

signature position fullname