**LVIV NATIONAL MEDICAL UNIVERSITY N.A. DANYLO HALYTSKY**
**Department of Physical Training and Sports Medicine**

**Approved at the methodical meeting of**
**the departmentof Physical training and sports medicine**
**Head of the department**

**k.b.s., associate prof. Kunynets O.B.** _____
**Protocol №1 from 30 of August 2021**

# GUIDELINES

in the discipline

# PHYSICAL REHABILITATION AND SPORTS MEDICINE

for 4th year students

training of specialists of the second (master's) level higher education in the field of knowledge 22 "Health" specialty 222 "Medicine" for independent work in preparation for practical classes

**Topic 6** *"General basics of physical rehabilitation. Psychological rehabilitation and social work with persons who became disabled during military service and other persons who were injured during hostilities."*

LVIV-2021

Methodical guidelines are made in accordance with the requirements of the curriculum in the discipline "Physical Rehabilitation and Sports Medicine", compiled to train specialists of the second (master's) level of higher education in the field of knowledge 22 "Health" specialty 222 "Medicine".

According to the curriculum, the study of physical rehabilitation and sports medicine at the medical faculty is carried out in the 4th year of study. The program is designed for 60 hours, of which 30 classroom hours (practical classes), 10 hours - lectures and 50 hours of independent work of students (IWS).

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1. **Relevance of the topic:** Physical rehabilitation is a discipline that studies the impact of means and methods of physical culture, massage and natural and performance factors on the human body for preventive, curative and restorative purposes. At the present stage, the doctor must have not only knowledge of modern aspects of the etiology, pathogenesis, clinic and differential diagnosis of certain diseases, but also be competent in comprehensive modern treatment, which includes physical means of rehabilitation. The study of the discipline requires in-depth knowledge of the relevant sections of pathological physiology, internal medicine, surgery, traumatology, neurology, pediatrics with knowledge of the application of a particular drug, so knowledge of forms, tools and methods of physical rehabilitation is a necessary part of a harmonious treatment of people with various pathologies.

2. **Class duration: 4 hours.**

3. **Learning objective**

***Know*:**

- forms, means and methods of physical rehabilitation;
- mechanisms of therapeutic action of means of physical rehabilitation;
- modes of physical activity at the inpatient, sanatorium and polyclinic stage of rehabilitation;
- principles of physical dosing;
- appointment of gymnastics for therapeutic, prophylactic and restorative purposes;
- methods of control of efficiency of the appointed means;
- medical documentation: card of the office of medical physical training f.042-y.

***Be able:***

- correctly determine the initial level of the functional state of the patient's body systems (cardiovascular, respiratory, nervous, muscular),
- to conduct anthropometric research;
- interpret the results of clinical and laboratory research methods;

correctly choose and correctly prescribe the forms, methods and means of physical rehabilitation;

- keep records of the results of physical rehabilitation according to functional tests;
- give a clinical interpretation and medical opinion on the results of treatment

***Learn practical skills:***

- independently conduct anthropometric and somatoscopic examination of the patient.
- independently conduct functional methods of examination.
- on the basis of clinical-laboratory and functional research methods to correctly and correctly prescribe procedures;
- keep records of the results of physical rehabilitation;
- clearly keep medical records.

**4. Interdisciplinary integration**

Anatomy- knowledge of the anatomy of the musculoskeletal, cardiovascular, respiratory, digestive, nervous systems. Be able to determine the correctness of the body structure, posture, the integrity of the skin.

Biochemistry- understand the role of surfactant and respiratory proteins in terms of adaptation to exercise, biochemical changes in muscle work.

Normal physiology- features of the physiological state of the organism after exposure to normal physical activity. Analyze the physiological constants of muscle work, the state of the body's enzyme system. Determine the change in heart rate, blood pressure.

Pathological physiology- to assess the physiological state of the organism after the action of

physical activity on it in pathological conditions, to interpret changes in the general analysis of blood after physical activity. Be able to detect clinical manifestations of acute, chronic overexertion fatigue of varying severity.

Propaedeutics of internal diseases - detect disorders of the cardiovascular system, respiratory tract, digestive system, kidneys. Carry out clinical, laboratory and instrumental diagnostics patients with various pathologies.

Propaedeutics of children's diseases - know the structure and functions of the cardiovascular system, respiratory tract, digestive and nervous systems in children.

General surgery -symptomatology of acute surgical conditions. Musculoskeletal injuries. To carry out clinical, laboratory and instrumental diagnostics of surgical patients.

**5. Student advice.**

**5.1. Topic content:**

Rehabilitation is the restoration of health, functional status and performance impaired by illness, injury or physical, chemical and social factors.

WHO: "Rehabilitation is a set of measures designed to ensure that people with disabilities due to illness, injury and birth defects adapt to the new living conditions in the society in which they live." The term rehabilitation comes from the Latin word habilis - "ability", rehabilis - "recovery ability".

According to the WHO, rehabilitation is a process aimed at comprehensive care for the sick and disabled to achieve the maximum possible physical, mental, professional, social and economic value in this disease.

The first and main direction of rehabilitation (medical and physical) is to restore the patient's health under the conditions of complex use of various means aimed at maximum restoration of disturbed physiological functions of the body, and in case of impossibility to achieve this - development of compensatory and replacement devices.

The psychological aspect of rehabilitation is aimed at correcting the mental state of the patient, creating conditions for the patient's adaptation to new life situations caused by the disease.

The professional aspect studies the issues of employment, vocational training and retraining, determining the working capacity of patients.

Socio-economic rehabilitation is to restore the victims' economic and social well-being.

Three types of rehabilitation, namely:

- medical,
- labor,
- social

correspond to three classes of disease consequences: 1) medical and biological consequences of diseases consisting in deviation from the normal morphofunctional status; 2) reduction of working capacity; 3) social maladaptation (disruption of ties with family and society).

**Task:**

- restoration of household opportunities of the patient;
- ability to move, self-service and perform simple work;
- recovery;
- prevention of the development of pathological processes that lead to temporary or permanent disability.

**The goal of rehabilitation** is the most complete restoration of the lost capabilities of the body, but if this is not possible, the task is to partially restore or compensate for the lost function and in any case - to slow the progression of the disease.

**Physical rehabilitation** is an integral part of medical, social and professional rehabilitation, which uses the means and methods of physical culture, massage and physical factors.

**Basic principles:**

1. Individual approach to the patient.
2. Conscious participation of the patient in the rehabilitation process.
3. Gradual physical activity.
4. Systematic classes.
5. Cyclicity: alternation of work and rest with observance of an optimum interval.
6. Systematic effects: alternation of exercises for different muscle groups.
7. Diversity in the choice of physical exercises of physical rehabilitation.
8. Moderation of the impact of funds.

**There are three or four stages in medical rehabilitation.**

*At three-stage:*

- specialized hospital,
- specialized rehabilitation center or sanatorium,
- polyclinic rehabilitation department.

*At four-stage rehabilitation used in traumatology:*

- specialized ambulance crew,
- specialized trauma hospital,
- inpatient rehabilitation center,
- polyclinic rehabilitation department.

The process of rehabilitation can be divided as follows: 1st stage - rehabilitation therapy, 2nd stage - readaptation, 3rd rehabilitation.

Rehabilitation means include: psychotherapeutic effect, drug correction, kinesitherapy, physiotherapy, massage, occupational therapy, sanatorium treatment, phytotherapy, manual exposure, etc.

The leading place among the means of physical rehabilitation is given to physical exercises, which are the basis for the proper construction of medical rehabilitation.

Exercise is a method of treatment that uses means of physical culture for therapeutic and prophylactic purposes to more quickly restore the health and efficiency of the patient and prevent the consequences of the pathological process.

Movement treatment is considered as a method of pathogenetic therapy, because in the case of the use of physical rehabilitation in the general response of the whole organism include those physiological mechanisms that are involved in the pathogenetic process.

Exercise is a method of active functional therapy, as they are able to increase the functional reserves of organs and systems, increase the functional adaptation of the patient and provide prevention of functional disorders. It is important that the unity of functional and morphological does not limit the therapeutic role of exercise within the framework of functional influences, because by improving the function, you can simultaneously improve the structure of the body and vice versa.

Physical rehabilitation aids are mostly non-specific stimuli. They have no etiological specificity, because they do not affect the etiology - the cause of the disease, which is achieved through the use of pharmacological agents. However, the means of physical rehabilitation is characterized by some biological specificity, because they have a certain selective physiological and therapeutic effect. General indications for exercise are divided into 4 groups of diseases. The 1st group includes all diseases in which the means of exercise therapy have mainly tonic and symptomatic effect (almost all diseases, except for minor injuries and diseases with initial or mild functional disorders). The 2nd group includes diseases whose pathogenesis is associated with dysfunction (hypertension, hypotension, functional diseases of the nervous system. In this group, exercise has a normalizing and restorative effect. The 3rd group includes diseases that require

compensation of impaired functions and increase the body's adaptive capacity (paresis, diseases of the musculoskeletal system of various etiologies). The 4th group includes all diseases that require stimulation of tissue regeneration (consequences of various injuries, myocardial infarction).

Contraindications to the appointment of physical rehabilitation: lack of contact with the patient due to his serious condition or mental disorders; acute period of the disease and its progressive course; increase in heart failure; sinus tachycardia (more than 100 beats per 1 min) and bradycardia (less than 50 beats per 1 min); frequent attacks of paroxysmal tachycardia or atrial fibrillation; extrasystole with a frequency of extrasystoles over 1:10; negative ECG dynamics; atrioventricular block II-III st; arterial hypertension (more than 220/120 mm Hg) on the background of a satisfactory condition of the patient: arterial hypotension (less than 90/50 mm Hg); frequent hyper - or hypotensive crises; threat of bleeding and thromboembolism; anemia with the number of erythrocytes up to 2.6-3 · $10^{12}$ g / l, increase in ESR over 20-25 mm / h, leukocytosis.

It is possible to use exercises of local action, but the latter should not cause significant functional stress on the cardiovascular and respiratory systems, increase metabolism.

**Physiological mechanisms of therapeutic action of physical exercises:**

1) tonic effect;

2) trophic action;

3) formation of compensations;

4) normalization of functions.

In an organized form, physical exercises are carried out taking into account the succession of stages of rehabilitation in hospitals, clinics, dispensaries and sanatoriums, where exercise rooms are equipped. Physical exercises are also carried out in general and special centers (departments on the basis of hospitals) of medical rehabilitation, centers of professional rehabilitation and in combined (medical and professional) rehabilitation centers. This scheme is in line with international ideas about the construction of these centers, as well as the developments of the WHO Expert Commission on Rehabilitation.

Means of physical rehabilitation: physical exercises, therapeutic massage, natural and preformed factors.

**Physical exercises are divided into:**

- general development,

- special.

**By the nature of muscle contraction:**

- dynamic (isotonic contraction),

- static (isometric reduction).

**By degree of activity:**

- active,

- passive.

**By anatomical feature:**

- for small (hand, foot, face),

- medium (neck, forearm, shin, thigh),

- large (limbs, torso) muscle groups.

**By the nature of the exercises:**

respiratory, corrective, muscle relaxation, muscle stretching, balance, rhythmic, using gymnastic objects and devices.

Breathing exercises are grouped as follows: "local" (to increase the volume of ventilation function of individual parts of the lungs), with resistance to breathing (to strengthen the respiratory muscles), those that increase the mobility of the chest and diaphragm, with sound reproduction (to

facilitate exhalation), drainage, with dosed respiratory arrest and with voluntary control of breathing. They can be performed in dynamic and static modes, using or excluding the movements of the limbs and torso. In contrast to calm normal breathing, which should be optimal in frequency and depth, breathing exercises can have the task of hyper-and hypoventilation of the lungs.

According to the general kinematic characteristics of the exercise are divided into cyclic and acyclic.

*Locomotor cyclic* exercises: running and walking, skating and skiing, swimming, cycling. These exercises are repeated repetition of stereotypical cycles of movements.

*Acyclic* exercises involve abrupt changes in motor activity (games, jumps, gymnastic exercises, etc.) with a sharp change in its power.

*Cyclic exercises* can be divided into anaerobic and aerobic depending on the predominance of one or another component of energy production. When performing anaerobic exercises, the leading quality is power, and when performing aerobic exercises, endurance.

In the treatment of various diseases use exercise of low, moderate, high, rarely - maximum intensity.

• *Low-intensity exercises*: slow rhythmic movements of the feet, compression and unclamping of the fingers, isometric tension of small muscle groups (eg, forearm flexors during plaster immobilization). The general physiological shifts at the same time are insignificant. Changes in the cardiovascular system are favorable and are accompanied by a small increase in heart rate and overall blood flow, increased systolic and decreased diastolic and venous pressure. There is a slight decrease in heart rate and deepening of respiration.

• *Exercises of moderate intensity* are accompanied by muscle tension of medium strength with a medium rate of contraction, isometric tension and relaxation of a relatively large number of muscle groups or muscles: for example, slow and medium movements of the limbs and torso, movement similar to self-care , walking at a slow and medium pace. Activation of cortical processes is moderate. Pulse and systolic blood pressure, in most cases, increase slightly, and diastolic-decreases. Moderately more frequent and deepening respiratory movements, increased pulmonary ventilation. The recovery period is short.

• *High-intensity exercises* involve large muscle groups with moderate or high strength, sometimes with a significant rate of contraction, expressed by static tension of synergistic muscles, intense changes in autonomic and trophic processes under the influence of late tonic reflexes (brisk walking, exercises on gymnastic shells, loads on the upper extremities, accompanied by weight transfer, skiing). These exercises significantly increase the excitability and mobility of cortical processes. The pulse noticeably increases. Not sharply increases and deepens breathing; pulmonary ventilation often ensures the delivery of oxygen and more than the body absorbs. The recovery period is quite long.

• *Exercises of submaximal and maximum intensity*: the movement includes a large number of muscles with maximum intensity and high speed of their contraction, sharply expressed late-tonic reactions (for example, running at speed). Patients can maintain high power of the performed work no more than 10 - 12 s therefore activity of vegetative bodies and a metabolism do not have time to grow to the maximum limits. Oxygen debt is growing rapidly. The activity of the cardiovascular and respiratory systems is maximized after classes; high heart rate is combined with reduced cardiac output and marginal enhancement of respiratory function.

Depending on the tasks in different periods of treatment, the dosage of loads are therapeutic, tonic and training:

• *Therapeutic dosage* is used in the case when it is necessary to provide primarily a therapeutic effect on the affected system or organ, to form compensation, to prevent complications. In this case, the total physical activity in the classroom is usually small and increases from class to class. In case of deterioration the load state is reduced.

• *Tonic dosage* is used in a satisfactory condition of the patient with prolonged immobilization, chronic diseases with a wavy course, after the end of rehabilitation with the

maximum possible therapeutic effect. General and local physical activity depends on the functional capabilities of the body as a whole and the individual affected organ or system. They should stimulate the functions of the main systems, ie have a tonic effect and maintain the achieved results. Exercises of moderate or high intensity are used.

• *Training dosage* is used during periods of recovery and rehabilitation, when it is necessary to normalize all body functions, increase efficiency or achieve high compensation. Various tests are performed to determine the amount of physical activity detected by the trainer. Thus, in diseases of the cardiovascular system, the maximum allowable physical activity is determined using a test of tolerance to them; the magnitude of the axial load in diaphyseal fractures - with the pressure of the injured immobilized leg until the onset of pain (optimal load is 80% of the value obtained); training effect to increase muscle strength provides load.

Forms in which physical exercises are carried out are connected with methods of carrying out employment.

There are gymnastic, sports-applied and game methods.

1. Gymnastic method predominates in morning hygienic gymnastics (MHG), therapeutic gymnastics (TG), water gymnastics,
2. Sports-applied method of training is widely used in walks, dosed walking on smooth routes and health trips, short-distance tourism, jogging. Bicycle and shuttle simulators, dosed games have become widespread.
3. There are games on the spot, sedentary, mobile and sports. Popular bowling alleys, small towns, badminton, table tennis, volleyball, tennis, as well as elements of basketball, handball, football and water polo.

**Modes of motor activity in the hospital**

**Ia - strict bed**

**Ib-bed gentle** development of an acute disease, period of exacerbation or severe decompensation of maintenance of body functions.

*The aim*: Ensuring physical and mental peace, maintaining basic functions and mobilization of basic forces: prevention of complications.

*Characteristic of the mode*: Ia - a strict medical and protective regime, calm, constant stay in bed. Static breathing exercises. Active movements in the distal extremities. Light foot and abdomen massage.

Ib - active movements in bed. Dynamic breathing exercises. Self-turning to the side. Active movements in the proximal and distal extremities. Individual TG and massage.

*Means of medical physical training*: 1. Breathing exercises: static, dynamic, special.

2. Massage of the lower extremities and chest.

3. Active movements in the distal extremities.

4. Passive movement in large joints.

5. Turning to the side, lifting pelvis for with the help of medical staff, then independently.

**II - bed extended mode** cessation of acute disease. Initial recovery or recovery from severe decompensation, exacerbation of chronic disease.

*The aim:* stimulation of the CNS, metabolism, respiration, enhancement of electrocardiac circulatory factors.

*Characteristic of the mode:* Active leisurely exercises and transition to a sitting position in bed (2-3 times a day from 10 to 15 minutes), then in a chair 4-5 times a day for 20-30 minutes are allowed. Active food consumption.

*Means of medical physical training:* 1. Therapeutic massage.

2. Breathing exercises.

3. Active free movements with large amplitude, lying down.

4. Elementary exercise at a slow pace, sitting.

**III – ward mode** significant improvement of the general condition of the patient's body.

*The aim:* promoting the restoration of impaired body functions.

*Characteristic of the mode:* It is allowed to sit in a chair up to 50% of the time. Movement in the ward. Dosed walking on department with a subsequent visit to the dining room and special offices.

*Means of medical physical training:* 1. Active free movements of the limbs and torso.

2. Breathing exercises.

3. Dosed walking in slow pace.

4. Exercises with light objects.

5. The use of elements of the game.

6. Application of hardening means.

7. Occupational therapy.

**IV – free mode** the presence of only residual phenomena, the weakening of body functions with a well-defined adaptation to exercise.

*The aim:* Elimination of residual effects of impaired functions.

*Characteristic of the mode:* Free walking around the department, climbing the stairs to the 2-3rd floor, walking around the hospital is allowed. ThG classes in the exercise room and on the site Occupational Therapy.

*Means of medical physical training:* 1. Active free movements of the limbs and torso maximum amplitude

2. Movements with encumbrance.

3. Dosed walking and climbing on stairs from one to three floors.

4. Exercises on shells in the exercise room.

5. Games of small and average mobility.

6. Dosed walks.

**Modes of motor activity at the sanatorium stage**

**V – gentle mode**

*The aim:* Adaptation of the body to physical activity of a domestic nature.

*Characteristic of the mode:* The first two or three days after discharge, the patient's motor activity compared with achieved in the hospital is reduced by half. For 4-5 days stay at home shows the dosed walk around the room, ThG complex, duration and intensity of physical activity in accordance with the III mode of motor activity of the hospital.

*Means of medical physical training:* 1. Morning hygienic gymnastics.

2. Complex of ThG exercises according to the III mode of motor activity of the hospital.

3. Breathing exercises.

4. Dosed walking at a slow pace.

5. Massage.

6. Hardening.

**VI - sparingly training mode**

*The aim:* Adaptation of the body to physical activity of domestic and labor nature.

*Characteristic of the mode:* Dosed walking on level ground and mastering of stairs within 2-3 floors is allowed. ThG complex according to the IV mode of motor activity of the hospital.

*Means of medical physical training:* 1. RGG.

2. ThG on the IV mode of motor activity of the hospital.

3. Dosed walking at a moderate pace with short-term accelerations.

4. Breathing exercises.

5. Terrencour.

6. Massage.

**VII – training mode**

*The aim:* Restoration of health, psychological status and physical fitness. Determining the group of working capacity and preparation for work.

*Characteristic of the mode:* Dosed walking at a moderate and fast pace, high-speed physical exercises with coverage of small and medium muscle groups are allowed. Exercises with isometric tension. Medium mobility games.

*Means of medical physical training:* 1. RGG.

2. ThG with the inclusion of speed exercises with elements of competition, static tension exercises.

3. Breathing exercises.

4. Games of small and average mobility.

5. Dosed walking at a moderate and fast pace.

6. Terrencour.

7. Near tourism.

8. Hardening.

**5.2. Theoretical questions for the lesson:**

1. Name the means of physical rehabilitation used in the stages of medical rehabilitation.

2. To reveal the mechanisms of therapeutic action of physical exercises.

3. Means, methods and forms of physical rehabilitation.

4. Indications and against indications for the use of physical exercises.

5. The content of motor modes at the inpatient stage of rehabilitation.

6. The content of motor modes at the outpatient stage of rehabilitation.

**5.3. Practical tasks performed for classes:**

**Work № 1.** Completion of medical documentation used in the medical and sports dispensary (f. 042 / y). (Addition).

**5.4. Materials for self-control:**

A. Questions for self-control:

1. What is rehabilitation.

2. Means of rehabilitation.

3. Methods and forms of physical rehabilitation.

4. Stages of rehabilitation.

5. Indications for physical rehabilitation.

6. Contraindications to physical rehabilitation.

7. The mechanism of action of physical exercises.

8. Types of physical activity.

9. Motor modes at the stationary stage of rehabilitation.

10. Motor modes at the sanatorium stage of rehabilitation.

B. Tasks for self-control

See Appendix №1

C. Test tasks for self-control

See appendix №2

B. Tasks for self-control (variant of test control of knowledge of the preparatory state of the lesson; the correct answer is marked with an asterisk): See appendix№1

1). Physical exercises are:

1. The tool.

2. Method.

3. Form FR.

2). Ideomotor physical exercises are used to:

1. Prevention of muscular malnutrition.

2. Preservation of conditioned-reflex connections.

3. Restoration of mobility in the joints.

3). Motor mode is:

1. The tool.

2. Method.

3. Form FR.

4). The group method of conducting therapeutic gymnastics classes is prescribed to patients who are on the mode:

1. Bed.

2. Training.

3. Chamber motor.

5). Breathing exercises used by patients only with the help of the main respiratory muscles:

1. Dynamic.

2. Static.

3. Ideomotor.

6). Objective indicator of the intensity of exercise:

1. The magnitude of the pulse.

2. Fatigue.

3. Sweating of the skin.

7). Special tasks of FR are solved in part of the lesson:

1. Basic.

2. Introductory.

3. Final.

8). The group method of conducting therapeutic gymnastics classes is prescribed to patients who are on the mode:

1. Bed.

2. Training.

3. Ward mode.

9). Breathing exercises used by patients only with the help of the main respiratory muscles:

1. Dynamic.

2. Static.

3. Ideomotor.

10). Acceleration of resorption of inflammatory process by means of measures of FR is reached mainly by action of physical exercises:

1. Incentive.

2. Compensatory.

3. Trophic.

Tests to the methodical instruction on the topic “General bases of physical rehabilitation” See appendix№2

1). What phase of the recovery process corresponds to the first period of therapeutic exercises:

1. Early signs of clinical recovery.
2. Expressive signs of clinical recovery.
3. Complete clinical recovery.
4. Partial clinical recovery.
5. Does not correspond to any phase.

2). What phase of the recovery process corresponds to the second period of therapeutic exercise:

1. Early signs of clinical recovery.
2. Expressive signs of clinical recovery.
3. Complete clinical recovery.
4. Partial clinical recovery.
5. Does not correspond to any phase.

3) What phase of the recovery process corresponds to the third period of exercise therapy:

1. Early signs of clinical recovery.
2. Expressive signs of clinical recovery.
3. Complete clinical recovery.
4. Partial clinical recovery.
5. Does not correspond to any phase.

4) Give the correct definition of physical rehabilitation as a method of rehabilitation therapy:

1. Passive, symptomatic, specific, immunocorrective and restorative therapy.
2. Active, biomechanical, neurohumoral, segmental-reflex and prophylactic therapy.
3. Active, nonspecific, pathogenetic, functional and restorative therapy.
4. Mechanical, nonspecific, pathogenetic, functional and general prophylactic therapy.
5. Active, specific, segmental-reflex and general-training therapy.

5). Appointment of exercise therapy and control over its implementation is carried out by:

1. Head of the department.
2. Chamber doctor.
3. Nurse.
4. Exercise doctor.
5. Methodist exercise therapy.

6). Therapeutic gymnastics, as the main form of physical rehabilitation, consists of exercises:

1. With objects, on shells, on simulators.
2. Isometric, isotonic, ideomotor.
3. General-strengthening, respiratory, special.
4. On the development of strength, speed, agility.
5. On the development of endurance and coordination of movements.

7). Therapeutic gymnastics on the patient's body performs:

1. General tonic, functional-stimulating, normalizing, specially-directed influence.

2. General-developing, activating, specially-directed, pathogenetic, symptomatic influence.

3. General tonic, functional-stimulating, normalizing, functional-restorative, compensatory-developing, preventive effect.

4. General-strengthening, specially-directed, activating, calming effect.

5. General-training, tonic, trophic, specially-directed, normalizing effect.

8).Morning hygienic gymnastics is aimed at:

1. Stimulation of the function of the cardiovascular system.

2. Stimulation of the whole organism.

3. Stimulation of respiratory function.

4. Stimulation of the function of the dental-maxillary system.

5. Stimulation of nervous system function.

9). Physiological mechanisms of therapeutic action of physical exercises:

1. Toning, trophic, compensation and normalization of functions.

2. Humoral, trophic, symptomatic formation of compensations.

3. Nervous-reflex, formation of compensations and normalization of functions.

4. Mechanical, tonic, trophic, compensation formation.

5. Stimulating, restorative, trophic, normalization of functions.

10). The main forms of physical rehabilitation are:

1. Exercise, dosed swimming, walking, jogging.

2. Morning hygienic gymnastics, therapeutic gymnastics, independent classes on the instructions of a doctor.

3. Exercise, motor regime, natural factors, therapeutic massage, mechanotherapy.

4. Exercise, dosed walking, water gymnastics, occupational therapy.

5. Exercise, dosed walking, health, elements of sports.

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