

STATE ESTABLISHMENT 'DNIPROPETROVSK MEDICAL ACADEMY OF MINISTRY
OF HEALTH OF UKRAINE'
Chair of physical rehabilitation, sport medicine and valeology

«Is confirmed»

At methodical meeting of physical
rehabilitation, sports medicine and
valeology chair
_____ (the chair name)

The head of the chair

_____ Nekhanevich O. B.
«__» _____ 20__ p.

METHODICAL INSTRUCTIONS

TO STUDENTS OF IV course medical faculty

FOR INDEPENDENT WORK

BY PREPARATION FOR THE PRACTICAL TRAINING

MODULE № 1: PHYSICAL REHABILITATION, SPORT MEDICINE

Thematic module 1: Physical rehabilitation

Theme № 9: Physical rehabilitation in neurological diseases.

MODULE I. PHYSICAL REHABILITATION, SPORT MEDICINE

Thematic module 2: Physical rehabilitation

Theme № 9: Physical rehabilitation in neurological diseases.

1. Theme urgency:

There are a lot of neurological diseases and complications in Ukraine. Neurological pathology is a common cause of death, complete or severe loss of working ability. Physical rehabilitation and manual therapy is as common the main method of treatment in neurological patients. Well time and adequate physical rehabilitation significantly enhances lost function recovery.

2. Theme duration: 4 hours.

3. The educational aim: study physical rehabilitation methods as a part of complex therapy in neurological practice.

Concrete aims:

To know:

- Indications and contraindications to physical rehabilitation in neurological diseases.
- The aims and specialities of physical rehabilitation in case of acute brain stroke.
- PR in brain trauma.
- PR in cerebral spastic infantile paralysis.
- Indications and contraindications to PR in peripheral nervous system diseases.
- Exercises in trigeminus nervus neuritis.
- Remedy gymnastics in ulnaris and radialis nerves, radiculities.
- PR in spine trauma.

To be able:

- To estimate the beginning level of functional state of an organism;
- To estimate the physical development and working capacity specialities;
- To evaluate clinical and lab data;
- To choose the correct rehabilitation;
- Monitor the rehabilitation proses;
- Make clinical interpretation and conclusion on treatment.
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To develop practical skills:

- Self-holding antropometric study of patient.
- Self-holding functional state estimation.
- Correctly choose the physical rehabilitation methods;
- Make the monitoring of physical rehabilitation;
- Work with medical documents.

4. Basic knowledge, skills (interdisciplinary integration) – (table 4.1):

Table 4.1

The names of previous disciplines	Practical skills
Normal physiology	To be able to registrate main physiologic features, to know the loading test methodic.
Pathologic physiology	To define the development process of prepathologic and pathologic organic changes, non-adequate physical exertion impact
Propedeutics of internal disease	To take blood pressure, heart rate, describe pulsus. To be able to take electrocardiography, to hold the loading test. To evaluate the medical data.
Pediatric Propedeutics	To know the specifics of physical development in children according to different age.

5. Students advice.

5.1 Theoretic questions:

1. Indications and contraindications to the use of physical rehabilitation for diseases, injuries, and injuries of the central nervous system.
2. Objectives and methodology FR features in acute cerebral blood flow (stroke), treatment provision, passive and active special exercises and massage in spastic paralysis.
3. Features of DF in closed and open brain injury.
4. Modern technology and innovative means of physical rehabilitation of children with cerebral palsy.
5. Indications and contraindications to the use of physical rehabilitation in diseases and injuries of the peripheral nervous system.
6. Objectives and methodology FR features in traumatic spinal cord injury. Treatment provisions, passive and active special exercises and massage with flaccid paralysis.
7. Features restoration and compensatory therapy in neuritis of the facial nerve, special exercise.
8. Some methods physiotherapist with neuritis ulnar and radial nerves, spinal osteochondrosis, radiculitis.

5.2 Practical part:

1. describe Harvard step-test methodic and result evaluation.
 2. describe Kuper test methodic and result evaluation
 3. Describe the estimation of glycolitic, Oxidative-glycolitic and oxidative capacity in human muscles.
 4. Calculate the maximal oxygen consumption factor by PWC_{170} value.
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1. Estimate physical work capacity with PWC_{170} test (veloergometric and stepergometric variants), evaluate the results.
 2. to estimate physical work capacity and physical exertion tolerance with Navakki test, evaluate the results.
 3. Calculate the maximal oxygen consumption factor by PWC_{170} value.
 4. To give a mark to general functional resources oh an organism.
 5. Give recommendations about the kind of physical activity and optimal moving mood depending on test results.

5.4. Theme content:

5.3 Self-control materials:

1) self-control questions:

1. Indications and contraindications to the use of physical rehabilitation for diseases, injuries, and injuries of the central nervous system.
2. Objectives and methodology FR features in acute cerebral blood flow (stroke), treatment provision, passive and active special exercises and massage in spastic paralysis.
3. Features of DF in closed and open brain injury.
4. Modern technology and innovative means of physical rehabilitation of children with cerebral palsy.
5. Indications and contraindications to the use of physical rehabilitation in diseases and injuries of the peripheral nervous system.
6. Objectives and methodology FR features in traumatic spinal cord injury. Treatment provisions, passive and active special exercises and massage with flaccid paralysis.
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2) Tests:

1) . Which of the mentioned methods of examination allow doctors to define backbone mobility, strength and stamina of muscles of the back and abdominal press in case of scoliotic disease?

- A. Clonistatic test, holding legs in the initial position on the back under 900 for 3 minutes,
- B. Wrist dynamometry, back strength,
- C. Test of Genchi, back strength, orthostatic sign,
- D. Test of Shtange, back strength,
- E. Bends of the trunk touching floor with palms, back strength, holding legs in the initial position on the back under 450 for 1.5-2 minutes.

2) The second (post-immobilizing) period is clinically characterized by:

- A. Restoration of anatomical bone integrity, formation of initial callus,
- B. Absence of pain in damaged area at static muscle tension,
- C. Restoration of muscular strength of the damaged extremity,
- D. Disappearance of edema in the damaged extremity,
- E. Restoration of mobility in immobilized joints.

literature:

the main

1. Remedial gymnastics and sport medicine: textbook/ Klapchuk V.V., Dsiak G.V., Mutavov V.I.; red. Klapchuk V.V., Dsiak G.V. – K.: Zdorov`e, 1995. – 312 p.
2. Remedial gymnastics and sport medicine: Tests for knowlage control in students of medical and stomatological faculties of universitie IY level of acreditation / Abramov B.B., Klapchuk B.B., Magl`ovanuy A.V., Smirnova O.L.,; red. Ph. Klapchuk V.V., Ph. Magl`ovanuy A.V. – Dnipropetrovsk: medical academy, 2006. – 124 p.
3. Remedial gymnastics and sport medicine (Lections) / Abramov B.B., Klapchuk V.V Smirnova O.L.,; red. Ph. Klapchuk V.V.,– Dnipropetrovsk: medical academy, 2006. – 179 p
4. Medical control in physical training and sports: medical recommendations for students of medical and stomatological faculties of universitie IY level of acreditation / V.S. Sokolovskyy, N.A. Romanova, V.S. Vladova, I.I. Bondarev. – Odessa: osmu, 2001. – 93p.
5. Sport medicine. textbook / Makarova G.A. – M.: Soviet sport, 2003. – 480 p.
6. Textbook «Remedial gymnastics and medical control» red. Epifanova and G. L. Apanasenko – p.14-16, 25-37.
7. Functional tests in sport medicine (methodical recomendations) /Mychaluk E. L. –Kyiv. –2005. – 37p.

Discussed on cathedral meeting « ____ » _____ 20__p. (Protocol № ____)

The head of the cathedra, Phd. _____ O.B.Nekhanevich

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