

**MINISTRY OF HEALTH PROTECTION OF UKRAINE**

**ODESSA NATIONAL MEDICAL UNIVERSITY**

Faculty of Medicine №2

Department of physical rehabilitation, sports medicine and physical training

APPROVED



Vice-rector for scientific and pedagogical work

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September 4, 2023

**METHODOLOGICAL DEVELOPMENT**

**FOR SEMINAR CLASSES**

**FROM EDUCATIONAL DISCIPLINE**

Faculty of Medical, course V

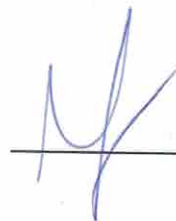
Study discipline: «**PHYSICAL THERAPY AND OCCUPATIONAL THERAPY**»

**Approved:**

The meeting of the department of physical rehabilitation, sports medicine and physical education of  
Odessa National Medical University

Protocol № 1 dated 09/04/2023

Head of the Department, Professor



Olga Iushkovska

**Developers:**

head of the department, MD, prof. Iushkovska O.G.,  
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## Seminar lesson No. 1

**Topic:** Rehabilitation, its definition, content, tasks

**Objective:** To get acquainted with the history of physical rehabilitation in Ukraine and the world, to learn the concept, tasks and principles of rehabilitation, basic requirements for the rehabilitation process and stages of rehabilitation.

**Basic concepts:** rehabilitation, physical rehabilitation, FRM doctor, physical therapist, occupational therapist

**Equipment:** Screen, multimedia projector

**Plan:**

1. **Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. **Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( **if necessary** ).
3. **Questions (test tasks) to check basic knowledge on the topic of the seminar:**
  1. Rehabilitation according to WHO is:
  2. What Latin word does "rehabilitation" come from
  3. When was the first time the issue of rehabilitation was considered on an international scale ?
4. **Discussion of theoretical issues:**
  1. Rehabilitation , her definition
  2. History becoming rehabilitation in Ukraine and the world
  3. Directions of rehabilitation
  4. Purpose and tasks rehabilitation
  5. Principles rehabilitation
  6. Stages rehabilitation
5. **Topics of reports/abstracts:**
  1. History of rehabilitation in the world
  2. History of rehabilitation in Ukraine
  3. The main principles of rehabilitation
6. **Summing up:**
  1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.
  2. Topic of the next lesson: Physical therapy and occupational therapy : history of formation, main tasks and principles
  3. Control questions for the following topic:
    1. Physical therapy is:
    2. Who is a physical tepavt
    3. occupational therapy translated from English ?
7. **List of recommended literature**

Main:

  1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.
  2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.
  3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

Additional:

  1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.
  2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.

## Seminar session No. 2

**Topic:** Physical therapy and occupational therapy : history of formation, main tasks and principles

**Goal:** consider and specify the tasks, goals of physical therapy and occupational therapy , reveal the main professional competencies of a physical therapist and occupational therapist .

**Basic concepts:** means of physical therapy and occupational therapy , types of physical therapy, SMART goals

**Equipment:** Screen, multimedia projector

**Plan:**

1. **Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).

2. **Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( **if necessary** ).

3. **Questions (test tasks) to check basic knowledge on the topic of the seminar:**

1. Physical therapy is:

2. Who is a physical therapist

3. occupational therapy translated from English ?

4. **Discussion of theoretical issues:**

1. physical therapy : history becoming

2. The main ones tasks and principles of FT

3. Duties physical therapist

4. The sequence of actions of a physical therapist

5. Occupational therapy : history of formation

5. Main tasks and principles of ET

6. Physical rehabilitation/ physical therapy, what is the difference and what is common

**5. Topics of reports/abstracts:**

1. History of physical therapy

2. History of occupational therapy

6. **Summing up:**

1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.

2. Topic of the next lesson: Physical therapy and occupational therapy : organization of the rehabilitation process

3. Control questions for the following topic:

1. What is MDT ?

2. Who is part of the MDT ?

3. What is a rehabilitation examination for ?

7. **List of recommended literature:**

Main:

1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.

2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.

3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

Additional:

1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.

2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.

### Seminar lesson No. 3

**Topic:** Physical therapy and occupational therapy : organization of the rehabilitation process

**Goal:** consider the composition of the multidisciplinary team and specify the participation of each specialist in it. To acquaint students with the professional competencies of physical therapists and occupational therapists . Consider the process of drawing up an individual rehabilitation plan and setting rehabilitation goals.

**Basic concepts:** MDC, rehabilitation examination, IRP

**Equipment:** Screen, multimedia projector

**Plan:**

1. **Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. **Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( **if necessary** ).
3. **Questions (test tasks) to check basic knowledge on the topic of the seminar:**
  4. What is MDC ?
  5. Who is part of the MDC ?
  6. What is a rehabilitation examination for ?
4. **Discussion of theoretical issues:**
  1. Multidisciplinary team
  2. Rehabilitation examinations
  3. The role of MDC members
  4. What a physical therapist should know
  5. an occupational therapist should know
  6. Individual rehabilitation plan
  7. Rehabilitation prognosis
  8. Rehabilitation potential
  9. Rehabilitation goals
5. **Topics of reports/abstracts:**
  1. The role of each member of the multidisciplinary team
  2. Types of rehabilitation interventions
6. **Summing up:**
  1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.
  2. Topic of the next lesson: Periods and stages of rehabilitation
  3. Control questions for the following topic:
    1. What periods of the disease do you know?
    2. What types of medical institutions do you know ?
    3. What movement modes exist ?
7. **List of recommended literature**

Main:

  1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.
  2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.
  3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

Additional:

  1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.
  2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.

#### **Seminar session No. 4**

**Topic:** Periods and stages of rehabilitation

**Goal:** consider and acquaint students with the periods and stages of rehabilitation, the place of provision of rehabilitation services and tasks at each stage of rehabilitation

**Basic concepts:** motor modes, verticalization, swallowing, household and professional skills

**Equipment:** Screen, multimedia projector

**Plan:**

1. **Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. **Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( **if necessary** ).

**3. Questions (test tasks) to check basic knowledge on the topic of the seminar:**

1. What periods of the disease do you know?
2. What types of medical institutions do you know ?
3. What movement modes exist ?

**4. Discussion of theoretical issues:**

1. Rehabilitation periods
2. Stages of rehabilitation
3. Tasks for each stage of rehabilitation

**5. Topics of reports/abstracts:**

1. Periods of rehabilitation according to periods of illness

**6. Summing up:**

1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.
2. Topic of the next lesson: Physiological justification of physical therapy
3. Control questions for the following topic:

1. Neurohumoral regulation is:
2. How hypodynamia affects the human body
3. Due to which the nervous regulation of the body's activity is carried out

**7. List of recommended literature**

Main:

1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.
2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.
3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

Additional:

1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.
2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.

**Seminar session No. 5**

**Topic:** Physiological justification of physical therapy

**Goal:** consider and acquaint students with the neuro-humoral regulation mechanism of the human body. Consider the four main mechanisms of action of physical therapy on the human body

**Basic concepts:** compensation, metabolism, homeostasis, proprioceptors

**Equipment:** Screen, multimedia projector

**Plan:**

1. **Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. **Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( **if necessary** ).
3. **Questions (test tasks) to check basic knowledge on the topic of the seminar:**
4. Neurohumoral regulation is:
5. How does hypodynamia affect the human body ?
6. Due to which the nervous regulation of the body's activity is carried out
4. **Discussion of theoretical issues:**
1. Neuro -reflex-humoral influence on the human body
2. Mechanisms actions physical therapy
3. Tonic influence
4. Trophic influence
5. Compensation
6. Normalization functions
5. **Topics of reports/abstracts:**
1. Neuro -humoral regulation in the human body

2. The main mechanisms of action of physical therapy on the human mechanism
3. Clinical and physiological justification of the use of physical rehabilitation tools in diseases of the digestive organs
4. Clinical and physiological substantiation of the use of physical rehabilitation tools for diseases of the musculoskeletal system

**6. Summing up:**

1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.
2. Topic of the next lesson: Physiological justification of occupational therapy .
3. Control questions for the following topic:
  1. In what time is the full recovery of the body possible ?
  2. In what phase of the disease necessary conduct rehabilitation ?
  3. How many exist principles neuroplasticity ?

**7. List of recommended literature**

Main:

1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.
2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.
3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

Additional:

1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.
2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.

### **Seminar lesson No. 6**

**Topic:** Physiological justification of occupational therapy .

**Goal:** consider and acquaint students with the principle of motor learning, what neuromodulation is and how neuroplasticity affects the course of rehabilitation.

**Basic concepts :** neuroplasticity , spontaneous recovery, recovery, neuromodulation

**Equipment:** Screen, multimedia projector

**Plan:**

1. **Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. **Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( **if necessary** ).
3. **Questions (test tasks) to check basic knowledge on the topic of the seminar:**
  4. In what time is the full recovery of the body possible ?
  5. In what phase of the disease necessary conduct rehabilitation ?
  6. How many exist principles neuroplasticity ?
4. **Discussion of theoretical issues:**
  1. Physiological justification occupational therapy
  2. Principles of motor learning
  3. Neuromodulation
  4. Neuroplasticity
5. **Topics of reports/abstracts:**
  1. Neuromodulation as an intervention of FRM
6. **Summing up:**
  1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.
  2. Topic of the next lesson: Principles of physical therapy and occupational therapy . Methods. Means.
  3. Control questions for the following topic:
    1. What principles of rehabilitation do you know ?
    2. What is multidisciplinary? evaluation ?
    3. What can be attributed to kinesiotherapy ?

## 7. List of recommended literature

Main:

1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.
2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.
3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

Additional:

1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.
2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.

### Seminar lesson No. 7

**Topic:** Principles of physical therapy and occupational therapy . Methods. Means.

**Goal:** consider and acquaint students with the principles of physical and occupational therapy , methods of physical and occupational therapy . Consider the equipment used in physical therapy and occupational therapy . Familiarize yourself with tools that facilitate self-care for people with disabilities.

**Basic concepts:** continuity, individuality, phasing, collectivity

**Equipment:** Screen, multimedia projector

**Plan:**

1. **Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. **Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( **if necessary** ).
3. **Questions (test tasks) to check basic knowledge on the topic of the seminar:**
  1. What principles of rehabilitation do you know ?
  2. What is multidisciplinary? evaluation ?
  3. What can be attributed to kinesiotherapy ?
4. **Discussion of theoretical issues:**
  1. Principles of physical therapy
  2. Principles of occupational therapy
  3. Methods of physical and occupational therapy
  4. Means of physical therapy
  5. Equipment that \_ used in physics therapy
  6. Means occupational therapy
  7. Examples ternagers
  8. Goods that \_ make it easier self-service for persons with disabilities opportunities
5. **Topics of reports/abstracts:**
  1. How does early start and individuality affect the effectiveness of rehabilitation?
  2. Physical therapy as a component of physical therapy
  3. Hydrotherapy for patients with damage to the central nervous system

**6. Summing up:**

1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.
2. Topic of the next lesson: Models of the use of physical therapy in different countries of the world

## 5. List of recommended literature

Main:

1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.
2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.
3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

Additional:



1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.
2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.

### **Seminar session No. 9**

**Topic:** Purpose and tasks of the international classification of functioning. Components of the international classification of functioning.

**Goal:** to acquaint students with the concept of functional diagnosis. Consider models of the approach to life limitations. Determine the purpose of the ICF classification. Familiarize with the components of the ICF

**Basic concepts:** disability, activation, initiative, care, functions, structures, participation, activity

**Equipment:** Screen, multimedia projector, National Classifier NC 030:2022

**Plan:**

1. **Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. **Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( **if necessary** ).
3. **Questions (test tasks) to check basic knowledge on the topic of the seminar:**
  1. IFF is...
  2. Life restrictions are...
  3. The state of health is...
  4. Functioning and limitations of vital activities are reflected at the levels of...
4. **Discussion of theoretical issues:**
  1. The purpose and tasks of the international classification of functioning.
  2. A model of the medical approach to life limitation
  3. A model of a social approach to the limitation of vital activities
  4. Biopsychosocial model
  5. Components of the international classification of functioning.
5. **Topics of reports/abstracts:**
  1. A model of the medical approach to life limitation
  2. A model of a social approach to the limitation of vital activities
6. **Summing up:**
  1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.
  2. Topic of the next lesson: Structure of the ICF. Peculiarities of application of ICF. Documentation of the rehabilitation process according to the ICF.
  3. Control questions for the following topic:
    1. How many parts does the ICF consist of ?
    2. How many levels \_ classification exists in the ICF?
    3. What is the ICF qualifier ?
7. **List of recommended literature**

Main:

  1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.
  2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.
  3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

Additional:

  1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.
  2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.

Electronic information resource

  1. <https://www.icf-core-sets.org/en/page1.php>

## Seminar session No. 10

**Topic:** Structure of the ICF. Peculiarities of application of ICF. Documentation of the rehabilitation process according to the ICF.

**Goal:** to acquaint students with the structure of the ICF. Consider what parts and components the ICF is divided into. Find out what the ICF code is and its components. Consider the ICF qualifiers . To acquaint students with the basic sets of ICF and the use of ICF in rehabilitation management.

**Basic concepts:** parts and components of the ICF, ICF code, ICF qualifier , core set, assessment, assignment, intervention

**Equipment:** Screen, multimedia projector

**Plan:**

- 1. Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
- 2. Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( **if necessary** ).
- 3. Questions (test tasks) to check basic knowledge on the topic of the seminar:**
  4. How many parts does the ICF consist of ?
  5. How many levels \_ classification exists in the ICF?
  6. What is the ICF qualifier ?
- 4. Discussion of theoretical issues:**
  1. Structure of the ICF.
  2. Peculiarities of application of ICF.
  3. Basic sets
  4. Documentation of the rehabilitation process according to the ICF.
- 5. Topics of reports/abstracts:**
  1. Extended and short basic set of ICF is like ?
  2. What documents can be used during the rehabilitation cycle ?
- 6. Summing up:**
  1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.
  2. Topic of the next lesson: Physical therapy and occupational therapy for diseases and injuries of the central nervous system.
  3. Control questions for the following topic:
    1. The structure of the central nervous system
    2. Name the main causes of vascular disorders in patients
    3. List the main methods of physical rehabilitation of patients with HPMK
    4. What are the periods of stroke treatment ?
- 7. List of recommended literature**

Main:

  1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.
  2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.
  3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

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  1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.
  2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.

Electronic information resource:

  1. <https://www.icf-core-sets.org/en/page1.php>
  2. <https://www.icf-research-branch.org/icf-core-sets>

## Seminar session No. 11

**Topic:** Physical therapy and occupational therapy for diseases and injuries of the central nervous system.

**Goal:** to acquaint students with the main types of disorders of the central nervous system. Methods of diagnosing disorders of the central nervous system and to study the means of physical rehabilitation for disorders of the central nervous system

**Basic concepts:** Central nervous system, TIA, HPMK, PMK, disability

**Equipment:** Screen, multimedia projector

**Plan:**

1. **Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. **Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( **if necessary** ).
3. **Questions (test tasks) to check basic knowledge on the topic of the seminar:**
  1. The structure of the central nervous system
  2. Name the main causes of vascular disorders in patients
  3. List the main methods of physical rehabilitation of patients with HPMK
  4. What are the periods of stroke treatment ?
5. **Discussion of theoretical issues:**
  1. The concept of diseases of the central nervous system.
  2. Violation of blood circulation. Main clinical forms.
  3. Concept of transient ischemic attack
  4. A stroke. Basic principles of physical rehabilitation for strokes.
  5. Physical therapy as a means of physical rehabilitation in stroke.
  6. Peculiarities of physical rehabilitation after a stroke
6. **Topics of reports/abstracts:**
  1. Cerebral circulation disorder, what is it ?
  2. Typical manifestations of HPMC
  3. How is positional treatment used in the rehabilitation of patients who have suffered a stroke ?
7. **Summing up:**
  1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.
  2. Topic of the next lesson: Physical therapy and occupational therapy for diseases and injuries of the peripheral nervous system
  3. Control questions for the following topic:
    1. Anatomy of the peripheral nervous system
    2. What are the most common forms of peripheral nerve damage, depending on the involvement of certain parts of the nerve pathways in the process?
    3. Types of peripheral nerve damage in case of closed nerve injuries.
    4. How many points in the scale of the functional impairment assessment system ?
5. **List of recommended literature**

Main:

  1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.
  2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.
  3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

Additional:

  1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.
  2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.

## Seminar session No. 12

**Topic:** Physical therapy and occupational therapy for diseases and injuries of the peripheral nervous system  
**Goal:** to acquaint students with the main types of disorders of the peripheral nervous system. Methods of diagnosing disorders of the PNS and to study the means of physical rehabilitation in case of violations of the PNS

**Basic concepts:** radiculopathy , plexopathy , neuropathy, polyneuropathy , shock, impact, compression, traction .

**Equipment:** Screen, multimedia projector

**Plan:**

1. **Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. **Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( **if necessary** ).
3. **Questions (test tasks) to check basic knowledge on the topic of the seminar:**
  1. Anatomy of the peripheral nervous system
  2. What are the most common forms of peripheral nerve damage, depending on the involvement of certain parts of the nerve pathways in the process?
  3. Types of peripheral nerve damage in case of closed nerve injuries.
  4. How many points in the scale of the functional impairment assessment system ?
4. **Discussion of theoretical issues:**
  1. Anatomy of the peripheral nervous system
  2. Types of disorders of the peripheral nervous system depending on the involvement of the area of the nerve pathways
  3. Directions of regeneration of the peripheral nervous system
  4. Main clinical symptoms of peripheral neuropathies .
  5. System of assessment of functional disorders
  6. Rehabilitation measures in the hospital (early) and post-hospital (late) recovery periods
5. **Topics of reports/abstracts:**
  1. Clinical manifestations of radiculopathy and methods of physical rehabilitation
  2. Clinical manifestations of neuropathy and methods of physical rehabilitation
  3. Typical limb deformities of paralytic etiology
6. **Summing up:**
  1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.
  2. Topic of the next lesson: Physical therapy and occupational therapy for diseases of the musculoskeletal system.
  3. Control questions for the following topic:
    1. What does the musculoskeletal system consist of ?
    2. Which mandatory structures has joint ?
    3. What are the joints ?
    4. A fracture is...
    5. Arthrosis is...
    6. Osteochondrosis is...
7. **List of recommended literature**

Main:

  1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.
  2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.
  3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

Additional:

  1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.

2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.

### Seminar session No. 13

**Topic:** Physical therapy and occupational therapy for diseases of the musculoskeletal system

**Goal:** to acquaint students with the most common diseases of the musculoskeletal system. Methods of diagnosis of these violations. To study the means of physical rehabilitation in case of violation of ORA.

**Basic concepts:** ORA, joint, simple joints, complex joints, combined joints, injury, VASH, arthritis, arthrosis, osteochondrosis

**Equipment:** Screen, multimedia projector

**Plan:**

1. **Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. **Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( **if necessary** ).
3. **Questions (test tasks) to check basic knowledge on the topic of the seminar:**
  7. What does the musculoskeletal system consist of ?
  8. Which mandatory structures has joint ?
  9. What are the joints ?
  10. A fracture is...
  11. Arthrosis is...
  12. Osteochondrosis is...
4. **Discussion of theoretical issues:**
  1. The structure of the joints
  2. Classification of joints
  3. The concept of trauma and traumatic disease
  4. Pain scale
  5. Violations of the anatomical integrity of the bone caused by mechanical influences
  6. TV in different periods of fracture treatment
  7. FR in arthrosis
  8. FR in osteochondrosis
5. **Topics of reports/abstracts:**
  1. What is "joint game" and what is it used for ?
  2. Tasks and methods of physical rehabilitation depending on the period ( immobilization , post-immobilization , restorative) and treatment method.
  3. Peculiarities of physical rehabilitation for musculoskeletal injuries caused by gunshot wounds.
6. **Summing up:**
  1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.
  2. Topic of the next lesson: Physical therapy and occupational therapy in pediatrics.
  3. Control questions for the following topic:
    1. What are the stages of childhood?
    2. What do you know about the anatomical and physiological features of the nervous system in children ?
    3. What do you know about the anatomical and physiological features of the musculoskeletal system in children ?
    4. How many types of CPU are there ?
7. **List of recommended literature**

Main:

1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.
2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.
3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

Additional:

1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.
2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.

### Seminar session No. 14

**Topic:** Physical therapy and occupational therapy in pediatrics.

**Purpose:** Study of the capabilities of the child's body, structural and functional features of the body of children of different ages, features of their development, the course of the main diseases of children of different ages. The causes of children's diseases and the most general patterns of the occurrence and course of pathological reactions and processes in the children's body. Clinical and physiological justification of the use of physical exercises and other means of physical rehabilitation for diseases in children.

**Basic concepts:** stages of childhood, reflexes, cerebral palsy, ASD, dysplasia ,

**Equipment:** Screen, multimedia projector

**Plan:**

1. **Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. **Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( **if necessary** ).
3. **Questions (test tasks) to check basic knowledge on the topic of the seminar:**
  1. What are the stages of childhood?
  2. What do you know about the anatomical and physiological features of the nervous system in children ?
  3. What do you know about the anatomical and physiological features of the musculoskeletal system in children ?
  4. How many types of CPU are there ?

#### 5. Discussion of theoretical issues:

1. Periodization of childhood
2. Physical development of children of different ages
3. Anatomical and physiological features of the nervous system in children of different ages
4. Physiological and pathological reflexes of newborns
5. Peculiarities of physical therapy for children with cerebral palsy and diseases of the nervous system
6. Peculiarities of physical therapy for cerebral palsy
7. Characteristics of the main diseases and disorders of the musculoskeletal system in childhood
8. The main means of physical therapy for diseases and disorders of the musculoskeletal system of children

#### 6. Topics of reports/abstracts:

1. Physiological and pathological reflexes in children under 3 years of age
2. Systems and scales for evaluating a child with cerebral palsy

**Summing up:**

1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.
2. Topic of the next lesson: Physical therapy and occupational therapy in cardiology.
3. Control questions for the following topic:
  1. Ischemic disease is...
  2. Forms of IHM
  3. Myocardial infarction is...
  4. Types of myocardial infarction
7. **List of recommended literature**

Main:

1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.
2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.
3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

Additional:

1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.
2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.

### Seminar session No. 15

**Topic:** Physical therapy and occupational therapy in cardiology.

**Goal:** to acquaint students with the risk factors of cardiovascular disease, diagnostic possibilities, the physical rehabilitation program, the purpose and main methods of rehabilitation of patients with coronary heart disease and myocardial infarction.

**Basic concepts:** ischemic heart disease, atherosclerosis, myocardial infarction

**Equipment:** Screen, multimedia projector

**Plan:**

1. **Organizational activities** (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. **Control of the reference level of knowledge** (written work, written test, frontal survey on basic terminology, etc.) ( if necessary ).
3. **Questions (test tasks) to check basic knowledge on the topic of the seminar:**
  5. Ischemic disease is...
  6. Forms of IHM
  7. Myocardial infarction is...
  8. Types of myocardial infarction
4. **Discussion of theoretical issues:**
  1. Definition and classification of coronary heart disease, risk factors.
  2. Concept of atherosclerosis.
  3. Diagnostics of the functional capacity of a patient with coronary artery disease.
  4. Clinical and physiological rationale for the use of physical therapy and occupational therapy in coronary heart disease.
  5. Tasks, indications and contraindications for rehabilitation measures in coronary artery disease.
  6. Angina. Classification. Clinic.
  7. Peculiarities of prescribing means of physical rehabilitation for angina pectoris depending on FC
  8. The main ones factors sharp insufficiency of coronary circulation
  9. Basic principles of physical rehabilitation of patients with myocardial infarction
5. **Topics of reports/abstracts:**
  1. Clinical manifestations of atypical angina pectoris
  2. Scandinavian gait as a type of rehabilitation for patients after AMI
6. **Summing up:**
  1. Announce evaluations to students and justify them according to the criteria for evaluating knowledge.
7. **List of recommended literature**

Main:

  1. Proceedings Of 7th International Conference & Exhibition on Physiotherapy & Physical Rehabilitation: 2019: Journal of Physiotherapy & Physical Rehabilitation: Volume 4. N.p., Conference Series, 2019.
  2. Cultures of Inclusive Education and Democratic Citizenship: Comparative Perspectives. Czech Republic, Charles University, Karolinum Press, 2022.
  3. Implementation of modern science and practice. N.p., PRIMEDIA launch LLC, 2021.

Additional:

  1. Assisted Living: Needs, Practices, and Policies in Residential Care for the Elderly. UK, Johns Hopkins University Press, 2001.
  2. Franchignoni, Franco, and Gobelet, Charles. Vocational rehabilitation the different European models. Germany, Springer Paris, 2006.