

## THEME PLAN

### **practical training in physiotherapy and medical rehabilitation for 5th year students of the Faculty of Medicine, Faculty of Foreign Students**

#### **1. Fundamentals of medical rehabilitation. Features of examination in medical rehabilitation**

The concept of rehabilitation. Types of rehabilitation. Definition of medical rehabilitation.

The concept of the consequences of the disease. Types of functional disorders according to the ICDH model. Categories of life activity, classification, definitions. Types of social insufficiency. ICF model.

Goals of medical rehabilitation. The concept of "quality of life", definition, components. The difference between medical rehabilitation and treatment. Principles of medical rehabilitation. Indications and contraindications for the appointment of rehabilitation measures. Disability criteria.

Organization of a rehabilitation service recommended by the World Health Organization (WHO). The concept of a rehabilitation program and rehabilitation services. The staff of the medical rehabilitation team. The concept of occupational therapy.

Laws of the Republic of Belarus regarding rehabilitation. WHO documents on rehabilitation. Basic regulatory legal acts of the Ministry of Health of the Republic of Belarus on medical rehabilitation. Phases of medical rehabilitation. Form of the individual program of medical rehabilitation of the patient.

Features of collecting anamnesis in medical rehabilitation. Study of motor functions. Methods for the study of physical development. Methods for assessing physical development. Assessment of physical development by the method of indices. Psychological examination in medical rehabilitation: tasks, methods. Internal picture of the disease: definition, significance in rehabilitation, types, assessment methods.

Research and evaluation of daily human activities. Scale of functional independence, scales Bartel, Katz. Tables for assessing the functional state. The concept of a functional class.

#### **2. Methods and means of medical rehabilitation**

Characteristics of the means of medical rehabilitation from the standpoint of evidence-based medicine.

Psychotherapy. Methods of psychotherapy used in the rehabilitation of patients with diseases of the internal organs.

Kinesiotherapy: classification of kinesiotherapy means, their brief description. Contraindications for the appointment of physiotherapy exercises, massage, mechanotherapy, manual therapy.

Hypoxia training. Types of training, indications and contraindications.

Physiotherapy. Methods of physiotherapy used in the medical rehabilitation of patients with a major disabling pathology.

Ergotherapy.

Medical and technical means of rehabilitation.

Diet therapy, general characteristics. WHO recommendations for rational nutrition.

### **3. Fundamentals of physiotherapy**

Definition of the concept of "physiotherapy". The role of domestic scientists in the development of physiotherapy, Belarusian school of physiotherapists. The main directions of the use of physical factors in medicine (therapeutic, rehabilitation, preventive, diagnostic). Features of therapeutic physical factors. Classification of means and methods of physiotherapy. Principles of physiotherapy. Modern ideas about the mechanisms of the physiological and therapeutic action of natural and preformed physical factors, physical, physico-chemical and biological stages, their effects on the human body. Local, segmental and general reactions of the human body under physiotherapeutic influences, their relationship. The role of the skin in the implementation of the action of physical factors. Neurophysiological and humoral aspects of the mechanism of action of physiotherapeutic procedures. Combination of physiotherapeutic factors. Safety rules for working with physiotherapy equipment.

#### **Direct current and its therapeutic and prophylactic use. Pulse electrotherapy**

Physico-chemical foundations and mechanisms of the physiological and therapeutic effects of direct current on the human body. Dosing direct current. Medicinal electrophoresis, the basics and the most important features of the method. Methods and techniques for the use of drug electrophoresis.

Pulse electrotherapy. Electrosleep. Diadynamic therapy. Amplipulse therapy. Interference therapy. Fluctuorization. Transcutaneous electrical stimulation. Electrodiagnostics and electrostimulation. Transcranial electrical stimulation. The mechanism of the physiological and therapeutic action of pulsed electrotherapy, indications and contraindications.

#### **4. High-frequency, ultra-high-frequency therapy. Mechanotherapy, aeroionotherapy**

General characteristics of high-frequency electrotherapy methods. Thermal and oscillatory components of the action of high-frequency factors. Physical characteristics of high-frequency factors, mechanism of physiological and therapeutic action, indications and contraindications. Mechanotherapy. Physical and biophysical foundations of ultrasonic therapy methods. The mechanism of the physiological and therapeutic action of ultrasound. Low frequency ultrasound, the benefits of low frequency ultrasound therapy. Indications and contraindications for ultrasound therapy. Equipment for ultrasound therapy, methods of procedures, safety precautions. Ultraphonophoresis of medicinal substances, the mechanism of therapeutic action, methods of procedures, indications and contraindications. Aeroionotherapy. The concept of air ions and hydroaeroions. Features of the

action of positive and negative aero- and hydroaeroions.

**5. Light therapy. Magnetotherapy. Water, mud, heat treatment. Cryotherapy. Spa treatment**

Physical and biophysical characteristics of light, the concept of the spectrum of light radiation. Physiological and therapeutic effect of infrared and visible rays. Bioptrontherapy. Physiological and therapeutic effect of plane polarized light. Ultra-violet rays. Physiological and therapeutic effect of ultraviolet rays with different wavelengths (long-medium and short-wave ultraviolet radiation). Ultraviolet erythema, its dynamics and biological role, indications and contraindications for use. Laser therapy. Physical and biophysical characteristics of laser radiation. The mechanism of physiological and therapeutic action of laser radiation. The concept of laser puncture and laser blood irradiation, indications and contraindications.

Magnetotherapy. Biophysical bases of magnetotherapy. Types of magnetic fields (constant, variable, running, pulsed). Physiological and therapeutic effect of magnetic fields. Indications and contraindications for magnetotherapy. Water, mud, heat treatment. Cryotherapy, physiological and therapeutic effect. Spa treatment.

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