

THEME PLAN

of practical lessons in physiotherapy and medical rehabilitation for the 5th-year students of the faculty of foreign students (studying in English)

1. Basics of Physiotherapy.

Definition of the term «physiotherapy». The role of Russian scientists in the development of physiotherapy, the Belarusian school of physiotherapists. Rules of medical ethics and deontology. The main areas of using physical factors in medicine (therapeutic, rehabilitation, preventive, diagnostic). Features of therapeutic physical factors. Classification of means and methods of physiotherapy. Principles of physiotherapy. Modern concepts of the mechanisms of physiological and therapeutic action of natural and preformed physical factors, physical, physicochemical and biological stages, their effects on the human body. Local, segmental and general reactions of the human body during 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 and combination of physiotherapeutic factors. Safety rules when working with physiotherapy equipment. Basic principles of emergency care.

2. Direct current and its therapeutic and prophylactic use. Pulsed electrotherapy. High-frequency, ultra-high-frequency and ultra-high-frequency therapy. Mechanotherapy, aeroionotherapy.

Physicochemical principles and mechanisms of the physiological and therapeutic effects of direct current on the human body. Direct current dosing. Medicinal electrophoresis: principles and key features of the method. Methods and techniques for using medicinal electrophoresis.

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

General characteristics of high-frequency electrotherapy methods. Thermal and oscillatory components of high-frequency factors. Physical characteristics of high-frequency factors, mechanism of physiological and therapeutic action, indications and contraindications. Mechanotherapy. Physical and biophysical principles of ultrasound therapy methods. Mechanism of physiological and therapeutic action of ultrasound. Low-frequency ultrasound, advantages of low-frequency ultrasound therapy. Indications and contraindications for ultrasound therapy. Equipment for ultrasound therapy, procedure techniques, safety precautions. Ultraphonophoresis of medicinal substances, mechanism of therapeutic action, procedure techniques, indications and contraindications. Aeroionotherapy. Concept of aeroions and hydroaeroions. Features of the action of positive and negative aero- and hydroaeroions.

3. Light therapy. Magnetic therapy. Water, mud, and heat therapy. Cryotherapy. Spa treatment.

Physical and biophysical characteristics of light, concept of the light spectrum. Physiological and therapeutic effects of infrared and visible rays. Bioptrontherapy. Physiological and therapeutic effects of plane-polarized light. Ultraviolet rays. Physiological and therapeutic effects 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. Mechanism of the physiological and therapeutic effects of laser radiation. Concept of laser puncture and laser blood irradiation, indications and contraindications.

Magnetotherapy. Biophysical principles of magnetotherapy. Types of magnetic fields (constant, alternating, traveling, pulsed). Physiological and therapeutic effects of magnetic fields. Indications and contraindications for magnetotherapy. Hydrotherapy, mud therapy, and heat therapy. Cryotherapy: physiological and therapeutic effects. Spa treatment.

Head of the of the Neurology
and neurosurgery Department with
course of medical rehabilitation, FATandR,
PhD, Associate Professor

N.N. Usova