



Cardio Pulmonary Rehabilitation Course (CPR)

The course is for physiotherapists and physicians.
The course is divided into two parts (A + B) for a total of 40 hours.

vertical walking



Annotation of course

The course clarifies the principles of physical activity, aerobic and anaerobic exertion used in prevention, physical well-being and rehabilitation of cardiopulmonary diseases. It offers a practical diagnostic application scheme that takes into account the current recommendations and standards of professional societies and is based on current evidence-based knowledge in these areas.

The course focuses on practical workshops aimed at the targeted use of subjective and objective assessment scales and cardiopulmonary patient exertion tests, the education of neuromuscular techniques of chest physiotherapy, respiratory reeducation and individual respiratory clearance (drainage) techniques.

Practical training is based on application of loading programs in clinical and outdoor conditions. Students acquire various techniques of exercise, walking (offensive and defensive approach), and walking with poles. The novelty is vertical walking and its contribution to the therapy of cardiovascular, respiratory and movement disorders. After successful completion of both parts, graduates will receive a Vertical Walking Instructor certificate.

Part A Cardiovascular Rehabilitation (20 hours)

Day I.

9.00-9.45 Current state of knowledge. Incidence and prevalence. Risk Factors: Secondary Policy prevention. Definition of Diagnostic and Therapeutic Problems - Comprehensive and multidisciplinary approach. Indications and objectives in each phase of cardiac rehabilitation. Current recommendations. Quality of life.

9.45-10.30 Significance and impact of physical activity on specific body systems. Physiology and pathophysiology of the circulatory system. Aetiology and clinical picture of major cardiopulmonary diseases. Symptoms of cardiopulmonary load. Vegetative reaction.

10.30-12.00 Diagnosis based and orientated on patient problem. Evaluation, individualization and stratification of the risk of movement treatment. Diagnostic modalities. Cardiac status. Motional status. Monitoring of physiological changes (METS, EF, PF, BP).

13.00-14.30 Subjective and objective assessment of load intensity (RPE, Borg, FAD ...). determination of submaximal capacity and calculation of the optimal training frequency. Functional tests - 6 min. walking test: evaluation and interpretation of the results - test form (practical education).

14.30-15.00 Pre-operative preparation and post-operative care after invasive procedures (PCI, CABG, sternotomy, thoracotomy ...): tactile stimulation and inhibition, re-education breathing patterns, segmental chest mobilization: practical demonstration and practice.

15.00-16.30 Cardiopulmonary resuscitation principles: refresh- practical training.

DAY II.

8.00- 9.30 Developing and optimization of the training session (FIT criteria). Various forms of aerobic, anaerobic and combined training used in cardio rehabilitation (walking, strength training, bicycle ergometry, hydrokinesiotherapy ...). Estimation of the level of physical activity. Load type a the progression. Modification of training parameters.

9.30- 11.00 Principles of individual and group therapeutic physical education in cardiac patients. Monitoring and supervision of cardio patient. Symptoms of overloading and excessive exertion. Risk stratification.

12.00- 16.30 Working with the patient and setting the optimal load on the field. Walking, walking with sticks, vertical walking: demonstration and practical training of various forms and intensity of the load in outdoor natural environment.

Part B Pulmonary Rehabilitation (20 hours)

DAY I.

9.00-10.30 Introduction to the Problem. Physiology and pathophysiology of the respiratory system. Risk factors and prevention of respiratory diseases. Aetiology and clinical picture of obstructive and restrictive diseases. Comprehensive and multidisciplinary approach.

9.45-10.30 Current guidelines. An integrated model of respiratory care. Practical application scheme of cardiopulmonary and postural dysfunction.

10.30- 12.00 Subjective and objective assessment of basic symptoms (dyspnoea, fatigue, cough ...) in association with respiratory diseases. Rating scales and performance indexes (BODE, ABCD, MRC, 6MWT ...). Spirometry. Exertion tests.

13.00-14.30 Examination of Breathing Stereotype. Inspiratory-expiratory balance. Respiratory hyperinflation. Functional reserve. Examination of posture in relation to breathing: Practical demonstration and training.

14.30-17.30 Techniques and Procedures of Respiratory Physiotherapy: Hygiene of Upper and Lower airways. Static and dynamic breathing gymnastics, controlled breathing, control cough and breathlessness, huffing, PEP, PIP system, active breathing cycle: practical demonstration and training.

DAY II.

8.00-9.30 Techniques of chest physiotherapy: relaxation and correctional position, tactile (hands on) stimulation and inhibition, manual treatment of myofascial and capsular chest structures and spine in relation to respiratory dysfunctions: practical demonstration and practice.

9.30-11.00 Relationship between posture and breathing. Tonus typology. Sensomotoric integration. Centre of gravity direction: effect of horizontal and vertical settings on the respiratory kinetics. Standing re-education and dynamic walking. Walking with poles. Vertical walking. Practical training.

12.00- 16.30 Cardio Pulmonary training in the outdoor natural environment: offensive and defensive walking style with modelling of exertion.