



HISTORY AND ESSENCE OF KINESITHERAPY

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Kinesitherapy, with its great preventive, restorative, and health-promoting capabilities, is increasingly entering the system for higher education. In the system of Physical Education, at Sofia University “St. Kliment Ohridski”, kinesitherapy is introduced as a cycle of special activities for prophylactic and therapeutic purposes. This gives the students with health problems an opportunity to take part in group activities or individual treatment at the Center for Kinesitherapy, located in the Rectorate building of Sofia University, or in the second Center for Kinesitherapy located in the bulding of the Faculty of Educational Studies and Arts.

1. Birth and development of kinesitherapy

There is evidence that physical exercise has been used as a therapeutic tool in many diseases by almost all nations of the ancient cultural world.

This is witnessed by the preserved and reached written monuments from thousands of years before our era. For example, in one of the books of the Ancient Chinese encyclopedia, “Kong Fu” from 3000s BC different starting positions of the body were described and drawn, from which the physical exercises had to be performed. In addition, there was an extensive description of the therapeutic gymnastics and justification of the therapeutic effects of the movement.

In India, around 1800 BC, in one of the sacred books – “Ayurveda” (“Book of Life”) and later around 1000 BC, the book “Sokruta” were described in great detail the known hygiene rules, and both books talked about the importance of movement for a healthy person. There also was a detailed description of passive and active physical exercises, respiratory gymnastics, and massage.

Later, the therapy with movement from Assyria and Babylonia, Persia, and Egypt passed into Ancient Ellada.

The period of prosperity of Greek culture was one of the important stages in the development of physical therapy. Hippocrates (460 – 370 BC) may be considered as the creator of therapeutic gymnastics. In the treatment of sick people, he placed as most important the diet and therapeutic gymnastics and insisted that they should have a strictly individual nature. In his book “Hippocratic Collection”, he described in detail the action of physical exercises, the time of their application, the rules for carrying them out, and their indications in various diseases.

Some methodical instructions for the application of therapeutic gymnastics left by Hippocrates have not lost their importance to present days.

Later, during the conquering of Ancient Ellada, crowds of Greek slaves, including scientists, doctors, and gymnasts, were taken to the Roman Empire. They took and disseminated their knowledge of therapeutic gymnastics there.

In old Rome, therapeutic gymnastics has received further development, which is associated with the names of the most famous Roman doctors: Asclepius, Gallen, Celsius, Aurelian.

In the Middle Ages, when human consciousness was hampered by the dogmas of the Christian religion, which considered asceticism as an ideal of life, and the cult of the beautiful, strong and healthy body from the Antiquity was considered as erethism and sin.

During that era, Arabs did not abandon treatment by movement and continued to apply it more through passive movements and massages accompanied by water procedures, mainly in public bathrooms.



During the Renaissance began a turbulent upsurge in the development of natural sciences and medicine. In 1575, the first paper “For gymnastic art” by Mercurialis appeared. In his work, he gathered everything that could be found related to gymnastics, therapeutic gymnastics, and the massages, and described it in detail.

Later – in the XVIII century, the development of therapeutic gymnastics was related to the names of Hoffman, Anri, Fuller and Thiso. In that era, the physical therapy received a particularly turbulent development in France. In his paper “Medical and Surgical Gymnastics” (1780), Fransoa Thiso wrote: “Movement on its impact can replace any drug, but all drugs in the world cannot replace the impact of movement”.

Medicine and therapeutic gymnastics continue to develop due to the increasing military trauma associated with frequent wars at that time.

Ling, after regaining his lost shoulder mobility in war, has devoted his entire life to giving the humanity a verified methodology of treatment through physical exercise. Through his students, Lings’ system soon went beyond Sweden’s borders and spread all over Europe under the name “Swedish Gymnastics”.

Bulgaria has also contributed to the promotion and implementation of the doctrine for the benefits of physical exercises for human health.

Dr. Peter Beron in his “Fish Primer” (1824) gives a number of important hygiene rules, where physical exercises come first.

From 1916, Petar Deunov began to pay attention to physical exercises, considering that spiritual growth requires a healthy and harmonious body. According to Peter Deunov, without movement, man cannot grow physically, spiritually, and mentally.

The beginning of the application of physical therapy (Kinesitherapy) in Bulgaria was set in 1947-1948. In 1947-1948 the first Department of Physical Therapy was opened at the Higher School of Physical Culture (today National Sports Academy “Vassil Levski”). Bulgaria was one of the first countries in Europe to introduce a 4-year Bachelor’s education in kinesitherapy. In 1952, the first Methodologists in kinesitherapy were graduated.

Kinesitherapists are health professionals who work to maintain and restore the health, capacity and bring back the independence of persons with disabilities or problems caused by physical, psychological, or other disorders.

Health services provided by kinesitherapists include research, kinesiological functional evaluation and diagnosis, planning, implementation, and ongoing evaluation of a kinesitherapeutic program.

The kinesitherapist examines and evaluates various problems related to the functional state of a person and determines his rehabilitation potential, develops and conducts kinesitherapeutic programs for clinically diagnosed by a doctor, diseases.

They conduct specialized treatment with specific kinesitherapeutic methods other than those of doctors. Kinesitherapists handle with a wide range of specialized methods and tests for studying and evaluating the functional state of the organs and systems of the human body, physical efficiency, and recovery.

Kinesitherapy is a profession, that uses physical exercises alone or in combination with massage and other manual techniques, and with other physical factors, as the main therapeutic tool for health promotion, prevention, and treatment.

The profession of “kinesitherapist” finds application in health, education, science, physical education and sports, fields.

Among the complex of factors in the overall program for increasing the living standards of society, an important place is given to Physical Education.



Transferred to the higher education system, this means meeting the needs of society not only for comprehensively educated professionals, but also for being physically healthy and with a long working capacity.

The increased requirements for the preparation of students in higher education institutions and some adverse factors of modern lifestyle require greater care for their health and physical condition.

This requires a rational solution of the regime of study/work and rest, achieving a balance between mental and physical load.

Physical Education and sports at the university are essential means for strengthening the health and increasing fitness levels of university students.

There is a significant number of students with health problems and disabilities in Sofia University “St. Kliment Ohridski”. To create the same opportunities for physical exercises for all students in the system of Physical Education a cycle of special activities with prophylactic and therapeutic purposes is introduced.

In 1962, thanks to assoc. prof. Elisaveta Morova, a specialist in physiotherapy (kinesitherapy), regular kinesitherapy classes were being conducted for Sofia University “St. Kliment Ohridski” students, in which a program adapted and consistent with the health condition of students was applied.

In 2013, prof. Kostadin Kostov, changed the kinesitherapy’s curricula, dividing the students into separate groups according to the type of their disease. Thus, groups of students with diseases of the nervous system, musculoskeletal system, cardiovascular and respiratory systems, metabolic diseases, and with problems in the spine were formed.

This distribution of students into groups formed by nosological units makes it possible to refine the learning process and to achieve greater effectiveness of the kinesitherapy impact aimed at improving the psychophysical and functional condition.

2. Essence of kinesitherapy

Kinesitherapy means treatment by movement.

The subject of kinesitherapy is the treatment, prevention, recovery, and maintenance of patients’ health and the prevention of relapses and complications.

The object of kinesitherapy is patients with various disabilities, dysfunctions of abilities, but also people who have a special physiological condition, such as pregnancy and the postpartum period, but also infants and young children, practically healthy adults, and old people.

Kinesitherapy solves therapeutic and prophylactic, restorative, and rehabilitation tasks, which are achieved with the help of physical exercises.

With the increasing dependence on technology, society today shows a tendency to “deprogram” the innate need to move, by replacing it with many alternatives, such as elevators, public transport, etc., that promote a sedentary lifestyle and reduced physical activity. The sedentary lifestyle is a major risk factor for the development of many chronic diseases and is one of the main causes of early death.

The positive effect of physical exercise on the human body is an indisputable fact. It is well known that regular physical activity and sports improve the functioning of the nervous, respiratory, musculoskeletal, and cardiovascular systems. Physical exercise is a natural activator of metabolism and contributes to its optimization. They improve the immune response, lower the illness risk, and reduce inflammation. They also increase vitality and last but not least increase the capacity to perform physical and mental work.

Kinesitherapy has a complex effect – functional, psychotherapeutic, tonic, structural (morphological) effect on tissues, organs, and systems. In turn, the functional influence of



individual organs and systems can be manifested in the following areas: normalization, maintenance, improvement, and reorganization of functions.

The ultimate **therapeutic purpose** in any disease is the restoration of physical and working capacity. Kinesitherapy is an active method of treatment – the patient takes an active part in it and in the recovery process, which leads to its mobilization and increases the effectiveness of the therapy.

Kinesitherapy is widely used. It is indicated in almost all diseases. There are no age restrictions, negative side effects when applied correctly.

The main tool of kinesitherapy is physical exercise. Physical exercises are meaningful and purposeful, methodically correctly selected and applied movements or a system of movements for achieving a certain result.

When applying kinesitherapy, good results can be obtained only by observing certain requirements and rules, which can be divided into three groups: pedagogical, physiological, and therapeutic.

Pedagogical rules:

- Activity and consciousness – students should participate as actively and consciously as possible in the activities;
- Accuracy and comprehension – the teacher should accurately, clearly, and understandably present the information when working with the students;
- Accessibility – classes should begin with easier exercises, gradually moving on to more complex and difficult ones.

Physiological rules:

- Optimal load – the optimal load is this functional load, which leads to the fastest effect with minimal risk for the participants. The workload, both in volume and intensity, must correspond to the students' abilities and the tasks set;
- Combination of general and specific therapeutic effects;
- Graduality of the load – the physical exercises and other means of kinesitherapy should be applied with a gradual increase of the dosage;
- Variety of applied means – they should vary because the uniformity of means leads to faster fatigue and loss of interest.
- For a positive effect, kinesitherapy classes should be conducted regularly and systematically. Each carried out activity leads to a small effect, but with regular activities, this effect is accumulated and leads to significant changes.

Therapeutic rules:

- The complexity of treatment – the impact of kinesitherapy increases if applied in combination with other therapeutic methods and means;
- Prophylactic focus – in order to prevent complications;
- Medical and pedagogical control – measurements and tests are carried out before and after every single procedure, as well as after a course of several activities.

Several forms of activities in kinesitherapy differ, but the **main form of occupation is the procedure.** The procedure is built in three parts – preparatory, main, and final part. Activities can be individual and group. Another form of kinesitherapy is morning gymnastics, which lasts 10 minutes. When working with students with spinal deformities or for prophylactic purposes, the kinesitherapy procedure has the form of a correctional gymnastics activity.



Proper dosing of the load in kinesitherapy is of a greatest importance for achieving the maximum positive therapeutic effect. The determination of the load must be consistent with the individual condition of the patient.

Contraindications to the application of kinesitherapy:

1. General - severe general condition, fever, the inflammatory process in the acute period, hemorrhage, malignancies.
2. Special - severe heart failure, hypertensive crisis, asthma attack, kidney and ulcer crisis, migraine, and others.

RESOURCES

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