Міністерство освіти і науки України
Національний університет
«Полтавська політехніка імені Юрія Кондратюка»
Національний університет фізичного виховання і спорту України
Полтавський державний медичний університет
Сумський державний педагогічний університет імені А.С. Макаренка
Прикарпатський національний університет імені Василя Стефаника
ГО «Всеукраїнське об'єднання фізичних терапевтів»
Vrije Universiteit, Belgium
Strasbourg University, France

# ФІЗИЧНА РЕАБІЛІТАЦІЯ ТА ЗДОРОВ'ЯЗБЕРЕЖУВАЛЬНІ ТЕХНОЛОГІЇ: РЕАЛІЇ І ПЕРСПЕКТИВИ

Збірник наукових матеріалів VIII Всеукраїнської науково-практичної Інтернет-конференції з міжнародною участю

*24 листопада 2022 року*

# PHYSICAL REHABILITATION AND HEALTHSAVING TECHNOLOGIES: REALITIES AND PERSPECTIVES

Collection of materials of the VIII All-Ukrainian Scientific and Practical conferences with international participation

November 24, 2022

Полтава 2022

Disease Outbreak: A Systematic Scoping Review of the Latest RCTs //Medicina. – 2022. – Т. 58. – №. 10. – С. 1321.

6. Milewski K. et al. Actual status and future directions of cardiac telerehabilitation //Cardiology Journal. – 2022.

7. Pencina M. J. et al. Quantifying importance of major risk factors for coronary heart disease //Circulation. – 2019. – Т. 139. – №. 13. – С. 1603-1611.

8. Piotrowicz E. et al. Hybrid comprehensive telerehabilitation in heart failure patients (TELEREH-HF): a randomized, multicenter, prospective, open-label, parallel-group controlled trial–study design and description of the intervention //American Heart Journal. – 2019. – Т. 217. – С. 148-158.

9. Sanchis-Gomar F. et al. Epidemiology of coronary heart disease and acute coronary syndrome //Annals of translational medicine. – 2016. – Т. 4. – №. 13.

10. Subedi N. et al. Implementation of telerehabilitation interventions for the self-management of cardiovascular disease: systematic review //JMIR mHealth and uHealth. – 2020. – Т. 8. – №. 11. – С. e17957.

Jo Verschueren
Doctor in Rehabilitation Sciences and Physical Therapy
Doctor in Philosophy
Human Physiology and Sports Physiotherapy of
*the Vrije Universiteit Brussel*
Viktoriia Horoshko
Candidate of Medical Sciences
*National University «Yuri Kondratyuk Poltava Polytechnic»*

## KINESIOLOGY AND REHABILITATION IN STIMULATING THERAPY OF CHILDREN WITH DISABILITIES

In motor and mental activity, the formation of brain function plays a special role in space. This is also important for the recovery process, so we should pay attention to this and try to identify from the inner contemplation of the concept of space and human communication with it, more effective ways to improve the brain and then use them in the practice of restoring human functions, we use space, performing the actions of the whole body (locomotion) and parts of the body, but these same actions acquire special significance against the background of an object moving in space – the main stimulus for human life. In this direction, we must begin the search for Stimulation Therapy and its methods.

Keywords: kinesiology, musculoskeletal system, antagonist's muscles, rehabilitation.

The level of development of children's speech is directly dependent on the degree of formation of fine movements of the fingers, and the improvement of speech directly depends on the degree of hand training [1]. Based on the results of studies conducted with the participation of a large number of children, the following pattern was revealed: if the development of finger movements corresponds to age, then speech development

is within the normal range. If the development of finger movements lags behind, then speech development is also delayed.

This is confirmed by many scientists and as a result of a study of children with mental retardation. In such children, the formation of higher mental functions, as well as speech and fine motor skills, are impaired. This dependence is due to the fact that in the cerebral cortex the zone responsible for the development of fine hand movements and the speech motor zone are located very close to each other. Throughout early childhood, it is clearly seen how, with the improvement of fine movements of the fingers, the development of speech function proceeds [2, 5].

Kinesiology methods affect not only the development of mental abilities and physical health, they allow you to activate various parts of the cerebral cortex, which contributes to the development of human abilities and the correction of problems in various areas of the psyche [3]. In particular, the use of this method improves the child's memory, attention, speech, spatial representations, fine and gross motor skills, reduces fatigue, increases the ability to control inter-hemispheric connections.

The main goal of educating children with disorders of the musculoskeletal system is to create all kinds of favorable conditions for preparing them for environmental conditions. So that children feel comfortable and do not feel discomfort about their “feature” [6].

Tasks of the medical-restorative movement:

- correction of incorrect positions of the musculoskeletal system (individual limbs, parts of the spine, foot, as well as the skeleton as a whole);
- normalization of muscle tone and balance of antagonist muscles;
- general relaxation (relaxation) of the skeleton and individual spastic muscle groups;
- overcoming weakness (hypotension, hypotrophy) of individual muscle groups
- overcoming general (diffuse) muscle hypotension
- increased joint mobility (prevention of contractures and their development);
- sensory enrichment: improvement of muscular-articular sensations (kinesthesia);

In this case, it is necessary to implement the principle of individualization [4, 7]. When implementing the principle of individualization must take into account the following:

1) features of somatic development;
2) characteristics of motor development;
3) features of mental development;
4) degree of intellectual development;
5) characteristics of the child's age;

Physical rehabilitation, which included exercise therapy, with the use of mechanical correction of the foot and spinal column of children with orthopedic insoles, helps prevent the development of further structural disorders and progressive changes in the spine and feet, and the general musculoskeletal system. We consider the creation and strengthening of the muscular corset, the emergence and consolidation of the skill of correct posture in children of primary school age with the help of physical exercises in exercise therapy classes, to be fundamental in achieving results.

*Literature*
1. Block M. E., Fines A. Examining physical activity for individuals with disabilities through a social justice lens //Kinesiology Review. – 2021. – Т. 11. – №. 1. – С. 80-87.
2. Konuk Sener D., Karaca A. Use of complementary and alternative medicine treatments by mothers of children with developmental disabilities: a cross sectional study //Nursing & Health Sciences. – 2020. – Т. 22. – №. 2. – С. 328-338.
3. Ku B. The Effects of Motor Skill Interventions on Motor Skills in Children with Developmental Disabilities: A Literature Review //The Asian Journal of Kinesiology. – 2020. – Т. 22. – №. 4. – С. 11-22.
4. Ku B. Validity of the Developmental Coordination Disorder Questionnaire'07 and Its Association with Physical Activity in Young Children with Developmental Disabilities //The Asian Journal of Kinesiology. – 2021. – Т. 23. – №. 1. – С. 10-19.
5. Metzler M. J. et al. Goals of children with unilateral cerebral palsy in a brain stimulation arm rehabilitation trial //Developmental Medicine & Child Neurology. – 2021. – Т. 63. – №. 5. – С. 584-591.
6. Santiago J. A. et al. Kinesiology Students' Experiences in a Service-Learning Project for Children With Disabilities //Physical Educator. – 2020. – Т. 77. – №. 2. – С. 183-207.
7. Tahir J., Ahmad S., Rana A. A. Effects of Neuromuscular Electrical Stimulation with and without Kinesio Taping Application on Sitting Balance Among Children with Cerebral Palsy //The Healer Journal of Physiotherapy and Rehabilitation Sciences. – 2021. – Т. 1. – №. 2.

Акімов О.Є., доктор філософії
*Полтавський державний медичний університет*
Левков А.А. к.мед.н., доцент
*Національний університет «Полтавська політехніка імені Юрія Кондратюка»*

## РЕАБІЛІТАЦІЯ ПІСЛЯ ВИВИХУ КОЛІННОГО СУГЛОБУ

У разі пошкодження колінного суглоба зміститися може:

- надколінок;
- стегнова кістка;
- великогомілкова кістка.

Вивих надколінка вважається менш серйозною травмою. Зазвичай після вправлення достатньо накладання шини для іммобілізації ноги. При зрушенні стегнової або великогомілкової кістки багатьом пацієнтам потрібна операція.

Залежно від напрямку зміщеної кістки виділяють:
передній вивих; задній; зовнішній; внутрішній.

Також він може бути: повним; неповним (підвивих).

Залежно від виду травми вивих буває: закритий – зберігається цілісність шкірного покриву; відкритий – відповідно до відкритої рани.