

Hippotherapy as a method of rehabilitation for children with disabilities

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Abstract. This publication is dedicated to one of the methods of rehabilitation of children with special needs, which is part of non-traditional medicine - hippotherapy. The article describes the essence and impact of this method on the rehabilitation of children with various forms of musculoskeletal disorders.

Keywords: hippotherapy; multi-sensory stimulation; rehabilitation; children's cerebral palsy; perception of language.

One of the main tasks of Russian medicine and politics in General is to nurture a healthy generation that can ensure the prosperity of the state in the future. The crisis state of society, a decrease in the birth rate and an increase in the death rate lead to an imbalance in society and, as a result, violations of state power in General. Another aspect that the state continues to improve the field of medicine and health care is the increase in the level of disability.

The very concept of disability can be defined as limitations in opportunities due to mental, physical or sensory abnormalities that lead to the emergence of social, legislative and other barriers that prevent the full integration of a person with disabilities into society.

According to statistics for 2020, the number of people with disabilities in Russia is 11875,000 people. These include both mental and physical abnormalities. The 8th place among them is the category of the population with cerebral palsy. [3]

One of the solutions for the education of children with physical and mental disorders is their integration into the conditions of inclusive education. But this decision is not always successful, since there are many children with disabilities today and schools cannot ensure the mass inclusion of children in the classes of general educational institutions. In this case, it becomes necessary for parents to increase the intensity of rehabilitation manipulations.

Often, the path of rehabilitation for cerebral palsy takes place not only in the conditions of classical therapy for pathology of the musculoskeletal system, but also using the methods of complementary medicine. One of the ways of alternative medicine is to turn to zootherapy, which includes hippotherapy. This method is defined as a type of rehabilitation in which children practice gymnastic exercises on a horse. The benefits of using horses in rehabilitation were noticed in ancient times by Hippocrates, and nowadays it has been scientifically proven and is used in many countries. [1, 9] In Russia, as in some other countries, there is the National Federation of Adaptive and Equestrian Hippotherapy (hereinafter NF IAKS). In other words, it is a community of organizations and people promoting hippotherapy for the rehabilitation, habilitation and adaptation of patients. In addition to the interest of organizations in the development of training with horses for rehabilitation purposes, over the past few years, representatives of Russian science have become interested in this technique, who plan to introduce hippotherapy into traditional medicine, pedagogy and psychology, thereby approaching the issue of developing the technique from all angles of child development.

Speaking directly about horse therapy, it is necessary to understand the division of roles and emotional shades among the subjects and objects necessary for the successful completion of the rehabilitation process. The main feature of hippotherapy is the fact that both the subject and the object of the method should be in a harmonious relationship, which is built by the intermediary. In the course of rehabilitation activities, the owner of the horse is obliged to monitor the mood and behavior of the animal, thereby ensuring the safety of all participants. [2, 6]

The essence of the technique lies not only in the performance of gymnastic exercises on a horse, but also in direct communication between the patient and the animal, without which the continuation of the exercises becomes impossible. Emotional perception improves the psychological state of the child at the time of communication with the horse, stimulates the development of self-esteem and has a beneficial effect on the mental processes of the body as a whole. Only after reaching the necessary contact between both participants in hippotherapy will it be possible to proceed to gymnastic exercises. The positive effect of training with a horse is achieved due to several aspects: emotional attachment, together with physical activity and a special, for this type of therapy, rhythmic movement of the horse. This distinctive feature of therapy allows you to create a momentary state that forces a child with a musculoskeletal disorder to keep balance and control the imbalance created by the horse's movements when moving. In addition, the child is given successive modifications that help correct the patient's postural control. Also, the process of riding a horse contributes to a continuous shift in the center of gravity and, as a result, postural adaptation of vestibular control. As a result of such manipulations, the child develops new somatosensory reflexes. Systematic training will allow the patient to develop the ability to control their own movements and, as a result, the movements of the horse, since the horse first listens to the impulses given by the person controlling it, and at first the owner of the horse acts as such a person in rehabilitation classes, and later the patient becomes under the control of the owner. [2, 9]

An experiment was conducted in Romania to confirm the positive effect of hippotherapy on children with musculoskeletal disorders. It was attended by 17 people with different levels of violation complexity. For the participants of the two groups, exercise systems were created with clearly defined goals and levels of difficulty depending on the degree of violation. After 2 months of experimental training, a secondary test was performed, which showed the following results for both groups:

Representatives of the group with an average level of violations showed improvements in static and dynamic balance and spatial orientation, an increase in sociability and a decrease in aggressive manifestations. No significant changes were found in the area of visual-motor coordination.

Among the representatives with a complex level of impairment, improvements were found in the field of behavioral and verbal communication, a partial improvement in paravertebral muscle tone and axial support of the head. In cases of severe muscle spasticity, relaxation was noted in the upper and lower extremities. In addition to positive changes in indicators, due to poor mental and physical endurance, symptoms of discomfort and shortness of breath were found. [4, 20]

Rehabilitation abilities of hippotherapy help to improve the condition not only among people with disorders of the musculoskeletal system, but also with intellectual disabilities, and manifestations of aggression and other mental disorders. At the same time, it is necessary to adequately assess the possibilities of hippotherapy and integrate them with therapeutic massages, speech therapy and psychological classes. In addition to additional rehabilitation actions, it is necessary to clearly understand the child's capabilities and readiness for close contact with the horse. Scientists confirmed that the greatest positive changes from riding were seen among subjects with mild or moderate levels of impairment. At the same time, it is difficult for children with complex forms of disorders to keep on a horse due to severe musculoskeletal dysfunction. In such cases, hippotherapy should be performed in order to improve the psychological state, by introducing the child to communicate with the horse, to walk next to the horses, or even feeding the animal. To improve the emotional background, it is possible to combine several types of zootherapy.

Research in the field of hippotherapy is still being conducted. Scientists intend to improve the method of rehabilitation by integrating it with other areas of rehabilitation, including pedagogical and psychological technologies.

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