

Tomsk scientists have developed a new method of rehabilitation of children with cerebral palsy

According to Tomsk Polytechnic University methodology nowadays about 30 children are engaged in it and one has already learned to walk.



The press service of the university reported that scientists of Tomsk Polytechnic University (TPU) have developed a special method of rehabilitation of children with cerebral palsy. Now 30 children are engaged in it, one child has already learned to walk.

"Many existing methods are trying to teach a child with cerebral palsy to walk as people walk without violations. But his gait will always be different. Our research has shown that the body of such special children comes up with its own walking mechanisms. We laid them as the basis of the methodology," the press service quoted the words of the project's scientific director, professor of the Department of Sports Disciplines of Leonid Kapilevich.

The research of the scientific group began 2.5 years ago. Then, using a high-speed camera, scientists tracked the movements of 30 children with cerebral palsy and found that the children have some walking features. For example, their arms and legs are not involved in the opposite phase -the right hand moves along with the right leg. In addition, to keep balance, they increase the amplitude of the movement of the hands. Thanks to mathematical modeling, scientists have found two different models.

"The developed methodology is a complex of more than 200 exercises from which it is possible to assemble an individual set of exercises for each child. Rehabilitation also involves massage and physiotherapy sessions. Children are

engaged in a rehabilitation center for children and adolescents with disabilities in Seversk at the age of 8 to 14 years," was noted at the university.

They said in TPU that the best result was shown by a boy diagnosed with "spastic tetraparesis" and he has already learned to walk. Scientists have received a patent for a method of rehabilitation. The press service of the university clarified that after studying the results of the children, scientists plan to replicate the methodology.

Scientists of TPU received a large grant from the Russian Science Foundation for three years in the amount of 18 million rubles for the development of rehabilitation techniques at the end of 2015, as well as for the development of technologies for the adaptation of students with disabilities.