## Age-Related Features of Rehabilitation of Patients with Dorsopathy

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### Abstract

Over the past 20 years, various methods of physical rehabilitation for spinal osteochondrosis have been developed and tested, but all of them are aimed at restoring the functions of only a certain part of the spine. According to the research of scientists who studied the formation of the clinic and the dynamics of neurological syndromes of osteochondrosis, 82.9% have simultaneous lesions of the cervical and lumbosacral spine, while the most frequent is the ascending type of osteochondrosis development. The existing methods of physical rehabilitation for multilevel osteochondrosis are currently insufficiently developed and implemented in the practice of treating osteochondrosis.

In the physical rehabilitation of osteochondrosis, new methods are being actively developed using the means of mechanotherapy-exercises on strength simulators. These rehabilitation methods used in practice do not always have a positive result due to the lack of developed methodological recommendations based on biomechanical indicators, such as the position of the spine relative to the central axis, the starting position and the technique of performing exercises, which is a key link in the physical rehabilitation of people with multilevel osteochondrosis of the cervical and lumbosacral spine. In addition, the problem of determining the optimal physical activity, timely operational measures to correct the use of physical rehabilitation tools, depending on the structural and functional changes in the spine, remains unexplored to date. In this regard, we can say that there is a contradiction between the objectively existing methods of physical rehabilitation for osteochondrosis of the cervical or lumbosacral spine and the lack of scientifically based approaches to the methodological support of the use of mechanotherapy for multilevel osteochondrosis of the spine.

The above has determined the problem of research aimed at the development, scientific justification and introduction into practice of the technique of mechanotherapy for multilevel osteochondrosis of the cervical and lumbosacral spine in remission.

### Introduction

In to develop and implement the method of mechanotherapy in the physical rehabilitation of people with multilevel osteochondrosis of the cervical and lumbosacral spine at the stage of stationary recovery using computer-optical diagnostics.

**Methods and techniques** the process of physical rehabilitation of people with multilevel osteochondrosis of the cervical and lumbosacral spine. Subject of research: methods and means of mechanotherapy for osteochondrosis of the cervical and lumbosacral spine in people of different ages. The hypothesis of the study suggested that the method of mechanotherapy using computer-optical diagnostics of the current state of the spine of people with multilevel osteochondrosis of the cervical and lumbosacral spine will be effective, will improve the state of the neuromuscular apparatus of the affected spine, will reduce pain if: an individual choice of the rational duration of the load and intensity of classes based on the results of the primary examination of the student using test exercises on simulators is made, manual muscle testing and computer-optical diagnostics; mechanotherapy in the physical rehabilitation of persons with osteochondrosis of the cervical and

## 209 MIDDLE EUROPEAN SCIENTIFIC BULLETIN

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lumbosacral spine is based on a system of exercises for all muscle groups of the trunk and limbs performed on simulators and consists of preparatory, basic and training rehabilitation cycles; physical rehabilitation of people with osteochondrosis of the cervical and lumbosacral spine using power, cardio simulators is implemented in stages, taking into account the individual characteristics of those involved and the dynamics of the state of the spine; a prerequisite for the successful implementation of mechanotherapy in the physical rehabilitation of people with spinal osteochondrosis is a gradual increase in physical activity, the use of operative diagnostics and correction of the number of approaches and repetitions, which contributes to the restoration of the motor stereotype, physical performance, and improving the quality of life.

## **Research objectives**

- 1. Physical rehabilitation of people with osteochondrosis of the cervical and lumbosacral spine on the process of restoring motor functions.
- 2. Manifestations and structural and functional changes of the musculoskeletal system in people with osteochondrosis of the cervical and lumbosacral spine according to the data of functional and hardware research methods, including computer-optical diagnostics.
- 3. Rehabilitation of people with multilevel osteochondrosis of the cervical and lumbosacral spine in remission.
- 4. Multilevel osteochondrosis of the cervical and lumbosacral spine in the conditions of a sports and recreation center.

The influence of generally accepted methods of physical rehabilitation of people with osteochondrosis of the cervical and lumbosacral spine on the process of restoring motor functions was revealed. The potential of computer-optical diagnostics of the state of the spinal column during rehabilitation measures in the conditions of a physical culture and recreation center. Features of clinical manifestations and structural and functional changes of the musculoskeletal system in people with osteochondrosis of the cervical and lumbosacral spine. Rehabilitation of persons with multilevel osteochondrosis in the cervical and lumbosacral spine using computer-optical diagnostics of the state of the spinal column and methods for assessing the strength of the main muscle groups. The use of mechanotherapy according to the stages of rehabilitation, the number of approaches and repetitions, the correctness of the choice of the starting position and the performance of exercises without allowing pain in multi-level osteochondrosis of the cervical and lumbosacral spine. Mechanotherapy for multilevel osteochondrosis of the cervical and lumbosacral spine in the conditions of a sports and wellness center. Research materials supplement the general theory and methodology of health and therapeutic physical culture with new methodological provisions on the use of training devices; a contribution has been made to the development of the theory and methodology of rehabilitation of persons with musculoskeletal disorders on the basis of operational control and correction in the recovery process; the theory of improving the quality of life through the implementation of mechanotherapy as a means of increasing the level of physical fitness, improving the psychoemotional state, reducing the level of depression has been updated. In each of the three rehabilitation cycles, different ligaments, combinations and the number of exercises are used; attention is focused on the formation of correct physiological bends of the spine by strengthening the pelvic muscles and aligning its position relative to the spinal column. A single rehabilitation course lasting 3 months includes at least 36 classes held at least three times a week or every other day. The method of physical rehabilitation of persons with multilevel osteochondrosis based on mechanotherapy is based on exercises for all muscle groups of the trunk and limbs and differs in a significant amount of load in the number of exercises (up to 39) and the time of training (from 30 minutes to 120 minutes) in different rehabilitation cycles. Training on strength simulators allows you to adjust the physical load

# 210 MIDDLE EUROPEAN SCIENTIFIC BULLETIN

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in a dosed, timely and timely manner and improve the functional state of the spine and its mobility. According to a number of researchers, one of the characteristic features of the development of osteochondrosis is the simultaneity of the degeneration process in the disks of various segments, as well as its multilevel development. Depending on the localization of spinal injury in a particular department, there are absolutely typical features of the course of the disease for each department, at the same time, this disease is always accompanied by neurological disorders.

In 90% of cases, osteochondrosis affects the discs of the lumbar spine. The discs of the cervical region (8%) and the thoracic region (2%) are significantly less affected. This is explained by the fact that intervertebral discs are usually damaged at the borders of the mobile part of the spine with a relatively stationary part of it, such as the lumbar region in relation to the sacral, the cervical region in relation to the thoracic.

## Conclusions

The practical recommendations obtained as a result of the study allow us to use the method of mechanotherapy in the physical rehabilitation of people with multilevel osteochondrosis of the cervical and lumbosacral spine and individually influence the intensification of physical exertion at various stages of rehabilitation.

The results of the research can be used in any sports and recreation complexes and rehabilitation centers; the materials of the dissertation can be used when teaching university students of the specialty "Physical culture for people with disabilities (Adaptive physical culture)", when conducting special courses on the discipline "Physical Rehabilitation", as well as in the system of advanced training and professional retraining of physical culture teachers.

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