

## METHODOLOGICAL PECULIARITIES OF THE USAGE OF STRETCHING TECHNIQUES IN THE PROCESS OF FLEXIBILITY DEVELOPMENT

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### Abstract

The article is devoted to theoretical and methodological substantiations of the body flexibility development practically applying the stretching techniques. It was generalized scientific data on the organization and methodological features of stretching exercises. Semantic content and structural componential model of stretching usage in the process of flexibility development and the estimation of the changes of this characteristic according to the age were carried out. In particular, some parameters were highlighted especially which allow to recommend that methodology both for individual and group usage were analyzed. Besides, it was analyzed the diversity of physiological mechanism of the influence of stretching on human body, especially it was singled out the effect on mental and physical spheres of human being. The generalized scientific data on the theoretical and practical aspects of flexibility development with the help of stretching techniques indicate the priority of usage of this method in many types of physical activities irrespective of the scope of its practical application.

**Key words:** stretching, flexibility, development.

**Оксана Романюк, Богдан Задворний. Особливості методики використання стретчингу в процесі розвитку гнучкості.** У статті здійснено теоретико-методичне обґрунтування розвитку гнучкості за допомогою практичного застосування вправ стретчингу. Узагальнено наукові дані щодо організаційно-методичних особливостей проведення занять зі стретчингу, проаналізовано змістове наповнення й структурно-компонентну модель використання стретчингу в процесі розвитку гнучкості та вікові нормативи оцінки її змін. Зокрема, виділено окремі параметри, що дають змогу рекомендувати методику як для індивідуального застосування, так і для групових занять. Окрім того, у роботі проаналізовано різносторонній фізіологічний механізм впливу стретчингу на організм людини, що полягає в активізації всіх систем, установлено дію на психічну та соматичну сфери людини. Узагальнені наукові дані щодо теоретичних і практичних аспектів розвитку гнучкості засобами стретчингу свідчать про пріоритетне використання методики в багатьох видах фізичної активності, незалежно від сфери її практичного застосування.

**Ключові слова:** стретчинг, гнучкість, розвиток.

**Оксана Романюк, Богдан Задворний. Особенности методики использования стретчинга в процессе развития гибкости.** В статье исследуется теоретико-методическое обоснование развития гибкости путем практического применения упражнений стретчинга. Обобщены научные данные касательно организационно-методических особенностей проведения занятий стретчинга, проанализированы содержательное наполнение и структурно-компонентная модель использования стретчинга в процессе развития гибкости, а также возрастные нормативы оценки ее изменений. В частности выделены отдельные параметры, позволяющие рекомендовать методику как для индивидуального применения, так и для групповых занятий. Кроме того, в работе проанализирован разносторонний физиологический механизм влияния стретчинга на организм человека, который заключается в активизации всех систем; установлено воздействие на психическую и соматическую сферы человека. Обобщаются научные данные о теоретических и практических аспектах развития гибкости средствами стретчинга, что свидетельствуют о приоритетном использовании методики во многих видах физической активности, независимо от сферы ее практического применения.

**Ключевые слова:** стретчинг, гибкость, развитие.

**Introduction.** The Ukrainian and foreign scientists very often interpret the term of flexibility as morphological and functional properties of the musculoskeletal system which define the mobility of its parts. A sufficient level of flexibility is the ability to do some elementary movements without any difficulties. However, doing any movements requires the usage of the means and methods of its development and support [1; 2; 5; 7; 11].

Scientists on the sphere of physical education and sport M. M. Bulatova (1997), N. M Kovalchuk (1994) and others worked in their works on the issue of flexibility development and improvement. However,

the investigation of the flexibility development under the influence of different factors is going on even now. Besides, the development of fitness industry offers new modern approaches of the development and improvement of human flexibility. The importance and need of their investigations are motivated by the high demands to physical and mental state of a person, without taking into account the age and the area of activity. From this perspective the problem of special methodology investigation arises. The aim of this methodology is to achieve normal physiological point of view of the human motions through the use of exercises.

**The aim of the research** is to prove the theoretical and practical aspects of the methods of using stretching exercises in order to develop flexibility.

**Research Methods.** The aim of the research is to study the set problems of the theoretical level using the method of analyzing literature, which includes the study, data systematization and generalization of scientific and technical literature on aspects of the practical application of stretching in order to improve the development of flexibility.

**The Results of Research. Discussion.** Nowadays every person performs a lot of movements during the day, which require a significant level of motion skills and flexibility in particular. A. Bondarenko (2016) emphasizes the improvement of the quality of the engine as one of the important factors in the physical state of the person. It indicates the possibility of doing exercises from the early age till. Inactivity can cause adverse physiological and morphological changes in organs and system at all. Moreover, it is proved that the level of physical development depends on the consistency and somatic vegetative functions, which can be achieved while doing exercises regularly [5; 6; 7;].

The sufficient level of flexibility should ensure the implementation of exercises which are necessary for every day activity. Of course, monitoring and evaluation of development should be conducted in terms of the division into age groups. In particular, V. Sergienko (2011) proposed differentiated standards of flexibility evaluation which are based on defined mathematical rules of sigmoid scale, according to which the results of tests are measured in 5–12 point scale. The accessible and objective defining of the level of flexibility is an important criterion of control and correction of the influential methods [8; 9].

One of the important points of the development and improvement of methods of flexibility is to single out optimal proportions of stretching exercises usage. This statement is the basis of the wide usage of stretching on the modern physical education system [10; 12].

Stretching is the system of static exercises the aim of which is to develop flexibility and to increase elasticity of muscles. Like other modern techniques it is a quite individual one. Nevertheless, the movements should be soft and slow in order to control them. The duration of the one set of exercises should be approximately from 10 to 45 minutes and the dosage of some exercises in static ranges from 15 to 60 seconds. Also, it is very important not to do the exercises on the same part of muscles, but to change them and to do exercises in different variations [3; 10; 12].

M. O. Zhukovsky (2016) proves the effectiveness of the usage of stretching to improve students' body flexibility. In particular, the author emphasizes the utmost importance of the popularity of new types of recreational gymnastics, which is important for the effective organization of practical physical education classes. The scientist highlights the positive impact of methods on the emotional state of students and the availability of performing these exercises at home [6].

The physiological nature of stretching is in the process of stretching muscles and keeping of certain provisions in these processes activates blood circulation and metabolism. Duration of rest between exercises is identified individually [3].

The impact on the human body of stretching from physiological and morphological standpoint is difficult to overemphasize. This method helps to reduce muscle tension and pain of normal joint mobility, improves physical and mental recovery of the body after prolonged stress, increase flexibility connective tissues, reduces the risk of injury and improve the quality of motor activity [3; 6; 12].

Stretching affects the mental and physical spheres of human growth and it is manifested in the improvement of human's abilities and capabilities. An important manifestation of this versatile technique on the human body is the development of management skills and movements control, increasing of resistance to external factors and special endurance [10].

In the practice of physical education and sport are the following types of exercises that promote muscle stretching method of stretching:

– ballistic – moves of arms and legs, trunk flexion and extension. The speed of stretching muscles is proportional to the rate of swings and flexion. This type of stretching is rarely used in practice during the group sessions because it is quite traumatic;

– slow – stretching muscles to the maximum length. This type of stretching is effectively used in the workout and is called «rhythmic flexibility».

– static – using slow movements for 5–30 and even 60 with a certain posture. At the same time, periodically or continuously person can strain the stretched muscle group;

– PNF – method consists of several stages and involves collaboration with a partner [4].

V. V. Biletska (2012) offers a program of stretching flexibility and divides it into separate blocks. The first block of the author recommends using exercises to develop strength and flexibility, a second unit represents Pilates system, the third block system combines yoga exercises with relaxation, meditation, breathing exercises. In our view, the author proposed efficient program of classes, integrated through the use of modern health techniques, which are accessible and effective way to promote flexibility [3].

It should be noted that stretching exercises is not only effective training body for further physical activity. Their use in the final part of the lesson will help muscles to recover by returning from of the reduced state to its original length (at rest). However, remember that stretching is allowed only up to certain limits peculiar to every individual, which is accompanied by pleasant sensations, pain in this case shows excessive range of motion and the risk of injury [10].

In the training process it is important to pay attention to breathing, it is simple, quiet, and forced expiratory without delay [12].

The peculiarity of the application of stretching is that it does not have clearly defined methods for constructing training session. General amount of its movements is so large that there are many variations and modifications of this physical activity.

Stretching techniques exhibit maximum efficiency in the development of flexibility under the terms of the following circumstances:

– an increase in static and dynamic activities occurs gradually and in stages, and the set of exercises on each stage is justified both from educational and from physiological point of view;

– an increase of the flexibility and dynamic development occurs in counter to achieve maximum health effect.

The physiological mechanism of action of stretching is to enhance muscle fibers by reducing the time of relaxation.

Being an interesting and modern technique, stretching is used in many types of physical activity. In particular, its effectiveness is proved in the field of preventive medicine and as a means of physical education classes in educational institutions at all levels and in private coaching practice.

**Conclusions and Perspectives for Further Research.** Stretching is reasonably considered to be rather «soft» method of flexibility development. This system of exercises does not have clearly identified contraindications as to be used at classes, however, in some cases the one should be very careful. Despite the technique is marketed as a means to prepare for further activities and "warming" of the muscles, it has been successfully used as an effective exercise for developing flexibility, strengthen muscles, posture improvement and joint mobility.

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Стаття надійшла до редакції 18.05.2017 р.