

DEVELOPMENT OF PHYSICAL QUALITIES OF YOUNG GYMNASTS

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Abstract:

The article provides examples of the development of physical qualities of young gymnasts.

Keywords: gymnastics, development, flexibility, energy, sharpness, muscles, squatting.

Introduction

Among many sports, artistic gymnastics stands out, first of all, for its unusual forms and types of movements. The simplest exercises in flexion and extension of the arms at the elbow joints, legs at the knees, and hip joints are performed in gymnastic exercises with parameters that have nothing in common with ordinary, moment-to-moment movements and far exceed them in absolute values. In this regard, the first feature is the almost complete absence in beginning gymnasts of those motor skills and abilities that she could use in a new specialized motor activity.

Considering the relationships between different types of training at different stages of training, L.Ya. Arkaev notes that the entire sports career of a gymnast can be divided into three large periods: initial training, improvement, and completion of competitive activity. These periods, in turn, are divided into stages. Initial training consists of general preliminary and initial technical training; improvement includes stages of technical improvement and higher mastery; the period of completion of competitive activity involves a transition to a light gymnastics program and then to means of general physical influence.

The physical training of gymnasts is subject to special, specific requirements that should lead gymnasts to master all program elements and ensure the ability to qualitatively perform certain combinations consisting of such elements in all types of gymnastic all-around. The physical training of gymnasts is multifaceted and at each specific stage of the educational and training process its content is different.

Motor qualities are not realized spontaneously, and a high level of their development in itself is not associated with the result of a sports exercise - training is needed, the formation of the ability to invest force where necessary, as much as necessary. In a sports exercise, the implementation of quality requires a very specific order of muscle activation and the sequence of their work.

It should also be noted about the flexibility and mobility in the joints of gymnasts. Any human movement is made thanks to these motor qualities.



Insufficient mobility in the joints limits the level of strength, negatively affects speed and coordination abilities, reduces the efficiency of work, and often causes damage to ligaments and muscles [3]. However, the level of development of flexibility in artistic gymnastics should not be the maximum possible, but optimal, i.e., correspond to the principle of optimal redundancy.

Thus, we set the goal of our research, which was to study methods for strength training and education of flexibility and mobility in the joints in girls 10-11 years old involved in artistic gymnastics. To solve the problems, we used the following methods: analysis of scientific and scientific-methodological literature on the problem under study; method of pedagogical observation; pedagogical testing of strength qualities, flexibility and mobility in joints.



At the first stage of the study, pedagogical and scientific-methodological literature was analyzed on the problem of studying the effectiveness of using exercises to develop strength and mobility in the joints of girls involved in artistic gymnastics.

At the second stage of our work, a group of children was selected. The research was carried out during the educational and training process on the basis of the State Educational Institution of Children's and Youth Sports School." The presence of the researcher did not cause a negative reaction among the students, which contributed to the creation of a neutral environment for the research.

During the school year, girls involved in artistic gymnastics performed the following exercises to develop strength qualities:



1. Exercises to develop the strength of the trunk muscles:

- rack swings on parallel bars (10-12 times);
- high angle from hand rest (20 s);
- holding the torso in a static position on a support (back and abdominal muscles - 45 s);
- “Match” (10 times);
- raising legs on the Swedish wall (15-20 times).

2. Exercises to develop strength in the muscles of the arms and shoulder girdle:

- handstand push-ups on parallel bars (10-15 times);
- push-ups, legs supported (10-15 times);
- rope climbing without the help of legs - 3 meters;
- hanging pull-ups on the bar (10 times);
- rack swings on high bars (10-12 times).

3. Exercises to develop leg strength:

- “Pistols” (squats on one leg) (10 times on each leg);
- jumping on a raised support (15 times);
- jumping over the bench to the right, left (40 jumps);
- long jumps moving forward in a circle;
- jumping with alternating legs on a gymnastic bridge (30 times);
- running in place.

All exercises were performed using the circuit training method for one hour. At the end of the strength training, exercise machines were used.

During the same period, the gymnasts performed the following exercises for flexibility and joint mobility.

1. Jerking movements with the arms in all directions, with a gradual increase in the strength and amplitude of jerking movements.
2. Circular movements of the arms forward and backward, with a gradual increase in the amplitude of movements.
3. Forward bends and various starting positions.
4. "Bridge".
5. Twines.
6. Swing your legs at the support forward, to the side and back.
7. Circles and leaps with the right and left over an obstacle, standing facing it and sideways.
8. Twist the shoulder joints with a jump rope or gymnastic stick, gradually bringing the grip points closer to shoulder width.



9. Movements with a gymnastic stick with different grips.

Exercises to develop mobility in the joints of the spine.

1. Stand on your knees, hands up, gripping the elbows, the partner presses on the thoracic spine between the shoulder blades.
2. Lying on your stomach - bending while resting on your hands.
3. Lying on your stomach - bending back while supporting your arms with bending your legs.
4. Lying on your stomach - bending back, arms up with the help of a partner.
5. Stand on the chest, spring movements, bending your knees.
6. Lying on your back, arms to the sides, legs forward, legs spread to the sides.



Exercises to develop mobility in the hip joints at the gymnastic wall.

1. "Splits" on the right, left legs, transverse from a chair, from a table, between chairs.
2. Stand sideways to the gymnastic wall, swing: right leg forward; left foot forward; right leg to the side; left leg to the side; right leg back; left leg back.
3. Stand with your back to the gymnastic wall, straight leg forward and upward, with your foot hooked onto the bar: right leg forward; left foot forward; right leg to the side; left leg to the



side [2]. Each gymnast could score a certain number of points (for each exercise - 10 points, a total of 80 points = 100%).

According to a study of strength abilities among young gymnasts at the beginning of the year, we can note that three people scored 44 points, which amounted to 55%, and the different number of points were distributed as follows: 70 points - 88% (one person); 51 points - 64% (one person); 60 points - 75% (one person); 45 points - 56% (one person); 55 points - 69% (one person); 48 points - 60% (one person); 49 points - 61% (one person); 50 points - 63% (one person); 39 points - 39% (one person)

At the end of the year, the young gymnasts' motor abilities improved. Two gymnasts scored - 73 points, which was 91%, two people - 62 points (77%), and two gymnasts - 63 points (79%). The different numbers of points were distributed as follows: 77 points - 96% (one person); 66 points - 82% (one person); 71 points - 89% (one person); 60 points - 73% (one person); 61 points - 76% (one person); 64 points - 80% (one person).

Comparing the indicators of motor abilities of each gymnast, it can be noted that in two girls the indicator improved by 27%. The rest of the gymnasts also showed positive dynamics in their test results. 10 gymnasts improved their performance in the range from 8% to 26%.

Thus, the indicators in exercises for the development of strength qualities (squats on one leg "pistol", climbing a rope without the help of legs, "match", high angle, raising legs on a gymnastic wall), flexibility and mobility in the joints ("fold", splits, "bridge") among gymnasts tended to improve.

Experts in the field of artistic gymnastics note that initial training in gymnastics is considered as a period of creating a strong motor base for further specialized technical improvement. The functional development of organs and systems of the body occurs, which creates a potential reserve of its power.

Physical training of young gymnasts helps strengthen the musculoskeletal system and improve its anatomical and physiological properties, promotes the development of strength qualities, general and special endurance, agility, and flexibility. Physical exercises in the initial period of training have a great influence on the formation of the foundations of technical skills

The stage of improving sportsmanship involves further accumulation of motor potential and improvement of abilities, and in the basic elements, physical training is directly related to the technique of exercises on apparatus and is coordinated with the work on technical training.

According to our research, the methods for developing strength, flexibility and mobility in the joints of gymnasts differ in structure, content and dosage in their complexity, since gymnastics requires special training for further study of the technique of gymnastic exercises.





Flexibility is an important physical quality in artistic gymnastics. However, the level of development of flexibility in this sport should not be the maximum possible, but optimal, i.e., correspond to the principle of optimal redundancy. Excessive flexibility in artistic gymnastics is more harmful than beneficial, since gymnasts who are too flexible by nature usually have a lack of strength. In addition, it has been established that very high mobility in the spinal column is an unfavorable factor for achieving the highest sports results and performing high training loads, without which achieving these results in artistic gymnastics is impossible. At the same time, lack of flexibility is a negative factor.

From the above, we can conclude that the use of special exercises in the method of developing strength qualities, flexibility and mobility in joints shows positive dynamics. The effectiveness of using these methods in the educational and training process with gymnasts aged 10-11 years has been confirmed and it makes sense to use them.

The formation of physical culture and sports is based on one of the most important methodological principles of general pedagogy - the unity of training and education

The main task of gymnastics at a university, like any sports discipline, is the professional and pedagogical training of physical education and sports specialists for general education and children's and youth sports schools. The role of gymnastics as a basic sports discipline in teaching students at the Faculty of Physical Education is currently increasing significantly. In this regard, it is in gymnastics classes that basic knowledge of methods for developing strength,



flexibility and mobility in joints should be formed, which can help young specialists use exercises in the physical training of children in the educational and training process.

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