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# IMPROVING THE DEVELOPMENT OF STRENGTH QUALITIES OF ATHLETES

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Received: Accepted: Published:	11 <sup>th</sup> March 2022 11 <sup>th</sup> April 2022 23 <sup>rd</sup> May 2022	This Article analyes a large arsenal of tools has been accumulated, with the help of which the task of developing the strength and speed-strength qualities of athletes is being solved. But it is safe to say that the ways to optimize the training of athletes are far from exhausted. For example, in most jumping sports, pushing is performed with one foot. At this moment, she is experiencing a load 5-7 times greater than her body weight. It is quite clear that the preparation for such overloads should go systematically, starting from a young age.

**Keywords:** Insults, obscene words, swearing, rude words, slander, verbal discrimination, general and legal concept of insult, obscene lexical units, vulgar words.

To date, a large arsenal of tools has been accumulated, with the help of which the task of developing the strength and speed-strength qualities of athletes is being solved. But it is safe to say that the ways to optimize the training of athletes are far from exhausted. For example, in most jumping sports, pushing is performed with one foot. At this moment, she is experiencing a load 5-7 times greater than her body weight. It is quite clear that the preparation for such overloads should go systematically, starting from a young age. However, in practice, a significant part of the preparatory exercises is performed on two legs and not only by beginners, but also by well-trained athletes.

Twenty years of practical experience of the best trainers in the development of strength and speed-strength qualities suggests that such exercises, even performed with heavy weights, are not as effective as it seems at first glance. When calculating the weight of the load falling on each leg, it turns out that it does not meet the competitive requirements! Here is just one example. An athlete whose body weight is 70 kg performs any exercise on two legs with a 60 kg barbell. Consequently, a mass of 65 kg falls on each leg.: (70 + 60): 2 = 65 kg, which is 5 kg less than its own mass. It is quite clear that the training effect will be higher if you perform the same exercise, but on one leg with its own weight of 70 kg, without using any weights... In other words, the development of leg muscle strength can be successfully carried out without the usual heavy weight barbell. Sports medicine has repeatedly drawn attention to the negative phenomena that occur in the spine, especially in its lumbar region, when using a barbell in adolescence. Systematic pressure on the spine can cause dystrophic changes in the intervertebral discs, as a result of which the cushioning properties of the spine decrease, its elasticity and mobility decrease.

The urgent need to discuss the issue of strength and speed-strength training of boys and girls is also dictated by the fact that recommendations are sometimes given in the program for youth schools without proper justification. For example, long jumpers at the age of 15 are recommended to squat on two legs with a barbell 100% of their own weight, which can be successfully replaced by squats on one leg without weights. To develop fast strength in 17-year-old boys, the program recommends fast squats on two legs with a barbell of 50% of body weight, which is equivalent to squats on one leg without a load. The processes of fatigue and recovery are of considerable importance in the issue under discussion. When performing exercises on two legs, the fatigue process rapidly covers symmetrical muscle groups and requires considerable time to recover. And classical studies have also found that with the alternate work of the limbs of the same name, fatigue developed during the work of one of them is largely eliminated if the other limb is working during a short rest. This phenomenon is called active recreation. It is important for us that a temporary increase in working capacity in the conditions of active recreation is also observed during speed and strength training. The essence of the corresponding technique is that in one approach, each leg alternately performs the same volume and intensity load with a rest interval of 6 to 10 seconds. When using this alternately asymmetric technique, work on two legs is provided until the beginner is able to perform the exercise on one leg.

The most convenient place for squats are elevations (horse, goat, and others) installed at the gymnastic wall (to grab it with your hand). The free leg goes down. The trainees perform squats on one leg at a pace that is feasible

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for themselves, if necessary, helping with their hand. The number of repetitions depends on the preparedness. Then the students move on to performing squats without the help of a hand, only touching the wall to maintain balance. It has been experimentally established that when mastering 7-8 approaches 6-8 times each, further volume increase is impractical, since this leads to the predominant development of strength endurance.

The subsequent optimization of the training process occurs due to the use of weights and an increase in the pace of the exercise. At the initial stage, weights from 3 to 5 kg are used. With an increase in the weight of weights, the number of repetitions in one approach and the pace decrease, and as adaptation increases again (up to 6-8 times). The number of approaches is 6-7. Lead belts and jackets from 3 to 15 kg, barbell discs and lead dumbbells up to 20 kg are used as weights.

After 3-4 years of practicing this technique, girls aged 17-18 easily master weights of 40-50 kg, which is equivalent to a 140-160 kg barbell in two-leg squats. Along with the above power work, work is being done to develop fast power. Unlike traditional methods of its development — using a stopwatch, we use a metronome. Observations have shown that the development of fast strength occurs more effectively if squats are performed on one leg, since the absence of barbell pressure on the spine makes it possible to significantly increase the pace of movement. Squats are performed without weights with a frequency of 55 - 65 per minute and with weights from 5 to 10 kg — with a frequency of 35 - 40. The combination of work at different rates, with different weights makes it possible to avoid negative adaptation to training work and leads to a rapid increase in speed and strength qualities.

Next, we should focus on the issue of the development of jumping ability. Pedagogical observations of children during their games have shown that they can perform a very large amount of jumping work on one leg.

In addition to the above, it is worth paying attention to the studies of Levchenko A. and Matveev A. ("Athletics", No. 12, 1986), which showed that the dynamic characteristics of repulsion when using jumps on two legs are somewhat different from long jumps and triple jumps and are very close to the working conditions of the musculoskeletal system when performing jumps on one leg.

In the first years of the development of jumping ability, it is recommended to gradually increase the amount of jumping work, perform jumps, alternately pushing off with two legs or one foot on different ground (sand, grass, etc.). And in the future, to obtain a higher training effect, use weights in the form of weighted jackets, belts and dumbbells. I must say that for many years of work on the proposed method, none of our students have had injuries of the musculoskeletal system. Even when performing exercises such as jumping on one leg over 120 cm high barriers, jumping with a 10 kg belt over 1 meter high barriers, with a 14 kg belt over 90 cm high barriers, Fosbury high jumps with a 5 kg belt.

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