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## **THE ELITE ROWERS' SPECIFIC STRENGTH IMPROVEMENT IN THE ANNUAL TRAINING CYCLE DURING THE PREPARATORY PERIOD**

A priority objective in the preparation of the rowers at the contemporary stage is the improvement of the special resistance. Exceeding the established annual volume, within the limits of 5-6 thousand kilometers, does not contribute to the improvement of sports performances.

In the contemporary practice of training rowers, qualified performers, according to the opinions of Issurin V.B. [4], Davidov Iu.B. [3], the reservations of increasing the effectiveness of the training process, which would lead to the continuous increase of sports performance, resides in increasing the development of muscle strength in athletes, as well as strength capabilities in speed, which leads to increased property of contractions of the muscular system, finally, contributing to the increase of efforts, the formation of the rational structure of the rowing technique, the increase of the sliding distance of the boat following a rowing cycle and, eventually, to the increase of the boat speed appropriate to the competitive conditions.

At the same time, it is known that the general traditional strength training performed at the stage of superior sports mastery does not always contribute to the increase of sports performances. It is necessary to look for effective means and forms of training that would favor the increased development of highly qualified athletes of special endurance.

Rowing is a sport that involves propelling a boat on water using oars. In this sport, a single player or a group of players participate, which depends on the format of the sport.

In this sport rowers race against each other. People play it as a recreational sport in traditional settings in some regions of the world and also as a competitive sport.

The sport requires very intense training and physical power and to become a

successful rower, the athletes need a very strong body and a tough mind.

Rowing is a water sport that requires those who practice it, strength, suppleness, coordination, endurance and harmoniously develop the body. It positively influences the mobility of the joint and the spine.

Strength training is an important means for performance development in young rowers.

Competitive rowing is a traditional Olympic sport with high demands on several components of physical fitness such as anaerobic endurance, strength endurance, and maximal strength [1, 2].

Based on the study of didactic and scientific-methodological bibliographic sources, as well as the analysis of advanced experience in the field, we selectively use ways to organize training using various exercise machines/fitness equipment and specialized devices that offer the possibility to develop force in regime of resistance, which ensures the increase of the sliding segment of the boat within a rowing cycle (due to the full manifestation of the force-speed capacities). It should be mentioned that this ensures the efficiency of a competitive start and finish according to the dimensions, character and duration of the effort developed in the conditions of maximum difficulty. It is also important that, at the same time, by perfecting the rowing technique, special force capacities are developed [5].

In the process of training lessons, carried out during the preparatory period, the exercise of the force in regime of resistance (during rowing) lasts 3-4 seconds with 8-10 repetitions / rowing. And the exercise of the force-speed capacities is done in an interval of 40 sec with 20 - 25 repetitions / rowing (a rowing being executed in 1.5 - 2 sec). The development of the force in resistance regime by means of the "rowing" at the trainers is carried out for 2 - 5 min, fact that equals with the time of the competitive races of 200, 500 and 1000 m.

We also took into account that during the strength exercises, large muscle groups, as a rule, are required to work immediately, leaving smaller muscle groups in passivity, which reduces the possibility of demonstrating a rowing technique in parameters of the existing model. In this order of ideas, for the liquidation of the compensatory functions of the large muscles and the framing of the smaller muscles,

we used the isometric training at the specialized rowing trainer that requires maximum efforts during 5 - 10 sec. Practicing this training has contributed to the concomitant inclusion in work of tired small muscles and large ones in synergistic conditions, ie, the interactions of the muscle group (large and small) favor the increase of the effort on, power "transmitted" to the paddle blade.

The use of strength exercises leads to an increase in the degree of development of special endurance, which is due to the adaptation of the muscular system to a long process of maximum intensity. It should be noted that it also improves the contraction power of the muscles involved in the work, as well as their ability to recover, ie the repeated use of mechanical energy during rowing - which generally increases the economic, smooth functioning of the athlete's body during facing efforts in training and competitions reducing the "price" of sports performance.

In order to evaluate the effects of strength training on measures of physical fitness in recreational, performance rowers, future research should consider the following study characteristics: randomized controlled trials with one control and one strength training group. Investigations with male and female young rowers, and researchers should focus on the most effective training types to enhance maximal strength and/or performance in athletes.

#### References:

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