УДК 797.123.1:796.012.12

USING SPECIAL SIMULATORS IN THE ACADEMIC ROWING

N.Y. Solomonov, V.I. Volchkova

Volga Region State Academy of Physical Culture Sport and Tourism, Kazan, Russia
Для связи с авторами: e-mail: nikitka23-92@mail.ru, vi-volchkova@rambler.ru

Abstract:
The article describes the use of special simulators in academic rowing. The authors pay attention to brining up of speed-strength qualities rowers with the help of special simulators. A positive aspect of the use of rowing machines in the preparation of athletes is the Dynamic Correspondence.
Keywords: Rowing ergometer, strength, musculoskeletal system, rowing, simulators.

ИСПОЛЬЗОВАНИЕ СПЕЦИАЛЬНЫХ ТРЕНАЖЕРОВ В АКАДЕМИЧЕСКОЙ ГРЕБЛЕ
Н.Ю. Соломонов, В.И. Волчкова
Поволжская государственная академия физической культуры, спорта и туризма Казань, Россия
Аннотация:
В статье рассматривается использование специальных тренажеров в академической гребле. Авторы обращают внимание на воспитание скоростно-силовых качеств гребцов при помощи специальных тренажеров. Положительным моментом использования гребных тренажеров в подготовке спортсменов является «динамическое соответствие».
Ключевые слова: гребной эргометр, сила, опорно-двигательный аппарат, академическая гребля, тренажеры.

Introduction. Rowing is considerated to be an Olympic sport. It should be noted that at present a system of speed-strength exercises in various sports is quite widely developed [11]. A significant number of papers devoted to the study of this problem have been published (Y. V. Verkhoshansky, V.V. Kuznetsov, A.N. Vorob'ev, V.P. Filin and others.).

However, the effectiveness and purposefulness of the development of speed-strength qualities are achieved when not only the trainer but also the athlete himself knows the specific characteristics of his movements during the performance of the competitive exercise and is guided by them when selecting and performing special exercises.

The national school of training rowers of high class has a glorious tradition. In recent years in Russia, a very high growth of results occurred in rowing at a distance of 2000 meters, this is due to the fact that this distance was included in the Olympic program, thereby increasing interest in its preparation. In our country there was a need for the education of skilled rowers.

In order for our athletes to win gold medals at the world level, it is worthwhile to study and choose a more rational and effective method of their preparation. In the training process, the development of power capabilities plays a huge role. The consequence of this is the need to carefully study certain aspects of this discipline. For the field of physical education and sports training at the present stage, a special approach is becoming a characteristic phenomenon, the essence of which is in orienting the training in accordance with its purpose. Now the target approach is in the making [2].

But to study the development of power capabilities, it is not enough only practical experience and common sense, but a scientific approach based on a quantitative and instrumental level is needed, therefore, the evaluation of the power abilities of athletes in the course of sports improvement is relevant.

Purpose of the study: to reveal the influence of the use of special simulators on the education of the speed-strength abilities of the rowers.

The objectives of the research: 1). To analyze the scientific and methodical literature on the research topic. 2). To organize research of power abilities of group of sports perfection during winter and spring mesocycle. 3). To an-

alyze the dynamics of the results obtained, and to make a full description.

The methods of the research: 1) Review of literary sources. 2) Testing the power abilities of athletes. 3) The method of statistical data processing.

Results of the study and their discussion. Practice proves that a high-class rower is a harmoniously developed athlete. It is also undeniable that when practicing this sport, it develops precisely those muscle groups that take a direct part in rowing. First of all, these are the muscles of the shins, then the muscle groups located in the pelvis, abdomen and waist (this is the muscular corset) and the muscles of the shoulder girdle and back.

As the rower should overcome the weight of his own weight, the relative strength of his is very important. It is statistically established that a number of very strong athletes on the index of growth and weight do not get 6-10 kg. But there are exceptions: some outstanding athletes have a weight-increasing index equal to zero. Thus, in itself, the weight of the rower is not an obstacle, if it has considerable power.

Strength endurance is characterized by muscular efforts, which resist external action on the oarsman for a long time. In this case, depending on the work of the muscles, the power endurance can be static and dynamic.

In recent years, in the training of rowers of academicians, including young athletes, it became necessary to include in the training load a special simulator the Concept 2 (Figure 1).

Training on the rowing ergometer the Concept 2 very accurately simulates training on the water in an academic boat. Biomechanics movements on this simulator is almost the same as in the boat for rowing. In this case, there are no factors that complicate rowing, such as wave, wind, etc., which allows us to have a more accurate idea of the functional state of the athlete.

The rowing ergometer is equipped with an electronic scoreboard, which informs you of all the parameters of the training such as power stroke, pace, distance traveled, training time and calorie consumption, etc. Also there are various models of this simulator, which make it possible to approximate the training conditions in the hall to the conditions of training on the water, for example, the Concept 2 Dynamic (Figure 2). Unlike the classic model of a rowing ergometer, the stop for stops in Dynamic is mobile and moves with a small amplitude at each stroke. This model requires a higher concentration of attention and coordination of movements on the stroke.

A positive aspect of the use of rowing machines in the preparation of young athletes is the dynamic correspondence, which includes the basic principles: the amplitude and direction

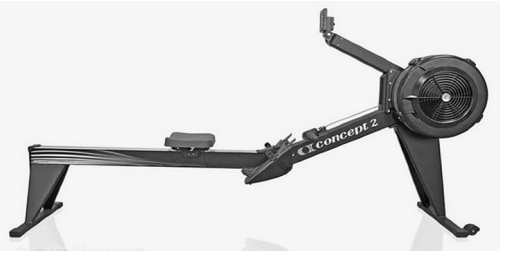

Figure 1 – Rowing ergometer

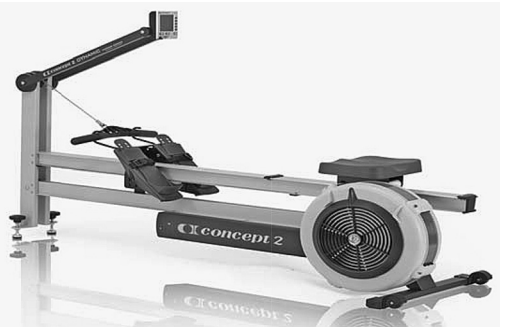

Figure 2 – Rowing ergometer the Concept 2 Dynamic

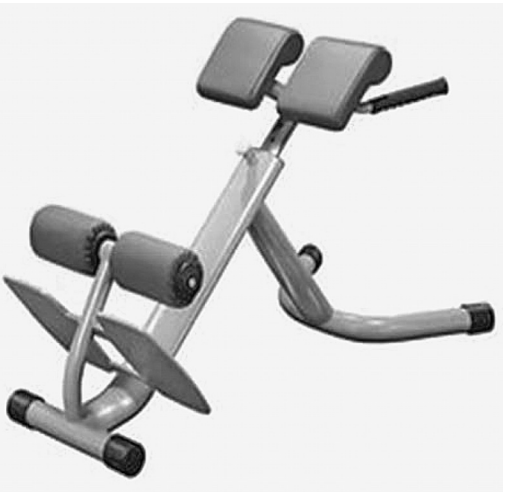

Figure 3 – Roman chair

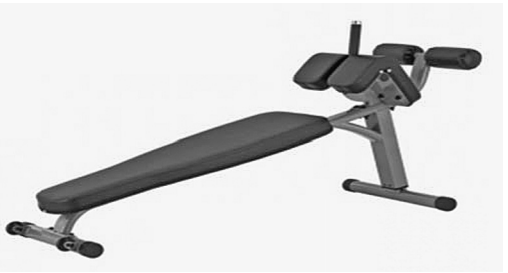

Figure 4 – Incline bench

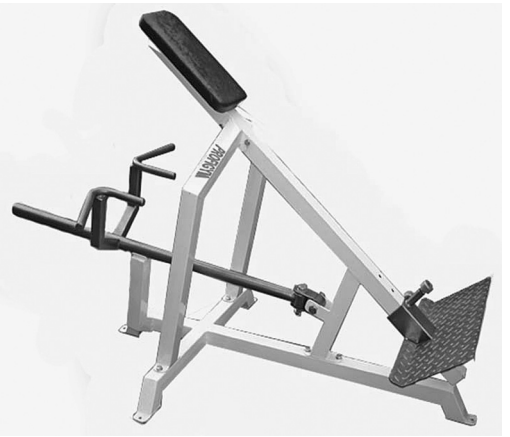

Figure 5 – Crossover

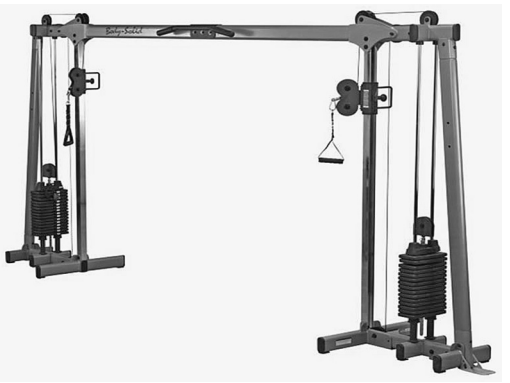

Figure 6 – T-neck design

of movement, the magnitude of the dynamic force, the rapidity of the manifestation of the maximum effort, the mode of operation of the muscles correspond to the basic motor action (V.G. Nikitushkin, I. S. Epischev). Such simulators as a roman chair, an incline bench, a crossover, a simulator platform and a T-neck design, are used to conduct various types of training aimed at developing the strength of the athlete.

Conclusions. Science does not stand still and in the physiology, biochemistry and physics there are constantly discoveries and new developments that allow the literate and searching coach to develop new training methods, and thereby improve the efficiency of their work both in training highly qualified athletes and in increasing interest in Training sessions for those people who, due to their natural abilities, cannot achieve high results, but, when doing sports sections, they strengthen health, become more strong-willed and purposeful. The rower must take into account all the features of his sport when performing the exercises; the conditions should be as close as possible to the conditions of the competition.

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СВЕДЕНИЯ ОБ АВТОРАХ:

Волчкова Венера Ильдусовна (Volchkova Venera Ildusovna) – заведующий кафедрой иностранных языков и языкознания, кандидат педагогических наук, доцент Поволжской государственной академии физической культуры, спорта и туризма, e-mail: vi-volchkova@rambler.ru;

Соломонов Никита Юрьевич (Solomonov Nikita Yurievich) – магистрант кафедры циклических видов спорта Поволжской государственной академии физической культуры, спорта и туризма, e-mail: nikitka23-92@mail.ru.