RESEARCH AND EVALUATION OF THE FUNCTIONAL CAPABILITIES AND PHYSICAL DEVELOPMENT OF QUALIFIED BOXERS UNDER THE INFLUENCE OF THE TRAINING PROCESS

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Annotation. The article presents an assessment of the physical development and functional capabilities of qualified boxers, which was carried out under the influence of training loads. Similarities and differences in physique indicators are also determined, which is directly related to the specifics of the training process of the compared specializations. It is concluded that in boxing, the loads are more intense in nature, since this sport involves the maximum return in short periods of time with a relatively slow recovery of energy costs.

Key words: physique, cardiorespiratory system, bicycle egometric test, anthropometry, aerobic system, physical activity.

Relevance. When developing model characteristics of athletes for the purpose of selection, in addition to a number of physique indicators, data on the composition of body weight, functional reserves of the cardiorespiratory system, the indicators of which are an indicator of sports performance, are of particular interest. The fundamental position of sports selection is the idea of population reality of individuals with extremely high severity of morphological and functional qualities, the importance of which is undeniable for achieving success in sports (V.B. Schwartz, 1991, B.A. Nikityuk, 1996, Rogozkin V.A., Nazarov I.B. et al., 2006, Safarova D.D. et al. ., 2009, 2018). In this regard, the morpho-functional indicators of boxers can be used not only to identify the state of fitness of athletes, but it is possible to clearly plan the direction of the training process, as well as correctly and objectively conduct sports selection. In order to obtain additional information about the effectiveness of the training process not only pedagogical, but also physiological indicators of the sides of the preparedness of athletes were recorded in a number of tests. In the work, in addition to studying the

morphological features of athletes, the task was to find objective criteria for determining physical fitness based on the functional state of athletes at different stages of the training process, to achieve optimal readiness (peak of sports form) for competitions and assess the state of rehabilitation after sports competitions. These problems were and remain topical issues at the present time. One of the most important indicators of the reserve capacity of the body is the state of the cardio-respiratory system,

Purpose of the study: Assessment of physical development and functional readiness of qualified boxers on the basis of anthropometry signs and indicators of the cardiorespiratory system.

Research objectives: To assess some indicators of the cardiorespiratory system, a survey of athletes studying at the Uzbek State University of Physical Culture was conducted. The study involved qualified boxers with the title of CMS (8) and 1 category (2). The total number of examined athletes was 10 young men aged 18-20 years. To conduct research in order to determine the physical development and characteristics of the cardiorespiratory system, the following anthropometric indicators were measured in the subjects: height, weight, chest circumference at rest (RGC). In addition, the vital capacity of the lungs (VC), arterial pressure - systolic (SD) and diastolic (DD) were determined. Heart rate (HR) was determined by pulse. A hypoxic test was also carried out (the time of maximum delay inspiratory breath measured in seconds). As a load test, we chose a 9-minute bicycle ergometer test. All data obtained were statistically processed and presented in the form of tables, which also indicate the significance of each indicator.

Research results and discussion:

To assess physical development, data are presented on intragroup variability in the variability of total body sizes in acyclic sports - boxers, fencers (Table 1).

The greatest body length is observed in fencers - 177.14 ± 7.19 cm, in boxers - 173 ± 5.74 cm. 13±4.43 kg.

The reverse trend is typical for the average values of chest girth for boxers - 93.55±6.54 cm, for fencers - 90.67±4.35 cm. The values of standard deviations range from 4.43 to 8.93. When assessing the total body dimensions of athletes, it should be noted that boxers with a smaller body length and body weight have the largest chest and hip measurements.

Among the partial signs, representatives of the 2 specializations revealed significant differences in the length of the thigh, lower leg, neck, abdomen, and

shoulder girth. According to these signs, as well as in a number of other anthropometric indicators, the samples of boxers and fencers seemed to be more similar.

Table 1

Indicators of the total body size of athletes specializing in acyclic sports

№	signs	Options	Boxing n=24	Fencing n=20
1	body length	S±m Dispersion Wed sq. deviation	173.61±0.77 32.95 5.74	177.14±1.61 51.69 7.19
2	Body mass	S±m Dispersion Wed sq. deviation	64.13±0.91 45.85 6.77	65.64±2.00 79.60 8.93
3	Chest girth-noah cells	S±m Dispersion Wed sq. deviated knowledge	93.55 42.79 6.54	90.60±0.97 18.89 4.35

Table 2 presents all indicators of the cardiorespiratory system before and after exercise.

Table 2

Indicators of the cardiorespiratory system before physical activity and after physical activity M±m

№	Options	Indicators up to physical activity (n=10 boxers)	Indicators after physical activity (n=10 boxers)
1	height	172.3±3.1	172.3±3.1
2	weight	71.6±4.6	71.6±4.6
3	chest girth	90±3.5	95±3.4
4	VC, ml	4.4±1.2	4.2±1.2
5	Breath holding on inspiration, s	70.1±3.5	66.4±3.9
6	Heart rate in 1 min	69.4±1.3	85.1±3.1
7	Arterial pressure, max	120±1.2	120.5±3.8
8	Arterial pressure, min	72.5±3.4	68.12.1

Table 2 presents data on indicators of VC and breath holding on inspiration for 1 minute, which made it possible to evaluate the aerobic capabilities of boxers in a comparative aspect.

Conclusions: The data obtained allowed us to draw certain conclusions and formulate the following research results:

a) in qualified boxers, the starting capabilities of the cardiorespiratory system are quite high and stable and are within the normal range;

b) after intense physical activity, cardiorespiratory indicators also increase within the normal range and return to the original data in a relatively short period of time;

c) the degree and index of recovery in qualified boxers are quite high, which indicates endurance and a high level of fitness.

Similarities and differences in physique indicators have been established, which is directly related to the specifics of the training process of the comparedspecializations. In addition, it can be assumed that in boxing, the loads are more intense in nature, since this sport involves the maximum return in short periods of time with relatively slow recovery energy costs.

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