

MANIFESTATION OF THE MAIN INDICATORS OF THE CENTRAL CARDIOHEMODYNAMICS IN WRESTLERS OF DIFFERENT QUALIFICATION

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The increase of the physical working capacity in the Olympics is a very keen interdisciplinary problem which involves medicine, sport physiology and sport rehabilitation. The control of the functional condition of the athletes is impossible without systemic approach based on the analysis of individual vegetative profile which in its turn determines typological traits of adaptation towards specific physical loads.

It is known that physical working capacity is dependent on a number of factors determining and limiting its, but the role of these factors is different depending on sports specialization and qualification, age, etc. At the same time adequate to the functional state of the visceral systems and a high level of performance of athletes provides the vegetative nervous system. Correction of the vegetative status of the organism, which consists in reducing the gain of sympatheticonia or parasympathicotonia allows to optimize the balance between the sympathetic and parasympathetic departments of the autonomic nervous system and, consequently, adaptation to physical loads.

It should be noted that the specific features of the indices of vegetative regulation and its impact on the ensuring of a functional status and high performance of wrestlers have not been adequately studied. Vegetative regulation means the ability to maintain the optimal level of functioning of the vegetative nervous system which determines the activity of the cardiovascular system adequate to physical load.

This accounts for the increasing topicality of new approaches oriented towards the need to take into account individual-typological features and physiological functions at all stages of the athlete's training and especially during the periods of preparation and participation in sports competitions.

Twenty-six young male freestyle wrestlers were examined at different stages of sports training. All of those examined were divided into two functional groups: the control group consisted of 10 persons who achieved the first adult category in wrestling, with an experience of sports training of up to 6 years. The second group (experimental) consisted of 16 persons also going in for freestyle wrestling, with at least 8 to 10 years of sports

training who had the sports qualifications of Candidate Master of Sports and Master of Sports.

The results of the studies conducted testify to the fundamental differences in some parameters of the cardiovascular system of the athletes depending on the level of their sports qualification. It is shown that prevailing in the experimental group athletes is the parasympathetic tone of the VNS (with the vegetative index making up 2.10 ± 0.24 conventional units), while the control group athletes have mainly a sympathetic tone, with the vegetative index making up 1.71 ± 0.06 c.u.. The difference between these indicators corresponds to 18.57 % and is significantly different ($p < 0.001$). In terms of heart rate, the difference was 14.66 % ($p < 0.001$), with PD 12.7 % ($p < 0.001$) lower in the control group, and the MV significant difference of 13.42 % ($p < 0.01$). At the same time, in the experimental group there was a significant increase in the average systolic blood pressure values by 4.43 % ($p < 0.01$), which is a compensatory response to a decrease in heart rate, as compared with the control group. Obviously, these differences are explained by the athletes' level of training and, accordingly, better compensatory mechanisms of central cardiohemodynamics. In general, the parameters of the arterial system of wrestlers reflect the dynamics of transformation of the vascular bed during the training process.

Keywords: central cardiohemodynamics, vegetative nervous system, athletes.

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