БАЗОВЫЕ ГЕМОДИНАМИЧЕСКИЕ ПОКАЗАТЕЛИ У ВЫСОКОКВАЛИФИЦИРОВАННЫХ ЛЕГКОАТЛЕТОК, СПЕЦИАЛИЗИРУЮЩИХСЯ В СЕМИБОРЬЕ

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BASIC HEMODYNAMIC PARAMETERS IN HIGHLY SKILLED ATHLETES, SPECIALIZING IN HEPTATHLON

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Nowadays the prior attention in evaluation of adaptive abilities of sportsmen' organism is devoted to cardiovascular system (CVS). Implementing functional parameters of CVS allows us to evaluate its condition and reveal possible shifts in adaptive mechanisms among sportsmen.

The objective of this research is to define basic hemodynamic indexes among high-qualified sportswomen who are involved in heptathlon.

During the process of training-educational classes at the base of state budget institution of Krasnodar region "Center of athletics development" of the city of Krasnodar and Higher Olympic base of federal state unitary enterprise "Yug sport" of the city of Kislovodsk, 55 young women of 16-29 years of age who specialize in heptathlon, were examined. Considering their qualification, they were divided into two groups. The first group (n=24) included high-qualified sportswomen (masters of sport, world class masters of sport, and honored masters of sports – members of regional and national teams of Krasnodar region and Russian Federation); the second group (n=31) included sportswomen of average qualification (1st grade and candidates for master).

Sportswomen participated in examination on voluntary basis, their written informational confirmation was received.

Heart rate (HR) was evaluated with portative tonometer 705 IT Omron (Japan) with digital registration of indexes; arterial pressure (AP) was defined according to method of Korotkov: systolic pressure (SP) – at the moment of first tone, and diastolic (DP) – at the moment of tone disappearance; index of pulse pressure (PP) was calculated (excluding DP and SP).

During the analysis of the received data HR among the sportswomen of the first group was reliably lower (62,83±1,43; $p<0,05$) than the same indication among the women of the second group (70,1±2,32; $p<0,05$) which is related to economization of chronotropic heart function as well as to increase in parasympathetic influence upon function of heart automatism.

No reliable differences in SP between the two groups were registered in process of studying analysis results.

Studying level of arterial pressure among sportswomen who specialize in heptathlon resulted in the following observations: indexes of DP were reliably higher among sportswomen of the first group in comparison to group – 2 ($p<0,05$), this fact can be interpreted as a disturbance in adaptation of blood circulation apparatus to physical strain, and, therefore, can be referred to signs of overtraining.

Thus, indexes of hemodynamics that reflect various qualitative characteristics of cardiovascular system functions can be used as screening diagnostics of oscillations in functional condition of sportswomen who specialize in heptathlon.