Changes in heart rate and blood pressure in sub-18 soccer players tested with Running-Based Anaerobic Sprint Test #34

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The Running-Based Anaerobic Sprint Test (RAST) is an important tool for prescribing and monitoring training. The aim of this study was to evaluate cardiovascular changes by the variables heart rate and blood pressure in soccer players tested with RAST. A trial with 20 soccer players who trained daily and participated in sub-18 soccer championships. The heart rate (HR) was collected at rest (before warming) and right after the end of the test, as well as the systolic (SBP) and diastolic (DBP) blood pressure. For statistics it was used the paired t-test with $p<0.05$. The collected data are presented in Table 1 and show that the values at resting time point can be considered normal for healthy young people and after the test it was observed that the HR and SBP increased significantly as compared with resting time, and the DPB presented no statistically changes.

Table 1. Values of mean ± standard deviations (SD) for heart rate (HR), systolic blood pressure (SBP) and diastolic blood pressure (DBP) at rest and right after the RAST test.

Rest			After		
HR (BPM)	SBP (mmHg)	DBP (mmHg)	HR (BPM)	SBP (mmHg)	DBP (mmHg)
68.9±12.0	118.0±11.0	69.5±8.2	179.6±9.1*	173.0±25.7*	68.0±10.0

(*<0.05) Compared with resting value.

Conclusion: The results showed that the cardiovascular changes occurring in the RAST test, which is an effort with anaerobic features, are similar to changes in high-intensity aerobic efforts.

Key words: RAST; soccer; cardiovascular changes.