PRE-SEASON PHYSIOLOGICAL PROFILE OF GREEK SOCCER AND BASKETBALL PLAYERS IN DIFFERENT DIVISIONS

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Soccer and basketball players need a high level of cardiorespiratory fitness before to start the re-building period (Casajús, 2001). However, the amount of emphasis placed on fitness training depends on several factors, such as the players’ competency in other areas of the game and the exercise intensity during training sessions which are not specifically designed to develop endurance fitness (Bangsbo, 1994; Metaxas et al., 2006). Thus, the purpose of this study was to compare and evaluate cardiorespiratory performance among Greek soccer and basketball players in different divisions before starting the preparation training season. One hundred soccer (age 24.7 ± 5.3yrs; and training experience 13.3 ± 5.0yrs) and 60 basketball players (age 22.5 ± 3.6yrs; and training experience 11.8 ± 3.6yrs). All players participated in Greek national leagues and subjected according to the kind of sport and division. All participants underwent physical examination, including anthropometric measurements and body fat assessments with. An incremental exercise test was following on treadmill (LE 6000, Jeager) to determine time to exhaustion, anaerobic threshold (HRAT), maximal ventilation (VEmax), oxygen uptake (VO2max) and respiratory exchange ratio (RER) (Oxycon-Pro, Jeager, Wirzburg Germany). Unhaemolysed blood lactate (BLmax) was determined using an enzymatic lactate analyzer (Boehringer, Mannheim). Time to exhaustion and HRAT did not differ between and within the groups of basketball and soccer players. VO2max in absolute and relative values was significantly lower in division IV for soccer players compared to the other three divisions (3413.4 ± 351.0 vs 3932.7 ± 551.2, 4172.7 ± 371.8, 4223.0 ± 323.8 ml/min-1; P<0.001; 46.93 ± 4.20 vs 52.47 ± 3.66, 54.86 ± 3.80, 55.32 ± 3.33 ml/kg/min-1; P<0.001). Among basketball players, division III showed significantly lower VO2max, in relative values, compared to division I (47.77 ± 5.27 vs 51.29 ± 4.08 ml/kg/min-1; P<0.05). However, basketball players presented significantly higher VO2max, in absolute values, compared to soccer players for division II (4586.3 ± 586.3 vs 4172.7 ± 371.8 ml/min-1; P<0.05), III (4319.6 ± 418.6 vs 3932.7 ± 551.2 ml/min-1; P<0.01) and IV (4624.0 ± 627.6 vs 4313.4 ± 351.0 ml/min-1; P<0.001), respectively. BLmax values was significantly lower in basketball compared to soccer players in I (10.1 ± 1.1 vs 11.7 ± 2.5 mmol/l; P<0.05) and II divisions (10.6 ± 1.7 vs 12.0 ± 2.2 mmol/l; P<0.01). In conclusion, it has been certified that the greater VO2max which have been reached by professional soccer and basketball players compared to semi – professional and amateur once and also the soccers compared to basketball players of the same division, can be attributed to the different duration of the maintenance period and to the effect of the training session on each sport, respectively.

References

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