## **Chapter 9**

# SEASONAL AEROBIC AND ANAEROBIC PERFORMANCE CHANGES OF FOOTBALL PLAYERS<sup>1</sup>

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#### INTRODUCTION

Football is a sport that is played in a large field dimensions of which are designated by the rules of the game, a large number of players who are to use any parts of their body except for their hands participate in the game, and the result of the game is determined by the goals that are scored or given away (Andersen et. al., 2003).

Since football is played in a large field, and there are a variety of positions footballers play at, it depends on physical and physiological properties of players. Moreover, due to football being a team and contact sport, to play it, athletic performance properties like high-level endurance, strength, speed and agility are necessary attributions to possess (Larcom, 2013). Additionally, physical endurance structure in a football game, often covers some explosive power elements such as jumping, kicking the ball, and sprinting. Therefore, it requires all the players in each position, including the goalkeeper, to have all the motoric properties (Stølen et. al., 2005).

The football of our age has become a much faster and a more tactical sport that demands much strength, and every single day there is much progress in the field, and the scientific advancements are much more in football than they are in any other sports. To keep up with the game, it is necessary to think quicker, be faster, and be more agile, and one needs to show an improvement in terms of these properties (O'Donoghue, 2005).

Therefore, day by day, all football teams feel compelled to improve their team's physiological, bio-motoric, and technical-tactical capacity in order to achieve success. This necessity affected the content of the training, which caused

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### **REFERENCES**

- Akın, M., Kireker, İ., Köklü, Y. (2009). 16 age group in the league of professional football league level and comparison some physical properties of Turkey by the district, *Clinical Journal of Sports Science*, 1(2), 72-80.
- Akın, S., Coşkun, Ö.Ö., Özberk, Z.N., Ertan, H., Korkusuz, F. (2004). Comparison of the physical properties of professional and amateur football players and concentric force of isokinetic knee muscles in arthroplasty. *Arthroscopic Surgery*, 15(3), 161-67.
- Andersen, T.E., Larsen, O., Tonga, A., Engebretsen, L., Bahr, R. (2003). Football incident analysis: a new videobased method to describe injury mechanisms in professional football, *Br J Sports Med*, 37(3), 226-232.
- Aslan, C.S.,İnan, T., Akalan, C. (2010). Comparisons of some physical and physiological characteristics between Turkish professional soccer players and the physical education and sports department students. *Journal of New World Science Academy*, 5(1), 47-58.
- Aslan, C.S., Koç, H. (2015). Comparing selected physical and motoric characteristics of Turkish amateur soccer players according to playing positions, *CBÜJ Phys Edu Sport Sci*, 10(1), 56-65.
- Bangsbo, J., Iaia, F.M., Krustrup, P. (2008). The Yo-Yo intermittent recovery test, *Sports medicine*, 38(1), 37-51.
- Besler, M., Acet, M., Koç, H., Akkoyunlu, Y. (2010). Comparison of some physical and motor features of footballers playing at winning team in professional and amateur league, *Selçuk University Journal of Physical Education and Sports Sciences*, 12(2), 150-156.
- Cerrah, A.O., Polat, C., Ertan, E. (2011). Evaluating some physical and technique charecteristics of süper amateur soccer players according to their playing positions, *Niğde University Journal of Physical Education and Sports Sciences*, 5(1),1-6.
- Cometti, G., Maffiuletti, N.A., Pousson, M., et al. (2001). Isokinetic strength and anaerobic power of elite, subelite and amateur french soccer player, *International Journal Sports Medicine*, 22, 45-51.
- Çoğalgil Ş, Kıshalı NF, Baş M. (2002). Physiologic and antropometric properties of university football and basketball teams, *Journal of Physical Education and Sport Sciences*, 4(3), 22-25.
- Greco, C.C., da Silva, W.L., Camarda, S.R., Denadai, B.S. (2013). Fatigue and rapid hamstring/quadriceps force capacity in professional soccer players, *Clin Physiol Funct Imaging*, 33, 18–23.
- Kartal, A., Kartal, R., İrez, G.B. (2016). Investigate of some motor functions according to soccer players playing positions, *CBÜ J Phys Edu Sport Sci*, 11(1), 55-62.
- Köklü Y., Özkan A., Alemdaroğlu U., Ersöz G. (2009). The comparison of some physical fitness and somatotype charecteristics of young soccer players according to their playing positions. *Spormetre Journal of Physical Education and Sport Sciences*, 7(2), 61-68.
- Kumartaşlı, M., Suna, G., Çalışkan, İ.V., Işıldak, K., Demir, M. (2011). Anthropometric features of tennis and football players, *Selçuk University Journal of Physical Education and Sport Sciences*. 13(3), 372-377.
- Larcom, A. (2013). The effects of balance training on dynamic balance capabilities in the elite australian rules footballer, Victoria University, School of Sport and Exercise Sciences, Master Thesis of Applied Science, Australia,

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- Little, T., Williams, G.A. (2006). Sultability of soccer training drills for endurance training, *Journal of Strength and Conditioning Research*, 20(2), 316-319.
- Mohr, M., Krustrup, P., Bangsbo, J. (2003). Match performance of high-standard soccer players with special reference to development with a25-second walk of fatigue, *J Sports Sci*, 21 (7), 519-28.
- O'Donoghue, P. (2005). Repeated work activity in English FA Premier League soccer, *International Journal of Performance Analysis in Sport*, 2, 46-80.
- Özer, K. (2001). Physical Fitness, Nobel Press, Ankara
- Özkara, A. (2002). Tests and Special Exercises in Football, Kuşçu Press, Ankara
- Saka, T., Yıldız, Y., Aydın, T. (2007). Aerobic performance of young recreational athletes. Süleyman Demirel University Sports Sciences Research Application Center, *Journal of Exercise Online*, 1(2), 45.
- Özkamçı, H., Diker, G., Zileli, R. (2018). Analysis of maximum heart rate values with different test protocols in elite soccer players, *Journal of Sports and Performance Researches*, 9(2), 127-135.
- Stølen, T., Chamarı, K., Castagna, C., Wısløff, U. (2005). Physiology of soccer, *Sports Medicine*, 35(6),501–536.
- Tahara, Y., Moji, K., Tsunawake, N., Fukuda, R., Nakayama, M., Nakagaichi, M., Komine, T., Kusano, Y., Physique, A.K. (2006). Body Composition and maximum oxygen consumption of selected soccer players of kunimi high school, Nagasaki, Japan, *Journal of Physiol Anthropol*, 25(4), 291–297.
- Taşkın, H. (2006). Investigation some physical parameters and 30 meter sprint capabilities of professional soccer players according to their playing positions, *Spormetre Journal of Physical Education and Sport Sciences*, 4(2), 49–54.
- Uğraş, A., Savaş, S. (2005). Physical and physiological charecteristics of Bilkent university american football team, *Journal of Gazi University Kırşehir Education Faculty*, 6(1), 77-86.