

ENERGY AND DIETARY INTAKES OF YOUNG PROFESSIONAL FOOTBALL PLAYERS

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Objectives

Adequate dietary habits in endurance and energy demanding sport such as soccer are very important for young athletes since deficiency may delay development and affect performance. Demanding training and busy travel schedules in addition to a possible lack of nutritional knowledge may prohibit them from maintaining an optimal dietary intake. The aim of this study was to investigate the nutritional profile of young high-level football players to establish specific dietary guidelines to enhance their peak athletic performance and overall health.

Materials/Methods

Three-day dietary records were analyzed and also the anthropometric measurements were taken at the beginning of competitive season. In this cross-sectional study, with 40 male elite football players, ergospirometry tests were conducted. Furthermore, lipid, hematological and biochemical parameters were sampled from athletes as well. Dietary and energy intakes with emphasis on macronutrient, micronutrient and fluid values were calculated using COSMED FMed 2.0 software.

Results

Physical characteristics of players with a mean age, height, weight, BMI and F% of 16.7 ± 0.7 years, 179.2 ± 6.1 cm, 71.5 ± 7.0 kg, 22.2 ± 1.5 and 9.33 ± 2.7 reflect that they were homogenous group. Only F% demonstrate significant difference ($p < 0.05$) for various soccer position in offense. Reported daily energy intake (EI) with meals, mostly taken at home, was 3042.9 ± 905.9 kcal which is significant lower ($p < 0.001$) than the EI obtained by the formula. Throughout the recording period carbohydrate intake was $52\% \pm 8.2$, fat intake was $31.0\% \pm 5.5$ and proteins were represented with $17\% \pm 3.5$. Fluid intake of 1782.3 ± 714.7 ml was no optimal and there is doubt that data had been underreported. Intake of vitamins and minerals had variation from DRI (%DRI) for Ca (71.6), Mg (94.8), Fe (134.5), K (71.2), Na (277.6), Vit.C (210.8), Vit.B6 (23.8) and Vit.B12 (61.1). EI was positively correlated with Fe ($p < 0.01$) and Ca ($p < 0.05$) intake. Cholesterol (112.0) and saturated fatty (157.6) intake above DRI suggest about quality of consumed food. Iron deficiency without anemia (11.6 ± 1.5) was found in 22 soccer players. In previous studies this iron deficiency is represented as a factor that can impact on endurance. The ANOVA showed that EI had significant effects on VO_{2max} .

Conclusion

This study reveals differences regarding current opinions about sports nutrition and points the need to increase EI with a higher carbohydrate proportion in football athletes. Inadequate fractional contribution of micronutrients and fluid should be adjusted to reach DRI. The nutritional consideration of young male football players should be focus on providing appropriate nutritional information in order to improve the athletes' diet and, consequently, their health and sports ability.

References

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