IJAE
Vol. 118, n. 2 (Supplement): 139, 2013
ITALIAN JOURNAL OF ANATOMY AND EMBRYOLOGY

Body composition changes in elite soccer players along the competitive season

Chiara Milanese[1], Francesco Piscitelli[1,2], Valentina Cavedon[1,2] and Carlo Zancanaro[1]

[1] Laboratory of Anthropometry and Body Composition, University of Verona, Italy
[2] Doctoral Programme in Multimodal Imaging in Biomedicine, University of Verona, Italy

Changes in body composition were investigated in 30 elite (serie A) soccer players (age, 25.2±4.26y; stature,1821±6,39cm; body mass 78.7±6.38kg; BMI, 23.7±1,24kg/m^2) along the competitive season. Body composition was assessed with Dual-energy X-ray absoptiometry (DXA) at pre-season (July), mid-season (January-March), and end-season (May).Results show that body mass and BMI did not change to a significant extent along the season; however, fat mass and percent fat mass showed significant reduction (p=0,017; p=0,014). Significant reduction was already found in the latter at mid-season vs. pre-season (p=0.032 for both). The decrease in fat mass and percent fat mass was similar across the playing positions. Instead, lean mass and bone mineral content did not change significantly. To our knowledge, this work is the first report of season-related body composition changes in elite soccer players using the reliable DXA technique. Results are in partial agreement with previous finding showing changes in both fat and lean mass along the season in elite soccer players [1] using skinfolds measurement and predictive equations. The results of this work should be of interest to soccer professionals because they will help improve athletes' performance.

References

[1] Carlin and Orhant (2010) Variation in body composition in professional soccer players: interseasonal and intraseasonal changes and the effects of exposure time and player position. J Strength Cond Res 24: 1332-9.

Key words

Body composition, DXA, soccer, fat mass, lean mass, body mineral content, playing position.