Analysis of Body Composition Changes in Professional Male Ice Hockey Players

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Body composition evaluations are used to establish objective goals for athletes. To appropriately make recommendations to athletes, practitioners must know the specific demands of the athlete’s sport, age and sex. **PURPOSE:** To establish an average body composition profile for professional male ice hockey players, assess whether yearly fluctuations exist, and examine if there are differences among positions played. **METHODS:** In this cross-sectional study, 36 professional male ice hockey players (25.4±3.8 years of age; body mass index [BMI]: 26.7±1.5 kg/m²) were measured for: total body mass, percent body fat (PBF), lean body mass (LBM), fat free mass (FFM), total body bone mineral density (TBBMD), and lumbar spine BMD (LBMD) using dual-energy X-ray absorptiometry (DXA). Descriptive statistics were used to determine average age, total body mass, PBF, LBM, FFM, TBBMD, and LBMD. A repeated measures t-test was used to determine if differences existed in these same parameters over a one-year period. A one-way ANOVA was used to determine if differences existed among the positions played (Forwards, Defensemen, and Goalies). Alpha levels were set a priori at p<0.05. **RESULTS:** Average values at the beginning of one season compared to the beginning of the next season, respectively, were: total body mass: 91.6±6.1 vs. 92.5±6.1 kg; PBF: 14.7±2.69 vs. 15.4±2.93%; LBM: 74.3±5.5 vs. 74.2±5.1 kg; FFM: 78.3±5.5 vs. 78.2±5.3 kg; TBBMD: 1.466±0.838 vs. 1.479±0.07g/cm²; and LBMD: 1.468±0.099 vs. 1.476±0.115 g/cm². Significant increases were observed in PBF (t(35)=2.451, p=0.019) from the beginning of one season (14.7±2.69%) to the beginning of the next season (15.4±2.93%). There were significant differences among positions for PBF during the second season (f(2,33)=5.06, p=0.012). No significant changes existed in any other measure between the two seasons or among position type (p>0.05). **CONCLUSION:** Our results support a possible standard of body composition for professional male ice hockey players. These data will help drive more objective interventions when addressing body composition goals.