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Body Composition Evaluation among High Intensity and Long Term Walking Distance Participants

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Abstract : Body composition insight during physical activity is relevant to follow up sports income since it can be important and actuate in velocity, resistance, potency, and has an effect on force and agility. The purpose of this study was to identify anthropometric profile, evaluate and correlate body mass index and bioimpedance behavior during the days of Caminhada Ecológica de Goiás - Brasil. A longitudinal study was performed with 25 male participants, with an average age of 45.6±9.1 years. All patients were actives. Body composition was evaluated by body mass index (BMI) measurement and bioimpedance procedures. Both were collected 20 days before walking beginning (A0) and in the four days along the same (A1, A2, A3 e A4). Data were collected in the end of each walking day at athletes accommodations. Final distance during walking route was 308 km in five days, with an average of 62km/day and 7,6 km/hour, and an average temperature of 30°C. Data are represented with mean and standard deviation. ANOVA (Bonferroni pos test) was used to compare frequent measurements between the days. Pearson's correlation test was used to correlate BMI with lean mass, fat mass, and water. BMI decreased from A0 to A1, A2 and A3 ($p < 0,01$) and increased on A4 ($p < 0,01$). No changes were observed concerning fat percentage ($p=0,60$), lean mass ($p=0,10$) and body water composition ($p=0,09$). A positive and moderate correlation between BMI and fat percentage was observed; an inverse and moderate correlation between BMI, lean mass and body water composition occurred. Total body mass increased during high intensity and long term walking distance. However, the values of body fat, lean mass and water were maintained.

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