Abstract

Introduction: Body mass index (BMI) has been one of the methods most frequently used for diagnose obesity, but it isn’t consider body composition. Objective: This study intends to apply one new adiposity index, the BMI adjusted for fat mass (BMIfat) developed by Mialich et al. (2011), in a adult Brazilian sample. Methods: A cross-sectional study with 501 individuals of both genders (366 women, 135 men) aged 17 to 38 years and mean age was 20.4 ± 2.8 years, mean weight 63.0 ± 13.5 kg, mean height 166.9 ± 9.0 cm, and BMI 22.4 ± 3.4 kg/m². Results and discussion: High and satisfactory R² values were obtained, i.e., 91.1%, 91.9% and 88.8% for the sample as a whole and for men and women, respectively. Considering this BMIfat were developed new ranges, as follows: 1.35 to 1.65 (nutritional risk for malnutrition), > 1.65 and 2.0 (normal weight) and > 2.0 (obesity). The BMIfat had a more accurate capacity of detecting obese individuals (0.980. 0.993, 0.974) considering the sample as a whole and women and men, respectively, compared to the traditional BMI (0.932, 0.956, 0.95). Were also defined new cut-off points for the traditional BMI for the classification of obesity, i.e.: 25.24 kg/m² and 28.38 kg/m² for men and women, respectively. Conclusion: The BMIfat was applied for the present population and can be adopted in clinical practice. Further studies are needed to determine its application to different ethnic groups and to compare this index to others previously described in the scientific literature.

Keywords

Body composition, Body mass index, Bioelectrical impedance, Body fat.