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Abstract

The aim of the present study was to assess the sensitivity of bio-impedance (BIA) in tracking body composition changes in adolescents with various degrees of obesity. We hypothesized that while BIA provides a reliable measure of body composition, its accuracy decreases with increasing obesity and its ability to track changes might be reduced with higher degree of body weight and body composition. Whole-body and segmental body composition were assessed by bio-impedance analysis (BIA-Tanita MC-780) and dual x-ray absorptiometry (DXA, Hologic) among 196 obese adolescents (Tanner stage 3-5) aged 14 ± 0.9 years old, before and after a 3-month weight loss program. Except for the measurement of FFM (kg) ($r = 0.03$; $p = 0.721$; $\rho = 0.107$; $p =$