

Effects of Continuous Training on Anthropometric Characteristics of Adolescents in Kano, Nigeria

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Abstract : This study assessed the effects of continuous training on anthropometric characteristics of adolescents in Kano, Nigeria. The anthropometric measures of per cent body fat (%BF), body mass index (BMI), conicity index (CI) and waist-to-hip ratio (WHR) were selected because of their roles in increased adiposity and favourable cardiovascular disease (CVD) factor profiles in children and adolescence. The international standards and procedures were followed in all the measurements. A total of thirty (30) subjects (M=15; F=15), selected at random, were divided into two groups; one training (M=10; F=10) and the other control (M=5; F=5). Both groups were tested before training, at six (6) and 12 weeks in all the listed variables. The training group had 12 weeks continuous training which involved running round the standard 400 m track of the college following standard procedures; while the control group did not. The findings revealed significant sex-specific reductions in %BF ($F=610.482 < 0.05$), BMI ($F=73.860 < 0.05$), WHR ($F=49.756 < 0.05$); however, no significant training effect on CI ($F=1.855 > 0.05$) and WHR ($F=1.956 > 0.05$) was found. Greater modifications found in females than in males (except in CI and WHR) due to training were probably related to their initial level of fitness and enzymatic modifications at subcellular level during training. The result also revealed significant relationship between the modifications in %BF, BMI and WHR but failed to establish any between CI and other adiposity measures. Thus, to avert the consequences of obesity and overweight, the declining fitness level of adolescents should be checked by ensuring they engaged in regular moderate-to-vigorous physical activity (MVPA) programmes. Such a childhood habit of exercise developed early in life will have a carry-over value into adult life and improve the quality of adult population.

Keywords : adiposity, anthropometry, conicity, continuous training

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