Abstract

Objective: To determine the trend of high school students from Valparaíso Chile by means of an anthropometrical somatotype.

Material and methods: two samples of students during the years 1984-1985 (86 men and 71 women) and 2009-2010 (77 men and 86 women) between 15 and 18 years of age have been studied. Somatotype was estimated by the Heath Carter anthropometric method. Results: significant differences were found in all the variables of the somatotype during the periods studied (p < 0.01), except for height (p = 0.176) and humeral breadth in women (p = 0.067). Important distinctions were also found in the endomorphic, mesomorphic and ectomorphic components (p < 0.01). Men measurements registered remarkable differences in all the variables (p < 0.01), with the exception of weight (p = 0.156), calf breadth (p = 0.906) and arm breadth in contraction (p = 0.284). Measurement results of endomorphic (p<0.01), ectomorphic (p < 0.01) and mesomorphic components (p < 0.05) revealed considerable differences. During the period 1984-1985, men classified as balanced mesomorph 2.7-4.8-3.1 which switched to mesomorph endomorph 3.8-4.3-2.5 in the period 2009-2010. And the population of women in the 1984-1985 period is classified as mesomorph-endomorph 4.2-4.7-2.1 and changes to a mesomorphic endomorph biotype 6.6-4.1- 1.3 in the 2009-2010. Conclusions: the somatotype of the adolescent population, especially women in Valparaiso, Chile has changed to a predominant endomorphic biotype, and its mesomorphic component has decreased. A high relative adiposity contributes to increase the probability for these people to suffer nontransmissible chronic diseases and cardiovascular issues.

Keywords

Somatotype, Anthropometry, Adolescents, Endomorphy.