

Changes in anthropometric parameters and physical fitness in older adults after participating in a 16-week physical activity program

Valdés-Badilla, P.
Guzmán-Muñoz, E.
Ramírez-Campillo, R.
Godoy-Cumillaf, A.
Concha-Cisternas, Y.
Ortega-Spuler, J.
Herrera-Valenzuela, T.
Durán-Agüero, S.
Vargas-Vitoria, R.
Magnani-Branco, B.H.

Abstract

Introduction: Physical activity is important for achieving healthy aging. **Objective:** To analyze changes in anthropometric parameters and physical fitness among Chilean older adults after participating in a 16-week physical activity program and to evaluate whether there were differences in relation to their baseline nutritional status or not. **Materials and methods:** Pre-experimental quantitative study. The study population consisted of 176 older adults (155 women and 21 men) distributed in three groups: normal weight (n=56), overweight (n=67) and obese (n=53). The following variables were evaluated: body mass index (BMI), waist circumference (WC), waist-to-height ratio (WHR) and physical fitness. **Results:** Significant decreases between pre-and post-measurements were found for WC ($p<0.001$), BMI ($p=0.015$), and WHR ($p<0.001$). Improvements were observed in the following tests: chair stand ($p<0.001$), arm curl ($p<0.001$), 2-min step ($p<0.001$), chair sit-&-reach ($p=0.018$) and back scratch ($p=0.014$). Regarding BMI, significant changes were observed between normal weight vs. overweight participants ($p=0.001$) and between normal weight vs. obese participants ($p=0.001$). **Conclusion:** Older adult participants that regularly attended the physical activity program were able to reduce their WC, BMI and WHR, and also improved their physical-functional performance on the chair stand, arm curl, 2-min step, chair sit-&-reach and back scratch tests. In addition, anthropo-metric parameters and physical fitness also improved regardless of their baseline nutritional status.

Author keywords

Aging
Anthropometry
Exercise
Physical Fitness
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