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Abstract

Normative Anthropometric and Physical-Function Scores for Costa Rican Older Adults

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ABSTRACT

INTRODUCTION: The aging population is becoming significantly large in several countries due to improved health conditions and higher life expectancy. For instance, Costa Rican elderly have 17% less mortality at 90 yr. of age than elderly from high-income countries, and in Costa Rica life expectancy is higher for men than for women. In developed countries such as Spain, a large number of sedentary elderly have been found with elevated body fat percentage, which might impact their overall health and quality of life. Although the international scientific literature is extensive, the physical and functional status of Central American elderly is unknown.

PURPOSE: The purpose of the study was to construct normative scores for anthropometric, adiposity and upper-arm strength variables in Costa Rican adults aged 60 to 110 yr.

METHODS: Participants were 5494 Costa Rican elderly randomly selected from the Costa Rican National Population Census. These participants were assessed to determine their general health status and to obtain anthropometric, adiposity and hand grip strength measures.

RESULTS: Nearly 50% of males and females showed an increased risk of metabolic complications ($\chi^2 = 91.6$; $p \leq 0.001$). A higher percentage of females (64.5%) had abdominal obesity compared to males (18.6%). Males (39.8%) were more pre-obese than females (37.2%) and also type II obesity was more frequent in males (3.8%) than in females (3.5%). Males had higher body weight (4.4%) than females (3.9%), less type I obesity (13.4%) than women (17.5%) and less type III obesity (1.0%) than females (1.5%). Gender specific percentile-based norms (P₁₀th, P₂₅th, P₅₀th, P₇₅th, and P₉₀th) were derived from data collected for each 10-year age groups (60-69, 70-79, 80-89, 90-99, and ≥ 100).

CONCLUSION: This is the first population-based study in Central America reporting normative scores for anthropometric and physical-function variables in older adults.