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Height-Weight Classifications for 20-70 Year-Old Estonian Men and Women

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Abstract

Based on research results of women's and men's body build, we present the arithmetic means of adult Estonian men and women (aged 20-70 years) as the national norms. Classifications based on gender and age enable to somatotype the subjects according to the classes of the classification.

Keywords: Body build; Height-weight classification; Anthropometry .

Introduction

The Centre for Physical Anthropology at the University of Tartu has achieved success in studying the regularities of body build structure. It has been established that the anthropometric structure forms a highly-correlated system of individual characteristics where the leading characteristics are height and weight. Changes in the relations between height and weight cause systemic changes in height, breadth and depth measurements, circumferences and body proportions [1]. Changes in proportions in the general cohort as well as in the pure types - pycnics and leptosomes - are related to changes in the relation between height and weight. No other special groups of body build have been found; the same regularities are valid for the general cohort and the groups of pycnics and leptosomes. This has enabled us to create a unified classification for characterization of body build, which consists of the following classes: small, medium, large, pycnomorphs, leptomorphs [2].

Considering the above-mentioned regularities of body build structure and possibilities of differentiation between somatotypes by means of a height-weight classification, the aim was to establish national height and weight norms for the majority of population of Estonia, and, based on arithmetic means and standard deviations, to establish separate SD height-weight classifications for all age groups of 20-70-year-old men and women [3]. This might facilitate the assessment of peculiarities of body build in medical, health promotional and nutritional studies.

Methods and Results

The material for research was collected from all the four regions of Estonia with the help of 50 family physicians in 2003-2005 [4]. In total, the data of 4587 Estonian women and 4034 Estonian men were collected. As a result of statistical analysis, we presented the arithmetic means of height and weight of 20-70-year-old Estonian men and women, which we can treat as national norms [5,6]. Next, based on the means and standard deviations, the limits of height and weight were calculated for the classes of the height-weight classification of 20-70-year-old men and women for each year of age.

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