

New growth curves for spanish children (0–10 years) in the region of extremadura

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Abstract

The anthropometric reference data used to examine the growth pattern of children in Spain are obtained from studies carried out several years ago. In the region of Extremadura, the tables obtained by the Faustino Obergozo Foundation, which date back to 2004, are used. The first objective of this work is to develop growth tables and graphs that accurately reflect the somatometric variables of children in Extremadura. Secondly, the averages of these variables by sex will be compared to determine if there are significant differences between them. A database provided by the General Directorate of Planning, Training, and Health and Social Quality of the Regional Government of Extremadura was used, which contains the measurements of height, weight, and body mass index (BMI) of boys and girls in Extremadura between the years 2006–2016. The database was analyzed using the Statistical Package for the Social Sciences (SPSS) version 23 and the R software version 3.5.1, considering a cross-sectional study. As a result, the tables and growth graphs of Extremadura's population base for weight and height are presented, from birth to 10 years, as well as comparisons of the average values of the analyzed variables between boys and girls. We found that there are significant differences in the mean values, according to sex, of the height and weight. On the other hand, BMI progressed normally when comparing the results of the Extremadura population with those reflected by the World Health Organization (WHO). Differences were found when comparing the results with those obtained by the Faustino Obergozo Foundation. © 2021 by the authors. Licensee MDPI, Basel, Switzerland.

Author keywords

Children's health; Growth; LMS method; Percentile; Sex; Size; Weight