Weight, height and body mass index of children and adolescents living at moderate altitude in Colombia

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Introduction. There is increasing concern over the study of physical growth in different regions of the world, although altitude is not considered an adjustment factor. Objectives.compare physical growth variables and body mass index (BMI) patterns with the Centers for Disease Control and Prevention (CDC) 2012 reference data and develop percentiles for children and adolescents. Methodology. School children living at moderate altitude in Bogotá (Colombia) were studied. Their weight and height were evaluated and their BMI was calculated. Anthropometric variables were compared against reference data of the CDC-2012, Brazil, Peru and Argentina. Curves were constructed using the least mean square (LMS) method. Results. A total of 2241 school children (1159 girls) aged 6.0 to 17.9 years were included. There were no significant differences in weight and BMI in 6 to 8 year-olds relative to CDC-2012 reference data; in 9 to 17 year-old children, however, this sample evidenced lower values in terms of weight and BMI as compared to those of the CDC-2012. As far as height is concerned, in both sexes, values were lower than those of the CDC-2012.comparisons against the regional curves of Argentina, Peru and Brazil yielded relatively similar results, with the exception of girls? BMI, as 13 to 17 year-old girls exhibited lower values. Conclusion. Growth variables of school children were lower relative to the CDC-2012 reference data. There were slight discrepancies in physical growth and BMI in relation to the curves of Argentina, Peru and Brazil. Curves were constructed to evaluate growth in school children living at moderate altitude in Colombia.

Adolescent

Altitude

Child

Development

Growth

adolescent

altitude

anthropometry

Argentina

Article

body growth

body height

body mass

body weight

Brazil

child

Colombia

controlled study

cross-sectional study

female

human

male

Peru

public health service

school child

Colombia

comparative study

reference value

Adolescent

Altitude

Body Height

Body Mass Index

Body Weight

Child

Colombia

Female

Humans

Male

Reference Values