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Growth Patterns of US Children from 1963 to 2012

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Anthropometric measurements such as weight, stature (height), and body mass index (BMI) provide reliable indicators of children's growth. The 2000 CDC growth charts are the national standards in the United States for these important measures. But these growth charts were generated using data from 1963-1994. To understand the growth patterns of US children since 1994, we generate weight-for-age, stature-for-age and BMI-for-age percentile curves for both boys and girls aged 2-20 through the methods used to generate the 2000 CDC growth charts. Our datasets are from the National Health and Nutrition Examination Survey (NHANES) for years 1999-2010 and and from NorthShore University HealthSystem's Enterprise Data Warehouse (NS-EDW) for years 2006-2012. The weight and BMI percentile curves generated from NS-EDW and NHANES data differ substantially from the CDC percentile curves, while those for stature do not differ substantially. We conclude that the population weight and BMI values of US children in recent years have increased significantly since 2000 and the 2000 CDC growth charts may no longer be applicable to the current population of US children. Our charts poignantly reveals the increasing obesity of American children.

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