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Prevalence of Underweight Among Children and Adolescents Aged 2–19 Years: United States, 1963–1965 Through 2011–2012

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Underlying health conditions in children and adolescents can result in underweight. In addition, underweight can reflect malnutrition. Results from the 2011–2012 National Health and Nutrition Examination Survey (NHANES), using measured heights and weights, indicate that an estimated 3.5% of children and adolescents aged 2–19 years are underweight.

Body mass index (BMI), expressed as weight in kilograms divided by height in meters squared (kg/m^2), is commonly used to classify weight status among children and adolescents. Cutoff criteria are based on the sex-specific BMI-for-age 2000 CDC Growth Charts for the United States (available from: http://www.cdc.gov/growthcharts/cdc_charts.htm). Based on current recommendations of expert committees, children and adolescents with BMI values below the 5th percentile of the growth charts are categorized as underweight.

The [table](#) shows the prevalence of underweight among children and adolescents aged 2–19, by age and sex, between 1963–1965 and 2011–2012.

NHANES, conducted by CDC's National Center for Health Statistics (NCHS), is a stratified, multistage probability sample of the civilian noninstitutionalized population of the United States. A household interview and a physical examination are conducted for each survey participant. During the physical examination, conducted in a mobile examination center, height and weight are measured as part of a more comprehensive set of body measurements. These measurements are taken by trained health technicians, using standardized measuring procedures and equipment. Observations for persons missing a valid height or weight measurement and for pregnant females were not included in the data analysis.

For additional information on NHANES methods, visit:
http://www.cdc.gov/nchs/nhanes/survey_methods.htm.

This Health E-Stat supersedes the earlier version below:

- Prevalence of underweight among children and adolescents aged 2–19 years: United States, 1963–1965 through 2007–2010. Available from:
http://www.cdc.gov/nchs/data/hestat/underweight_child_07_10/underweight_child_07_10.htm.



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Table. Prevalence of underweight among children and adolescents aged 2–19 years, by age and sex: United States, selected years 1963–1965 through 2011–2012

Survey period	Sample (n)	Total	Age (years)			Sex	
			2–5	6–11	12–19	Boys	Girls
Percent (standard error)							
1963–1965	---	---	---	5.8 (0.6)	---	---	---
1966–1970 ¹	---	---	---	---	4.6 (0.3)	---	---
1971–1974	7,041	5.1 (0.4)	5.8 (0.5)	5.3 (0.5)	4.7 (0.5)	5.0 (0.3)	5.3 (0.5)
1976–1980	7,351	4.5 (0.3)	5.3 (0.4)	4.2 (0.5)	4.4 (0.4)	5.0 (0.4)	4.1 (0.3)
1988–1994	10,777	4.0 (0.3)	4.3 (0.4)	3.9 (0.6)	3.9 (0.6)	4.2 (0.5)	3.8 (0.5)
1999–2000	4,039	4.2 (0.5)	5.1 (1.3)	4.3 (0.9)	3.7 (0.6)	4.9 (0.9)	3.5 (0.7)
2001–2002	4,261	3.4 (0.3)	2.8 (0.8)	3.4 (0.3)	3.7 (0.6)	3.7 (0.5)	3.1 (0.4)
2003–2004	3,961	3.2 (0.3)	3.7 (1.0)	3.0 (0.7)	3.2 (0.7)	3.6 (0.4)	2.9 (0.5)
2005–2006	4,207	3.2 (0.4)	1.9 (0.4)	2.3 (0.7)	4.5 (0.7)	3.7 (0.7)	2.7 (0.4)
2007–2008	3,249	3.7 (0.4)	3.8 (0.9)	3.0 (0.7)	4.2 (0.6)	3.8 (0.8)	3.6 (0.4)
2009–2010	3,408	3.3 (0.4)	3.1 (0.5)	4.2 (0.7)	2.8 (0.6)	3.3 (0.5)	3.4 (0.5)
2011–2012	3,355	3.5 (0.5)	3.2 (0.7)	3.6 (0.8)	3.6 (0.7)	4.2 (1.1)	2.8 (0.5)

--- Data not available. Children aged 2–5 years were not included in the surveys undertaken in the 1960s.

¹Data for 1966–1970 are for adolescents aged 12–17 (not 12–19).

NOTES: Underweight is body mass index (BMI) less than the sex- and age-specific 5th percentile from the BMI-for-age 2000 CDC Growth Charts. Pregnant females were excluded from analysis beginning with 1971–1974. Pregnancy status was not available for 1963–1965 and 1966–1970.

SOURCE: CDC/NCHS, National Health Examination Surveys (NHES) 1963–1965 and 1966–1970; and National Health and Nutrition Examination Surveys (NHANES) 1971–1974, 1976–1980, 1988–1994, and 1999–2012.