

Prevalence of Underweight Among Adults Aged 20 and Over: United States, 1960–1962 Through 2017–2018

by Cheryl D. Fryar, M.S.P.H., Margaret D. Carroll, M.S.P.H., and Joseph Afful, M.S., Division of Health and Nutrition Examination Surveys

Poor nutrition or underlying health conditions can result in adults being underweight. Results from the 2017–2018 National Health and Nutrition Examination Survey (NHANES), using measured heights and weights, indicate that an estimated 1.6% of U.S. adults aged 20 and over are underweight. Body mass index (BMI), expressed as weight in kilograms divided by height in meters squared (kg/m^2), is used commonly to classify underweight (BMI less than 18.5) among adults aged 20 and over.

The prevalence of underweight among adults aged 20 and over by age and sex from 1988–1994 through 2017–2018 is shown in [Table 1](#). Because surveys before 1988 did not include persons over age 74, [Table 2](#) shows the prevalence of underweight for adults aged 20–74 by age and sex for all survey periods dating to 1960. The total and sex-specific estimates for both tables are age adjusted.

NHANES, conducted by the National Center for Health Statistics, is a 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 pregnant women and for persons missing a valid height or weight measurement are not included in the data analysis.

For additional information on NHANES methods, visit: <https://www.cdc.gov/nchs/nhanes/analyticguidelines.aspx>.

This *Health E-Stat* supersedes the earlier version, “Prevalence of Underweight Among Adults Aged 20 and Over: United States, 1960–1962 Through 2015–2016,” available from: https://www.cdc.gov/nchs/data/hestat/underweight_adult_15_16/underweight_adult_15_16.htm.

Suggested citation

Fryar CD, Carroll MD, Afful J. Prevalence of underweight among adults aged 20 and over: United States, 1960–1962 through 2017–2018. NCHS Health E-Stats. 2020.

Table 1. Prevalence of underweight among adults aged 20 and over, by age and sex: United States, 1988–1994 through 2017–2018

Survey period	Sample size (n)	Total ¹	20–39	40–59	60 and over	Men ¹	Women ¹
1988–1994	16,235	2.3 (0.2)	3.0 (0.4)	1.7 (0.3)	2.3 (0.2)	1.1 (0.2)	3.5 (0.3)
1999–2000	4,117	2.0 (0.2)	2.9 (0.4)	1.3 (0.2)	1.4 (0.4)	1.1 (0.2)	2.7 (0.5)
2001–2002	4,413	1.9 (0.2)	2.9 (0.5)	0.9 (0.2)	1.6 (0.3)	1.0 (0.3)	2.7 (0.3)
2003–2004	4,431	1.7 (0.2)	2.8 (0.3)	1.0 (0.4)	0.8 (0.2)	1.4 (0.3)	2.0 (0.4)
2005–2006	4,356	1.9 (0.3)	2.4 (0.6)	1.4 (0.4)	1.6 (0.3)	1.2 (0.4)	2.5 (0.4)
2007–2008	5,550	1.6 (0.3)	1.9 (0.5)	1.5 (0.5)	1.1 (0.2)	1.0 (0.3)	2.2 (0.4)
2009–2010	5,926	1.8 (0.3)	2.0 (0.3)	2.1 (0.5)	1.3 (0.2)	1.0 (0.2)	2.6 (0.5)
2011–2012	5,181	1.7 (0.2)	2.5 (0.3)	0.9 (0.2)	1.6 (0.4)	0.7 (0.1)	2.6 (0.4)
2013–2014	5,455	1.4 (0.2)	1.9 (0.4)	0.8 (0.3)	1.6 (0.4)	1.3 (0.3)	1.6 (0.2)
2015–2016	5,337	1.5 (0.2)	2.5 (0.4)	0.8 (0.3)	0.9 (0.3)	1.2 (0.2)	1.8 (0.4)
2017–2018	5,120	1.6 (0.2)	2.4 (0.5)	1.6 (0.4)	0.5 (0.2)	1.3 (0.3)	2.0 (0.4)

¹Age adjusted by the direct method to U.S. Census 2000 estimates using the age groups 20–39, 40–59, and 60 and over. Crude estimates (not age adjusted) for 2017–2018 are 1.5% for total, 1.2% for men, and 1.8% for women.

NOTE: Underweight is body mass index less than 18.5 kg/m². Pregnant women are excluded from the analysis.

SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Surveys, 1988–1994 and 1999–2018.

Table 2. Prevalence of underweight among adults aged 20–74, by age and sex: United States, 1960–1962 through 2017–2018

Survey period	Sample size (n)	Total ¹	20–39	40–59	60–74	Men ¹	Women ¹
1960–1962	6,126	4.0 (0.2)	5.7 (0.4)	2.3 (0.3)	3.7 (0.6)	2.2 (0.2)	5.7 (0.4)
1971–1974	12,911	3.6 (0.2)	4.9 (0.3)	2.2 (0.3)	3.8 (0.4)	2.4 (0.3)	4.8 (0.3)
1976–1980	11,765	3.0 (0.1)	4.2 (0.3)	1.9 (0.3)	2.7 (0.4)	1.6 (0.2)	4.4 (0.3)
1988–1994	14,319	2.3 (0.2)	3.0 (0.4)	1.7 (0.3)	1.9 (0.3)	1.1 (0.2)	3.5 (0.3)
1999–2000	3,603	2.0 (0.2)	2.9 (0.4)	1.3 (0.2)	1.1 (0.2)	1.2 (0.2)	2.7 (0.5)
2001–2002	3,916	1.8 (0.2)	2.9 (0.5)	0.9 (0.2)	1.4 (0.4)	1.0 (0.3)	2.6 (0.4)
2003–2004	3,756	1.7 (0.2)	2.8 (0.3)	1.0 (0.4)	0.7 (0.3)	1.4 (0.3)	2.1 (0.4)
2005–2006	3,835	1.8 (0.3)	2.4 (0.6)	1.4 (0.4)	1.1 (0.5)	1.3 (0.4)	2.4 (0.5)
2007–2008	4,876	1.6 (0.3)	1.9 (0.5)	1.5 (0.5)	0.9 (0.2)	0.9 (0.3)	2.3 (0.4)
2009–2010	5,279	1.9 (0.3)	2.0 (0.3)	2.1 (0.5)	1.2 (0.3)	1.0 (0.3)	2.7 (0.5)
2011–2012	4,674	1.7 (0.2)	2.5 (0.3)	0.9 (0.2)	1.2 (0.5)	0.7 (0.1)	2.6 (0.4)
2013–2014	4,940	1.4 (0.2)	1.9 (0.4)	0.8 (0.3)	1.7 (0.5)	1.4 (0.3)	1.5 (0.3)
2015–2016	4,778	1.5 (0.2)	2.5 (0.4)	0.8 (0.3)	0.8 (0.3)	1.2 (0.3)	1.9 (0.4)
2017–2018	4,536	1.7 (0.3)	2.4 (0.5)	1.6 (0.4)	0.4 (0.2)	1.4 (0.3)	2.1 (0.4)

¹Age adjusted by the direct method to U.S. Census 2000 estimates using the age groups 20–39, 40–59, and 60–74. The 1960–1962 National Health Examination Survey included adults aged 18–79, and the 1971–1974 and 1976–1980 National Health and Nutrition Examination Surveys did not include individuals over age 74.

NOTE: Underweight is body mass index less than 18.5 kg/m². Pregnant women are excluded from the analysis.

SOURCES: National Center for Health Statistics, National Health Examination Survey, 1960–1962; and National Health and Nutrition Examination Surveys, 1971–1974, 1976–1980, 1988–1994, and 1999–2018.