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Anthropometric Reference Data for Children and Adults: United States, 2007–2010



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics

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Series 11, Number 252

Anthropometric Reference Data for Children and Adults: United States, 2007–2010

Data From the National Health
and Nutrition Examination
Survey

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics

Hyattsville, Maryland
October 2012
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Abstract

Objective

This report presents national anthropometric reference data for all ages of the U.S. population in 2007–2010, adding to results published previously from the years 1960–2006.

Methods

Data are from the National Health and Nutrition Examination Survey (NHANES), a complex, stratified, and multistage probability sample of the civilian noninstitutionalized U.S. population. Anthropometry measurements were obtained from 20,015 survey participants. The anthropometric measures included weight, height, recumbent length, circumferences, limb lengths, and skinfold thickness measurements.

Results

The tables in this report include weighted population means, standard errors of the means, and selected percentiles of body measurement values. Because measurements varied by sex and age (as well as race and ethnicity in adults), results are reported by these subgroups.

Conclusions

These latest NHANES data add to the knowledge about trends in child growth and development and trends in the distribution of body measurements, such as weight and height, in the U.S. population.

Keywords: anthropometry • body measures • nutrition surveys • National Health and Nutrition Examination Survey

Anthropometric Reference Data for Children and Adults: United States, 2007–2010

by Cheryl D. Fryar, M.S.P.H.; Qiuping Gu, M.D.; and Cynthia L. Ogden, Ph.D., Division of Health and Nutrition Examination Surveys

Introduction

The field of anthropometry encompasses a variety of human body measurements, such as weight, height, and size, including skinfold thicknesses, circumferences, lengths, and breadths. Anthropometry is a key component of nutritional status assessment in children and adults (1). Anthropometric data for children reflect general health status, dietary adequacy, and growth and development over time. In adults, body measurement data are used to evaluate health and dietary status, disease risk, and body composition changes that occur over the adult lifespan. This report provides anthropometric reference data from the years 2007–2010 for U.S. children and adults of all ages.

Methods

National Health and Nutrition Examination Surveys (NHANES) are conducted by the Centers for Disease Control and Prevention's National Center for Health Statistics. NHANES data are the primary source of body measurement information for the U.S. population. Household interviews and health examinations are used to collect NHANES data. Health examinations are conducted in mobile examination centers. The examination centers are staffed by full-time personnel, including health technicians who obtain body measurements from survey participants.

Surveys were conducted on a periodic basis from 1960 to 1994. NHANES became a continuous survey

in 1999. Each of the continuous NHANES annual samples is nationally representative. For reasons that include disclosure and data reliability, public-use data files are released in 2-year cycles. A combined 4-year dataset based on 2007–2008 and 2009–2010 data was used for this report to improve the stability and reliability of the statistical estimates (2–5).

Sample Description

NHANES is a complex, multistage probability sample of the civilian noninstitutionalized U.S. population. The NHANES 2007–2010 sample included participants of all ages. Those aged 60 and over, all Hispanic persons, black persons, and those with low income were oversampled to improve the precision of the statistical estimates for these groups (2). The oversampling of all Hispanic persons is new to the 2007–2010 data collection methodology. In addition to allowing estimates for the total Hispanic group, sampling fractions were set so that the sample size for Mexican-American participants would not be very different from previous years and would be sufficient to produce reliable estimates for this group (3). The analytic sample for this report was based on the 2007–2010 examined sample of 20,015 persons. Pregnant females were excluded from the tabulations of weight, body mass index (BMI), circumference measurements, and skinfold thickness data.

The age and race/ethnicity categories used for adults aged 20 and over were based on the survey sample domains that were recommended in the

NHANES Analytic Guidelines (2). Age was categorized into three groups: 20–39, 40–59, and 60 and over. Race/ethnicity was reported for non-Hispanic white persons, non-Hispanic black persons, all Hispanic persons, and Mexican-American persons. Age groups for participants who were under age 20 are by single years, except for infants under age 1 year, which are by month.

Anthropometry Measures

Although portions of the health examination component have varied during the survey's history, much of the anthropometry component methodology has remained consistent over time. The NHANES Anthropometry Procedures Manual describes the protocol, equipment, quality control, and measurement procedures in detail (6).

Weight was measured to the nearest 0.1 kilogram. Stature, length, and circumference measurements were made to the nearest 0.1 centimeter. Skinfold thickness measures were made to the nearest 0.1 millimeter. Weight was measured using a digital floor scale, and an infantometer was used to measure recumbent length on infants and young children. Standing height was measured with a wall-mounted stadiometer. BMI was calculated as weight in kilograms, divided by height in meters squared (kg/m^2). Head circumference measurements were made using a plastic head circumference measurement tape. Upper arm length was measured with a tape measure from the posterior border of the acromion process to the tip of the olecranon process; during the measurement, the upper arm length midpoint was marked. The midarm circumference was measured with a tape measure. Triceps and subscapular skinfolds were measured with a skinfold caliper. Waist circumference was measured with a tape measure at the uppermost lateral border of the hip crest (ilium). Weight, recumbent length, and standing height values were recorded automatically. The other body measurement data were recorded using computer-assisted data entry, and all

results were based on a single body measurement examination.

In addition to the measurements above, upper leg length measurements were taken on participants aged 8 and over. This measurement was taken on seated participants; the distance from the inguinal crease to the distal end of the femur was measured.

Statistical Analysis

Population means, standard errors of the means, and percentiles were weighted using NHANES 4-year calculated examination sample weights ($\text{MEC4YR}=1/2*\text{wtmec2yr}$) to produce national estimates. The NHANES examination sample weights incorporate the differential probabilities of selection and include adjustments for oversampling of selected populations, noncoverage, and nonresponse. Standard errors were estimated using SUDAAN by Taylor series linearization because of the complex sample design (7).

The reliability of the estimates produced for this report was evaluated. Estimates based on less than 12 degrees of freedom or with a relative standard error (RSE) greater than 30% were considered statistically unreliable (2). RSE is defined as the ratio of the standard error of the estimate, divided by the estimate, multiplied by 100. No estimates in this report had RSEs greater than 30%. In [Tables 1–35](#), estimates based on less than 12 degrees of freedom are identified with an asterisk (*). Estimates with standard errors that were not able to be calculated using SUDAAN because of small cell sizes were omitted from the tables and are identified with a dagger (†).

Results

A list of detailed tables based on the anthropometric measurements and indices in the survey is found in the [Table](#) on the following page. [Tables 1–35](#) contain the results from each measurement or index. Results are reported by sex and age group, and the

results for adults aged 20 and over are also presented by racial and ethnic group. Results from previous surveys for most measurements have been reported for the National Health Examination Survey and NHANES conducted from 1960–2006 (8–20). A historical summary of published body measurement reference data is available in the [Appendix](#) of this report.

Discussion

This report provides the most recent anthropometric reference data for U.S. children and adults. NHANES anthropometric data have been used by researchers and policy makers for a variety of research and policy applications. The national overweight and obesity trends among children (21) were instrumental in developing the Let's Move Campaign, a comprehensive initiative launched by the First Lady of the United States, “dedicated to solving the problem of obesity within a generation” (22). The increasing midarm circumferences found in children and adults have been used to formulate guidelines for health practitioners regarding the selection of blood pressure cuff sizes for blood pressure measurement (23). The Consumer Product Safety Commission used NHANES anthropometric data to examine whether changes in physical dimensions of U.S. children have any practical significance for the evaluation of the hazard and design of safe products for children (24). The Federal Aviation Administration used NHANES body measurement data in the determination of average passenger weights in its Advisory Circular on Aircraft Weight and Balance Control (25). Similarly, the U.S. Coast Guard looked at NHANES body weight data when considering passenger weight and vessel stability requirements (26). NHANES will continue to collect anthropometric data and provide vital information to support national health programs and policy efforts.

Table. Detailed tables with anthropometric measurements or indices from the National Health and Nutrition Examination Survey, 2007–2010

| Table number | Measurement (unit of measurement) | Age group and sex |
|--------------|------------------------------------|---------------------------|
| 1 | Weight (kilograms) | Birth–19 years |
| 2 | Weight (pounds) | Birth–19 years |
| 3 | Weight (kilograms) | Females 20 years and over |
| 4 | Weight (pounds) | Females 20 years and over |
| 5 | Weight (kilograms) | Males 20 years and over |
| 6 | Weight (pounds) | Males 20 years and over |
| 7 | Standing height (centimeters) | Persons 2–19 years |
| 8 | Standing height (inches) | Persons 2–19 years |
| 9 | Standing height (centimeters) | Females 20 years and over |
| 10 | Standing height (inches) | Females 20 years and over |
| 11 | Standing height (centimeters) | Males 20 years and over |
| 12 | Standing height (inches) | Males 20 years and over |
| 13 | Body mass index (BMI value) | Persons 2–19 years |
| 14 | Body mass index (BMI value) | Females 20 years and over |
| 15 | Body mass index (BMI value) | Males 20 years and over |
| 16 | Head circumference (centimeters) | Birth through 6 months |
| 17 | Recumbent length (centimeters) | Birth through 36 months |
| 18 | Waist circumference (centimeters) | Persons 2–19 years |
| 19 | Waist circumference (centimeters) | Females 20 years and over |
| 20 | Waist circumference (centimeters) | Males 20 years and over |
| 21 | Midarm circumference (centimeters) | Persons 2 months–19 years |
| 22 | Midarm circumference (centimeters) | Females 20 years and over |
| 23 | Midarm circumference (centimeters) | Males 20 years and over |
| 24 | Upper arm length (centimeters) | Persons 2 months–19 years |
| 25 | Upper arm length (centimeters) | Females 20 years and over |
| 26 | Upper arm length (centimeters) | Males 20 years and over |
| 27 | Subscapular skinfold (millimeters) | Persons 2 months–19 years |
| 28 | Subscapular skinfold (millimeters) | Females 20 years and over |
| 29 | Subscapular skinfold (millimeters) | Males 20 years and over |
| 30 | Triceps skinfold (millimeters) | Persons 2 months–19 years |
| 31 | Triceps skinfold (millimeters) | Females 20 years and over |
| 32 | Triceps skinfold (millimeters) | Males 20 years and over |
| 33 | Upper leg length (centimeters) | Persons 8–19 years |
| 34 | Upper leg length (centimeters) | Females 20 years and over |
| 35 | Upper leg length (centimeters) | Males 20 years and over |

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Table 1. Weight in kilograms for children and adolescents from birth through age 19 years and number of examined persons, mean, standard error of the mean, and selected percentiles, by sex and age: United States, 2007–2010

| Sex and age ¹ | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|-----------------------------|----------------------------|------|----------------------------|------------------|------|------|------|------|------|------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| Male | | | | Kilograms | | | | | | | | |
| Birth to 2 months | 82 | 5.2 | 0.09 | 3.5 | 3.8 | 4.0 | 4.5 | 5.4 | 5.8 | 6.0 | 6.1 | 6.3 |
| 3–5 months | 111 | 7.1 | 0.11 | 5.6 | 5.8 | 6.0 | 6.2 | 7.0 | 7.5 | 8.1 | 8.4 | 8.6 |
| 6–8 months | 103 | 8.7 | 0.13 | 7.2 | 7.5 | 7.7 | 8.1 | 8.7 | 9.2 | 9.5 | 10.0 | 10.6 |
| 9–11 months | 108 | 9.6 | 0.15 | † | 8.1 | 8.2 | 8.7 | 9.3 | 10.5 | 11.1 | 11.2 | 11.7 |
| 1 year | 318 | 11.3 | 0.09 | 8.9 | 9.4 | 9.7 | 10.2 | 11.4 | 12.2 | 12.8 | 13.0 | 13.8 |
| 2 years | 325 | 14.0 | 0.14 | 11.3 | 11.8 | 12.2 | 12.6 | 13.9 | 15.0 | 15.7 | 16.4 | 17.3 |
| 3 years | 203 | 16.2 | 0.21 | 13.1 | 13.6 | 14.0 | 14.7 | 15.9 | 17.2 | 17.8 | 18.3 | 20.2 |
| 4 years | 244 | 18.5 | 0.22 | 14.9 | 15.2 | 15.6 | 16.2 | 17.7 | 19.5 | 21.5 | 23.0 | 25.5 |
| 5 years | 205 | 21.2 | 0.32 | 16.3 | 17.1 | 17.8 | 18.9 | 20.2 | 22.1 | 24.4 | 27.1 | 31.0 |
| 6 years | 193 | 24.3 | 0.47 | 16.8 | 18.1 | 19.1 | 20.3 | 23.1 | 25.6 | 29.1 | 35.0 | 36.5 |
| 7 years | 216 | 26.7 | 0.43 | 19.7 | 20.3 | 21.1 | 22.2 | 24.9 | 29.6 | 33.5 | 34.8 | 39.5 |
| 8 years | 211 | 31.3 | 0.70 | 21.6 | 22.7 | 23.8 | 25.8 | 29.8 | 35.3 | 39.4 | 42.1 | 46.5 |
| 9 years | 191 | 36.6 | 1.17 | 22.8 | 24.6 | 26.6 | 28.3 | 33.0 | 42.8 | 49.2 | 52.6 | † |
| 10 years | 197 | 40.0 | 0.93 | 25.8 | 28.6 | 30.2 | 32.1 | 38.0 | 46.1 | 52.2 | 54.0 | 59.7 |
| 11 years | 211 | 46.6 | 1.13 | 31.5 | 33.7 | 34.5 | 35.9 | 42.4 | 54.4 | 60.8 | 66.8 | 73.5 |
| 12 years | 159 | 51.5 | 1.27 | 31.3 | 34.5 | 36.6 | 39.9 | 49.2 | 60.7 | 68.0 | 69.7 | 75.1 |
| 13 years | 146 | 59.2 | 1.45 | 38.0 | 42.7 | 44.6 | 48.5 | 56.6 | 63.6 | 71.4 | 81.0 | 95.8 |
| 14 years | 177 | 63.9 | 1.92 | 40.2 | 42.3 | 47.0 | 52.2 | 60.4 | 71.2 | 81.2 | 88.9 | † |
| 15 years | 160 | 70.1 | 1.95 | 48.4 | 50.6 | 53.9 | 56.2 | 66.0 | 76.4 | 86.9 | 94.2 | 115.3 |
| 16 years | 175 | 75.1 | 1.52 | 52.0 | 56.2 | 57.7 | 62.3 | 70.7 | 84.4 | 92.9 | 99.8 | 108.9 |
| 17 years | 188 | 77.4 | 2.41 | 52.3 | 58.1 | 60.9 | 64.4 | 71.0 | 85.4 | 95.3 | 104.8 | 128.5 |
| 18 years | 142 | 81.3 | 2.00 | 56.7 | 60.1 | 61.9 | 66.5 | 78.3 | 90.3 | 95.8 | 106.1 | † |
| 19 years | 179 | 79.5 | 1.39 | 57.6 | 62.3 | 63.6 | 66.9 | 76.6 | 85.6 | 95.8 | 98.8 | 119.1 |
| Female | | | | | | | | | | | | |
| Birth to 2 months | 82 | 5.0 | 0.11 | 3.0 | 3.6 | 4.2 | 4.5 | 5.1 | 5.4 | 5.6 | 5.8 | 6.0 |
| 3–5 months | 104 | 6.7 | 0.07 | 5.2 | 5.4 | 5.7 | 6.1 | 6.8 | 7.2 | 7.4 | 7.7 | 7.9 |
| 6–8 months | 103 | 8.1 | 0.07 | 6.7 | 7.0 | 7.2 | 7.4 | 8.0 | 8.7 | 8.9 | 9.3 | 9.6 |
| 9–11 months | 119 | 9.0 | 0.12 | 7.3 | 7.6 | 7.8 | 8.4 | 8.9 | 9.7 | 10.0 | 10.2 | 10.7 |
| 1 year | 297 | 10.9 | 0.10 | 8.7 | 8.9 | 9.2 | 9.7 | 10.7 | 11.7 | 12.2 | 12.7 | 13.1 |
| 2 years | 282 | 13.4 | 0.15 | 10.9 | 11.2 | 11.7 | 12.1 | 13.2 | 14.4 | 14.9 | 15.6 | 16.5 |
| 3 years | 191 | 15.7 | 0.24 | 12.3 | 12.8 | 13.1 | 13.8 | 15.4 | 16.9 | 18.1 | 18.9 | 19.7 |
| 4 years | 200 | 17.7 | 0.21 | 14.2 | 14.9 | 15.1 | 15.8 | 17.1 | 18.9 | 20.4 | 22.0 | 23.1 |
| 5 years | 177 | 21.1 | 0.54 | 15.9 | 16.6 | 17.4 | 18.1 | 19.7 | 22.4 | 24.2 | 26.4 | † |
| 6 years | 177 | 23.6 | 0.47 | 18.3 | 18.7 | 19.2 | 20.4 | 22.5 | 25.2 | 27.6 | 30.3 | 33.5 |
| 7 years | 207 | 26.8 | 0.53 | 19.4 | 20.6 | 21.0 | 22.1 | 25.2 | 28.9 | 32.8 | 35.4 | 39.6 |
| 8 years | 203 | 31.9 | 1.01 | 21.8 | 23.1 | 23.7 | 25.0 | 29.2 | 37.8 | 42.4 | 43.6 | 48.0 |
| 9 years | 205 | 35.5 | 0.98 | 23.3 | 26.1 | 26.5 | 28.0 | 31.9 | 40.1 | 46.1 | 49.3 | 55.7 |
| 10 years | 183 | 41.1 | 0.74 | 27.3 | 29.1 | 30.1 | 33.6 | 39.0 | 45.3 | 52.3 | 55.0 | 61.3 |
| 11 years | 219 | 47.5 | 1.28 | 30.0 | 31.5 | 33.0 | 36.1 | 43.3 | 56.5 | 63.0 | 66.8 | 79.6 |
| 12 years | 166 | 52.3 | 1.26 | 30.6 | 34.8 | 38.0 | 43.1 | 51.4 | 60.3 | 65.7 | 72.1 | 75.7 |
| 13 years | 140 | 56.8 | 1.41 | 38.8 | 41.4 | 44.6 | 46.1 | 52.3 | 64.8 | 72.4 | 75.7 | 83.2 |
| 14 years | 168 | 61.6 | 1.13 | 42.7 | 44.8 | 47.7 | 51.1 | 59.0 | 67.1 | 73.5 | 76.4 | † |
| 15 years | 137 | 63.3 | 1.32 | 44.2 | 46.5 | 48.2 | 54.5 | 59.5 | 70.6 | 77.1 | 85.8 | 92.3 |
| 16 years | 156 | 62.4 | 1.11 | 45.5 | 48.4 | 50.0 | 51.3 | 58.7 | 69.5 | 77.9 | 84.8 | 92.0 |
| 17 years | 143 | 63.7 | 1.56 | 45.4 | 47.9 | 49.1 | 51.8 | 60.8 | 68.4 | 80.0 | 83.8 | 92.0 |
| 18 years | 137 | 65.4 | 1.67 | 46.6 | 50.6 | 51.8 | 53.5 | 58.6 | 69.5 | 80.4 | 85.8 | 105.0 |
| 19 years | 118 | 68.0 | 2.00 | 44.4 | 47.1 | 51.0 | 55.1 | 62.8 | 76.8 | 88.2 | 94.9 | 106.7 |

† Standard error not calculated by SUDAAN.

¹Refers to age at time of examination.

NOTE: Pregnant females were excluded.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 2. Weight in pounds for children and adolescents from birth through age 19 years and number of examined persons, mean, standard error of the mean, and selected percentiles, by sex and age: United States, 2007–2010

| Sex and age ¹ | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|-----------------------------|----------------------------|-------|----------------------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| Male | | | | Pounds | | | | | | | | |
| Birth to 2 months | 82 | 11.5 | 0.20 | 7.7 | 8.3 | 8.9 | 10.0 | 11.9 | 12.8 | 13.2 | 13.5 | 13.9 |
| 3–5 months | 111 | 15.6 | 0.24 | 12.4 | 12.8 | 13.1 | 13.8 | 15.5 | 16.6 | 17.8 | 18.5 | 18.9 |
| 6–8 months | 103 | 19.2 | 0.28 | 15.9 | 16.5 | 17.0 | 17.8 | 19.2 | 20.3 | 20.9 | 22.0 | 23.3 |
| 9–11 months | 108 | 21.2 | 0.33 | † | 17.8 | 18.1 | 19.2 | 20.6 | 23.2 | 24.5 | 24.8 | 25.7 |
| 1 year | 318 | 25.0 | 0.20 | 19.6 | 20.8 | 21.3 | 22.6 | 25.0 | 27.0 | 28.2 | 28.6 | 30.5 |
| 2 years | 325 | 31.0 | 0.32 | 24.8 | 26.0 | 26.9 | 27.8 | 30.6 | 33.1 | 34.7 | 36.2 | 38.2 |
| 3 years | 203 | 35.8 | 0.45 | 28.9 | 30.1 | 30.9 | 32.5 | 35.0 | 37.9 | 39.3 | 40.3 | 44.6 |
| 4 years | 244 | 40.7 | 0.48 | 32.8 | 33.6 | 34.3 | 35.7 | 39.1 | 42.9 | 47.4 | 50.7 | 56.3 |
| 5 years | 205 | 46.7 | 0.70 | 35.9 | 37.7 | 39.2 | 41.6 | 44.6 | 48.8 | 53.8 | 59.7 | 68.4 |
| 6 years | 193 | 53.5 | 1.03 | 37.0 | 39.9 | 42.0 | 44.8 | 50.9 | 56.5 | 64.0 | 77.1 | 80.5 |
| 7 years | 216 | 58.9 | 0.95 | 43.5 | 44.7 | 46.6 | 48.9 | 54.9 | 65.2 | 73.8 | 76.7 | 87.2 |
| 8 years | 211 | 69.1 | 1.55 | 47.7 | 50.0 | 52.4 | 57.0 | 65.7 | 77.8 | 86.9 | 92.8 | 102.5 |
| 9 years | 191 | 80.7 | 2.58 | 50.2 | 54.2 | 58.7 | 62.3 | 72.8 | 94.3 | 108.4 | 116.0 | † |
| 10 years | 197 | 88.3 | 2.06 | 56.8 | 63.1 | 66.5 | 70.7 | 83.8 | 101.6 | 115.2 | 119.1 | 131.7 |
| 11 years | 211 | 102.8 | 2.50 | 69.5 | 74.3 | 76.1 | 79.1 | 93.4 | 119.9 | 134.0 | 147.2 | 161.9 |
| 12 years | 159 | 113.5 | 2.79 | 69.0 | 76.0 | 80.7 | 88.1 | 108.4 | 133.9 | 150.0 | 153.7 | 165.5 |
| 13 years | 146 | 130.5 | 3.20 | 83.7 | 94.2 | 98.2 | 106.9 | 124.8 | 140.3 | 157.3 | 178.6 | 211.1 |
| 14 years | 177 | 140.9 | 4.24 | 88.7 | 93.3 | 103.6 | 115.1 | 133.1 | 156.9 | 178.9 | 196.1 | † |
| 15 years | 160 | 154.5 | 4.31 | 106.8 | 111.5 | 118.7 | 124.0 | 145.5 | 168.4 | 191.6 | 207.7 | 254.2 |
| 16 years | 175 | 165.7 | 3.36 | 114.7 | 123.8 | 127.2 | 137.4 | 156.0 | 186.0 | 204.8 | 219.9 | 240.1 |
| 17 years | 188 | 170.7 | 5.30 | 115.4 | 128.0 | 134.2 | 142.0 | 156.6 | 188.3 | 210.1 | 231.2 | 283.2 |
| 18 years | 142 | 179.3 | 4.41 | 125.0 | 132.6 | 136.4 | 146.6 | 172.7 | 199.1 | 211.2 | 233.9 | † |
| 19 years | 179 | 175.3 | 3.07 | 127.0 | 137.4 | 140.3 | 147.6 | 168.9 | 188.6 | 211.1 | 217.9 | 262.5 |
| Female | | | | | | | | | | | | |
| Birth to 2 months | 82 | 11.0 | 0.25 | 6.5 | 8.0 | 9.3 | 9.9 | 11.3 | 11.9 | 12.4 | 12.9 | 13.2 |
| 3–5 months | 104 | 14.8 | 0.15 | 11.4 | 12.0 | 12.5 | 13.4 | 14.9 | 15.8 | 16.3 | 17.0 | 17.4 |
| 6–8 months | 103 | 17.9 | 0.16 | 14.7 | 15.4 | 15.8 | 16.4 | 17.6 | 19.2 | 19.7 | 20.5 | 21.1 |
| 9–11 months | 119 | 19.9 | 0.26 | 16.0 | 16.7 | 17.1 | 18.4 | 19.7 | 21.4 | 22.1 | 22.4 | 23.6 |
| 1 year | 297 | 24.1 | 0.22 | 19.2 | 19.7 | 20.2 | 21.5 | 23.7 | 25.9 | 26.9 | 28.1 | 28.9 |
| 2 years | 282 | 29.5 | 0.32 | 24.0 | 24.7 | 25.8 | 26.6 | 29.0 | 31.8 | 32.9 | 34.4 | 36.3 |
| 3 years | 191 | 34.5 | 0.52 | 27.2 | 28.1 | 28.8 | 30.4 | 34.0 | 37.2 | 39.9 | 41.7 | 43.4 |
| 4 years | 200 | 39.1 | 0.47 | 31.3 | 32.8 | 33.3 | 34.7 | 37.7 | 41.6 | 45.0 | 48.6 | 50.9 |
| 5 years | 177 | 46.6 | 1.20 | 35.1 | 36.6 | 38.4 | 40.0 | 43.5 | 49.4 | 53.2 | 58.2 | † |
| 6 years | 177 | 51.9 | 1.03 | 40.4 | 41.3 | 42.4 | 45.0 | 49.6 | 55.6 | 60.9 | 66.7 | 73.9 |
| 7 years | 207 | 59.1 | 1.17 | 42.7 | 45.3 | 46.4 | 48.8 | 55.6 | 63.7 | 72.2 | 78.0 | 87.3 |
| 8 years | 203 | 70.3 | 2.23 | 48.0 | 51.0 | 52.3 | 55.1 | 64.4 | 83.4 | 93.5 | 96.1 | 105.7 |
| 9 years | 205 | 78.2 | 2.17 | 51.3 | 57.6 | 58.3 | 61.8 | 70.4 | 88.3 | 101.6 | 108.8 | 122.7 |
| 10 years | 183 | 90.7 | 1.64 | 60.2 | 64.1 | 66.4 | 74.0 | 86.1 | 99.8 | 115.2 | 121.3 | 135.2 |
| 11 years | 219 | 104.8 | 2.82 | 66.2 | 69.4 | 72.8 | 79.5 | 95.6 | 124.5 | 138.9 | 147.2 | 175.5 |
| 12 years | 166 | 115.2 | 2.77 | 67.4 | 76.6 | 83.7 | 95.0 | 113.3 | 132.9 | 144.9 | 159.0 | 166.8 |
| 13 years | 140 | 125.3 | 3.10 | 85.5 | 91.2 | 98.3 | 101.6 | 115.3 | 142.9 | 159.7 | 166.8 | 183.4 |
| 14 years | 168 | 135.8 | 2.50 | 94.0 | 98.8 | 105.2 | 112.7 | 130.1 | 148.0 | 162.1 | 168.5 | † |
| 15 years | 137 | 139.6 | 2.92 | 97.5 | 102.6 | 106.2 | 120.2 | 131.1 | 155.7 | 170.0 | 189.1 | 203.4 |
| 16 years | 156 | 137.6 | 2.44 | 100.4 | 106.8 | 110.3 | 113.2 | 129.4 | 153.2 | 171.7 | 187.0 | 202.8 |
| 17 years | 143 | 140.4 | 3.44 | 100.2 | 105.7 | 108.2 | 114.1 | 134.0 | 150.7 | 176.5 | 184.8 | 202.8 |
| 18 years | 137 | 144.2 | 3.68 | 102.8 | 111.6 | 114.3 | 117.9 | 129.1 | 153.1 | 177.2 | 189.1 | 231.6 |
| 19 years | 118 | 150.0 | 4.41 | 98.0 | 103.8 | 112.4 | 121.4 | 138.4 | 169.4 | 194.5 | 209.3 | 235.2 |

† Standard error not calculated by SUDAAN.

¹Refers to age at time of examination.

NOTE: Pregnant females were excluded.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 3. Weight in kilograms for females aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|------------------|------|------|------|------|-------|-------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Kilograms | | | | | | | | |
| 20 years and over | 5,844 | 75.4 | 0.35 | 50.2 | 53.6 | 56.6 | 61.1 | 71.3 | 85.5 | 95.4 | 102.2 | 113.8 |
| 20–29 years | 906 | 73.4 | 1.13 | 48.6 | 52.1 | 53.8 | 57.3 | 67.7 | 82.2 | 94.8 | 103.1 | 120.0 |
| 30–39 years | 982 | 76.7 | 0.94 | 50.9 | 53.9 | 57.4 | 62.2 | 72.5 | 88.1 | 97.6 | 102.2 | 115.2 |
| 40–49 years | 1,056 | 76.2 | 0.74 | 50.8 | 54.8 | 57.4 | 61.2 | 71.8 | 85.7 | 96.2 | 103.7 | 114.9 |
| 50–59 years | 873 | 77.1 | 0.83 | 51.1 | 55.9 | 58.4 | 62.8 | 73.2 | 87.9 | 96.8 | 104.4 | 115.8 |
| 60–69 years | 951 | 77.4 | 0.65 | 52.8 | 57.2 | 60.0 | 63.7 | 75.2 | 87.3 | 95.7 | 102.7 | 109.5 |
| 70–79 years | 679 | 74.8 | 0.69 | 49.9 | 53.5 | 57.0 | 62.1 | 72.3 | 84.9 | 91.5 | 99.1 | 109.2 |
| 80 years and over | 397 | 64.9 | 0.73 | 45.4 | 49.8 | 51.8 | 55.8 | 63.5 | 71.9 | 78.4 | 82.9 | 87.4 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,730 | 75.0 | 0.51 | 50.6 | 53.8 | 56.7 | 61.2 | 71.0 | 85.0 | 95.0 | 101.5 | 112.0 |
| 20–39 years | 792 | 74.7 | 1.16 | 50.1 | 53.4 | 55.8 | 59.9 | 69.9 | 84.6 | 96.3 | 102.2 | 116.8 |
| 40–59 years | 861 | 76.1 | 0.66 | 50.9 | 55.0 | 57.5 | 61.8 | 71.9 | 86.1 | 96.2 | 103.0 | 115.5 |
| 60 years and over | 1,077 | 73.9 | 0.44 | 50.4 | 53.5 | 57.1 | 61.3 | 71.4 | 84.1 | 91.7 | 98.5 | 106.8 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,128 | 85.2 | 0.78 | 53.9 | 58.7 | 61.9 | 68.5 | 80.5 | 97.7 | 107.7 | 115.7 | 130.5 |
| 20–39 years | 372 | 84.4 | 1.16 | 51.6 | 57.0 | 60.9 | 65.8 | 79.9 | 98.3 | 109.7 | 117.4 | 133.6 |
| 40–59 years | 383 | 88.3 | 1.22 | 56.9 | 60.7 | 65.4 | 71.0 | 83.2 | 100.5 | 110.4 | 116.7 | 131.7 |
| 60 years and over | 373 | 80.7 | 1.04 | 52.8 | 57.1 | 61.2 | 67.6 | 77.7 | 90.9 | 100.3 | 106.1 | 114.8 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,708 | 72.9 | 0.46 | 49.7 | 53.1 | 56.0 | 60.5 | 70.2 | 82.3 | 89.9 | 95.6 | 103.5 |
| 20–39 years | 619 | 72.3 | 0.60 | 48.8 | 52.1 | 54.1 | 58.8 | 68.7 | 83.3 | 91.1 | 96.5 | 105.1 |
| 40–59 years | 579 | 74.6 | 0.83 | 52.0 | 57.0 | 59.4 | 63.9 | 72.1 | 82.7 | 89.5 | 95.3 | 103.7 |
| 60 years and over | 510 | 70.7 | 0.47 | 48.0 | 51.8 | 55.6 | 60.5 | 69.4 | 79.1 | 85.5 | 90.2 | 96.9 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 1,032 | 73.2 | 0.40 | 50.3 | 53.6 | 56.5 | 61.0 | 70.8 | 83.0 | 90.0 | 94.3 | 104.0 |
| 20–39 years | 386 | 72.7 | 0.66 | 50.1 | 52.8 | 55.0 | 59.9 | 69.0 | 84.0 | 91.6 | 96.6 | 105.9 |
| 40–59 years | 347 | 75.2 | 0.97 | 53.3 | 57.7 | 60.5 | 64.8 | 73.4 | 83.0 | 89.4 | 93.4 | 102.5 |
| 60 years and over | 299 | 70.6 | 0.56 | 47.1 | 51.5 | 55.5 | 60.4 | 69.5 | 79.3 | 85.1 | 89.5 | 94.1 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

NOTE: Pregnant females were excluded.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 4. Weight in pounds for females aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|-------|----------------------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups ¹ | | | | Pounds | | | | | | | | |
| 20 years and over | 5,844 | 166.2 | 0.78 | 110.7 | 118.2 | 124.8 | 134.6 | 157.2 | 188.6 | 210.3 | 225.3 | 250.9 |
| 20–29 years | 906 | 161.9 | 2.49 | 107.2 | 114.8 | 118.5 | 126.3 | 149.4 | 181.2 | 208.9 | 227.3 | 264.5 |
| 30–39 years | 982 | 169.1 | 2.07 | 112.2 | 118.8 | 126.5 | 137.2 | 159.8 | 194.2 | 215.1 | 225.4 | 253.9 |
| 40–49 years | 1,056 | 168.0 | 1.64 | 111.9 | 120.8 | 126.5 | 134.9 | 158.4 | 189.0 | 212.0 | 228.7 | 253.2 |
| 50–59 years | 873 | 170.0 | 1.82 | 112.7 | 123.3 | 128.8 | 138.5 | 161.4 | 193.8 | 213.3 | 230.2 | 255.3 |
| 60–69 years | 951 | 170.5 | 1.44 | 116.5 | 126.1 | 132.2 | 140.4 | 165.7 | 192.5 | 211.0 | 226.3 | 241.4 |
| 70–79 years | 679 | 164.9 | 1.52 | 109.9 | 118.0 | 125.7 | 136.9 | 159.4 | 187.1 | 201.7 | 218.4 | 240.6 |
| 80 years and over | 397 | 143.1 | 1.60 | 100.2 | 109.8 | 114.1 | 123.1 | 140.0 | 158.5 | 172.9 | 182.7 | 192.6 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,730 | 165.4 | 1.13 | 111.6 | 118.6 | 125.0 | 134.9 | 156.6 | 187.4 | 209.3 | 223.7 | 246.8 |
| 20–39 years | 792 | 164.7 | 2.55 | 110.4 | 117.7 | 123.0 | 132.0 | 154.0 | 186.6 | 212.3 | 225.4 | 257.5 |
| 40–59 years | 861 | 167.7 | 1.45 | 112.3 | 121.3 | 126.7 | 136.2 | 158.5 | 189.7 | 212.2 | 227.0 | 254.6 |
| 60 years and over | 1,077 | 163.0 | 0.97 | 111.1 | 117.9 | 125.9 | 135.2 | 157.5 | 185.5 | 202.2 | 217.1 | 235.4 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,128 | 187.9 | 1.72 | 118.9 | 129.5 | 136.5 | 151.0 | 177.5 | 215.5 | 237.4 | 255.1 | 287.8 |
| 20–39 years | 372 | 186.2 | 2.57 | 113.8 | 125.6 | 134.4 | 145.1 | 176.2 | 216.6 | 241.8 | 258.9 | 294.5 |
| 40–59 years | 383 | 194.7 | 2.68 | 125.4 | 133.9 | 144.2 | 156.4 | 183.4 | 221.5 | 243.5 | 257.3 | 290.3 |
| 60 years and over | 373 | 177.8 | 2.30 | 116.4 | 125.9 | 135.0 | 149.1 | 171.4 | 200.3 | 221.0 | 233.9 | 253.0 |
| Hispanic ² | | | | | | | | | | | | |
| 20 years and over | 1,708 | 160.6 | 1.02 | 109.7 | 117.0 | 123.6 | 133.4 | 154.7 | 181.5 | 198.3 | 210.7 | 228.1 |
| 20–39 years | 619 | 159.4 | 1.31 | 107.6 | 114.8 | 119.2 | 129.6 | 151.4 | 183.6 | 200.8 | 212.8 | 231.6 |
| 40–59 years | 579 | 164.5 | 1.84 | 114.6 | 125.6 | 131.0 | 140.9 | 158.9 | 182.3 | 197.4 | 210.1 | 228.6 |
| 60 years and over | 510 | 155.8 | 1.05 | 105.8 | 114.2 | 122.5 | 133.5 | 153.0 | 174.3 | 188.4 | 198.8 | 213.6 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 1,032 | 161.5 | 0.89 | 110.9 | 118.1 | 124.6 | 134.5 | 156.0 | 182.9 | 198.5 | 208.0 | 229.3 |
| 20–39 years | 386 | 160.3 | 1.46 | 110.4 | 116.4 | 121.3 | 132.1 | 152.1 | 185.3 | 202.0 | 213.0 | 233.5 |
| 40–59 years | 347 | 165.8 | 2.13 | 117.5 | 127.1 | 133.4 | 142.8 | 161.8 | 182.9 | 197.0 | 206.0 | 226.0 |
| 60 years and over | 299 | 155.5 | 1.23 | 103.8 | 113.6 | 122.4 | 133.3 | 153.2 | 174.8 | 187.6 | 197.4 | 207.5 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

NOTE: Pregnant females were excluded.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 5. Weight in kilograms for males aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|------------------|------|------|------|------|-------|-------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Kilograms | | | | | | | | |
| 20 years and over | 5,651 | 88.7 | 0.45 | 61.5 | 66.5 | 69.7 | 75.0 | 86.1 | 98.9 | 107.2 | 114.4 | 124.1 |
| 20–29 years | 894 | 83.4 | 0.85 | 58.4 | 62.6 | 65.3 | 69.5 | 80.1 | 93.7 | 101.6 | 109.0 | 116.8 |
| 30–39 years | 948 | 90.5 | 0.75 | 63.3 | 67.8 | 70.8 | 75.4 | 86.7 | 101.1 | 110.1 | 117.8 | 128.0 |
| 40–49 years | 933 | 91.0 | 0.96 | 64.4 | 69.5 | 73.5 | 78.5 | 87.9 | 100.6 | 108.6 | 116.2 | 126.3 |
| 50–59 years | 934 | 91.3 | 1.10 | 63.8 | 69.0 | 72.9 | 78.2 | 88.6 | 102.9 | 109.8 | 117.6 | 126.6 |
| 60–69 years | 933 | 90.5 | 0.76 | 61.7 | 67.9 | 70.9 | 76.4 | 88.5 | 101.2 | 108.3 | 115.1 | 127.4 |
| 70–79 years | 649 | 86.5 | 0.88 | 62.6 | 66.8 | 70.4 | 75.1 | 84.7 | 95.1 | 102.9 | 109.4 | 117.9 |
| 80 years and over | 360 | 79.3 | 0.81 | 57.6 | 61.5 | 64.1 | 69.0 | 77.9 | 88.2 | 94.3 | 97.3 | 104.5 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,738 | 90.4 | 0.42 | 63.7 | 68.9 | 72.2 | 77.3 | 88.0 | 100.6 | 108.7 | 115.6 | 124.1 |
| 20–39 years | 796 | 88.3 | 0.77 | 61.5 | 65.9 | 69.4 | 73.8 | 85.3 | 98.5 | 107.9 | 113.5 | 122.7 |
| 40–59 years | 832 | 92.9 | 0.71 | 66.4 | 72.1 | 75.0 | 80.4 | 90.0 | 103.1 | 111.9 | 117.7 | 128.7 |
| 60 years and over | 1,110 | 89.0 | 0.55 | 63.5 | 69.0 | 72.2 | 76.6 | 87.0 | 98.5 | 105.6 | 112.6 | 121.0 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,094 | 90.4 | 0.74 | 60.9 | 65.1 | 67.9 | 74.0 | 86.8 | 101.8 | 111.4 | 120.1 | 132.5 |
| 20–39 years | 356 | 89.9 | 1.43 | 61.3 | 64.2 | 66.6 | 72.1 | 85.6 | 101.4 | 111.7 | 120.0 | 134.3 |
| 40–59 years | 372 | 92.1 | 1.26 | 60.5 | 66.2 | 71.2 | 76.9 | 89.1 | 103.3 | 113.3 | 120.8 | 132.4 |
| 60 years and over | 366 | 87.8 | 1.15 | 58.0 | 63.8 | 67.1 | 72.0 | 85.3 | 98.0 | 106.5 | 116.4 | 128.8 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,541 | 84.4 | 0.88 | 60.4 | 65.0 | 67.3 | 71.4 | 81.6 | 93.2 | 100.2 | 107.3 | 121.0 |
| 20–39 years | 573 | 84.0 | 1.21 | 58.6 | 63.7 | 66.3 | 70.3 | 79.9 | 92.8 | 100.4 | 109.4 | 123.2 |
| 40–59 years | 577 | 85.9 | 0.80 | 64.2 | 68.2 | 70.3 | 74.9 | 83.6 | 94.2 | 101.3 | 105.4 | 117.0 |
| 60 years and over | 391 | 82.0 | 1.13 | 58.6 | 63.0 | 66.5 | 70.2 | 80.4 | 90.9 | 96.6 | 101.5 | 109.4 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 991 | 84.1 | 1.04 | 60.4 | 65.0 | 67.3 | 71.3 | 81.4 | 92.8 | 99.2 | 106.9 | 121.4 |
| 20–39 years | 386 | 84.0 | 1.48 | 59.4 | 63.5 | 66.2 | 70.3 | 80.1 | 92.9 | 100.1 | 109.5 | 125.3 |
| 40–59 years | 371 | 85.0 | 0.90 | 64.0 | 68.0 | 70.1 | 73.9 | 82.9 | 93.7 | 99.7 | 104.0 | 115.8 |
| 60 years and over | 234 | 81.9 | 1.44 | 59.3 | 63.0 | 67.1 | 70.6 | 80.4 | 90.4 | 94.8 | 97.6 | 109.1 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 6. Weight in pounds for males aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|-------|----------------------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Pounds | | | | | | | | |
| 20 years and over | 5,651 | 195.5 | 0.99 | 135.5 | 146.6 | 153.7 | 165.2 | 189.8 | 218.0 | 236.4 | 252.2 | 273.6 |
| 20–29 years | 894 | 183.9 | 1.87 | 128.7 | 137.9 | 143.9 | 153.2 | 176.5 | 206.6 | 224.0 | 240.4 | 257.5 |
| 30–39 years | 948 | 199.5 | 1.66 | 139.6 | 149.4 | 156.0 | 166.2 | 191.1 | 222.9 | 242.7 | 259.7 | 282.2 |
| 40–49 years | 933 | 200.6 | 2.12 | 142.1 | 153.2 | 162.0 | 173.1 | 193.7 | 221.9 | 239.4 | 256.1 | 278.5 |
| 50–59 years | 934 | 201.3 | 2.43 | 140.6 | 152.2 | 160.8 | 172.3 | 195.4 | 226.9 | 242.1 | 259.3 | 279.0 |
| 60–69 years | 933 | 199.4 | 1.67 | 135.9 | 149.8 | 156.2 | 168.5 | 195.1 | 223.0 | 238.7 | 253.8 | 280.8 |
| 70–79 years | 649 | 190.6 | 1.95 | 138.1 | 147.2 | 155.1 | 165.5 | 186.8 | 209.8 | 227.0 | 241.1 | 259.9 |
| 80 years and over | 360 | 174.9 | 1.79 | 127.1 | 135.5 | 141.3 | 152.2 | 171.8 | 194.4 | 207.9 | 214.5 | 230.3 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,738 | 199.2 | 0.92 | 140.4 | 151.8 | 159.1 | 170.3 | 194.0 | 221.7 | 239.6 | 254.9 | 273.6 |
| 20–39 years | 796 | 194.7 | 1.71 | 135.7 | 145.3 | 153.0 | 162.8 | 188.1 | 217.2 | 238.0 | 250.3 | 270.6 |
| 40–59 years | 832 | 204.9 | 1.56 | 146.3 | 159.0 | 165.4 | 177.3 | 198.5 | 227.4 | 246.7 | 259.5 | 283.7 |
| 60 years and over | 1,110 | 196.3 | 1.21 | 140.1 | 152.0 | 159.1 | 168.8 | 191.8 | 217.1 | 232.7 | 248.1 | 266.7 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,094 | 199.4 | 1.63 | 134.3 | 143.5 | 149.7 | 163.1 | 191.3 | 224.5 | 245.7 | 264.7 | 292.0 |
| 20–39 years | 356 | 198.1 | 3.14 | 135.2 | 141.6 | 146.8 | 158.9 | 188.7 | 223.5 | 246.3 | 264.5 | 296.1 |
| 40–59 years | 372 | 203.1 | 2.77 | 133.4 | 146.0 | 156.9 | 169.5 | 196.4 | 227.7 | 249.8 | 266.3 | 291.9 |
| 60 years and over | 366 | 193.6 | 2.54 | 127.8 | 140.8 | 147.8 | 158.7 | 188.0 | 216.0 | 234.7 | 256.5 | 283.9 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,541 | 186.1 | 1.95 | 133.2 | 143.4 | 148.5 | 157.5 | 180.0 | 205.4 | 221.0 | 236.4 | 266.7 |
| 20–39 years | 573 | 185.1 | 2.66 | 129.2 | 140.4 | 146.1 | 154.9 | 176.1 | 204.6 | 221.4 | 241.2 | 271.7 |
| 40–59 years | 577 | 189.4 | 1.77 | 141.6 | 150.3 | 155.0 | 165.2 | 184.2 | 207.7 | 223.3 | 232.4 | 258.0 |
| 60 years and over | 391 | 180.8 | 2.50 | 129.1 | 138.8 | 146.5 | 154.7 | 177.1 | 200.5 | 212.9 | 223.7 | 241.2 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 991 | 185.4 | 2.30 | 133.2 | 143.3 | 148.4 | 157.1 | 179.6 | 204.6 | 218.8 | 235.6 | 267.6 |
| 20–39 years | 386 | 185.2 | 3.27 | 130.9 | 140.0 | 146.0 | 155.0 | 176.6 | 204.8 | 220.6 | 241.4 | 276.2 |
| 40–59 years | 371 | 187.4 | 1.98 | 141.1 | 150.0 | 154.6 | 163.0 | 182.8 | 206.6 | 219.8 | 229.3 | 255.3 |
| 60 years and over | 234 | 180.6 | 3.17 | 130.7 | 138.9 | 148.0 | 155.8 | 177.2 | 199.3 | 208.9 | 215.2 | 240.6 |

¹Persons of other races and ethnicities are included.

²Mexican-American persons are included in the Hispanic group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 7. Height in centimeters for children and adolescents aged 2–19 years and number of examined persons, mean, standard error of the mean, and selected percentiles, by sex and age: United States, 2007–2010

| Sex and age ¹ | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|--------------------------|----------------------------|-------|----------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| Male | | | | Centimeters | | | | | | | | |
| 2 years | 285 | 91.8 | 0.38 | 84.1 | 85.5 | 87.0 | 88.6 | 92.0 | 94.9 | 96.4 | 97.6 | 99.5 |
| 3 years | 202 | 98.9 | 0.36 | 91.1 | 93.5 | 94.6 | 95.9 | 98.8 | 101.5 | 103.9 | 104.8 | 105.8 |
| 4 years | 244 | 106.2 | 0.43 | 97.8 | 100.1 | 101.2 | 103.1 | 106.0 | 108.7 | 111.1 | 112.8 | 114.9 |
| 5 years | 205 | 113.7 | 0.55 | 104.2 | 106.7 | 107.2 | 109.4 | 113.1 | 116.9 | 119.5 | 121.7 | † |
| 6 years | 193 | 119.3 | 0.45 | 108.6 | 112.0 | 112.7 | 115.4 | 119.5 | 123.3 | 124.8 | 126.1 | 128.2 |
| 7 years | 215 | 125.4 | 0.43 | 117.1 | 118.2 | 118.7 | 120.3 | 124.8 | 128.9 | 131.9 | 133.7 | 136.5 |
| 8 years | 210 | 131.6 | 0.66 | 122.0 | 123.4 | 125.3 | 128.0 | 131.4 | 135.4 | 137.4 | 138.8 | † |
| 9 years | 190 | 137.9 | 0.88 | 123.4 | 127.6 | 130.2 | 132.3 | 136.7 | 143.2 | 145.3 | 146.5 | 151.2 |
| 10 years | 197 | 142.3 | 0.64 | 131.7 | 133.4 | 135.3 | 137.5 | 142.5 | 147.0 | 148.5 | 149.9 | 152.8 |
| 11 years | 211 | 149.9 | 0.62 | 138.8 | 140.3 | 142.1 | 145.0 | 149.3 | 154.1 | 157.1 | 160.2 | 163.1 |
| 12 years | 159 | 154.6 | 0.61 | 143.1 | 144.4 | 146.0 | 149.0 | 153.4 | 160.6 | 163.3 | 165.8 | 168.2 |
| 13 years | 146 | 163.7 | 0.68 | 147.7 | 151.4 | 155.2 | 157.3 | 164.5 | 168.9 | 172.1 | 174.9 | † |
| 14 years | 177 | 168.5 | 0.94 | 154.9 | 157.7 | 160.1 | 162.5 | 169.5 | 174.3 | 176.2 | 177.6 | † |
| 15 years | 160 | 173.8 | 0.88 | 160.3 | 164.0 | 166.9 | 170.0 | 173.7 | 178.2 | 181.5 | 183.4 | 187.8 |
| 16 years | 175 | 175.1 | 0.50 | 163.3 | 166.2 | 168.1 | 171.0 | 175.4 | 178.5 | 182.1 | 183.3 | 186.3 |
| 17 years | 188 | 175.9 | 0.69 | 162.6 | 165.4 | 167.5 | 172.1 | 176.1 | 180.3 | 183.2 | 185.4 | † |
| 18 years | 142 | 176.4 | 0.54 | 164.0 | 168.8 | 169.7 | 172.2 | 176.8 | 180.0 | 183.0 | 184.4 | 185.7 |
| 19 years | 179 | 177.8 | 0.81 | 164.7 | 168.5 | 170.1 | 173.4 | 178.2 | 181.9 | 184.9 | 187.3 | † |
| Female | | | | | | | | | | | | |
| 2 years | 257 | 90.4 | 0.41 | 84.7 | 85.5 | 86.1 | 87.4 | 90.0 | 92.7 | 95.2 | 96.1 | 97.6 |
| 3 years | 189 | 98.7 | 0.39 | 90.9 | 92.5 | 93.6 | 95.1 | 99.0 | 101.7 | 103.3 | 104.9 | 106.9 |
| 4 years | 200 | 105.0 | 0.46 | 98.0 | 99.6 | 100.7 | 102.0 | 104.7 | 107.5 | 110.0 | 111.6 | 112.6 |
| 5 years | 177 | 112.6 | 0.45 | 104.0 | 105.6 | 107.4 | 109.4 | 112.0 | 115.8 | 117.5 | 120.3 | 122.1 |
| 6 years | 177 | 119.2 | 0.52 | 111.0 | 112.8 | 113.5 | 115.0 | 118.8 | 123.1 | 124.9 | 126.5 | 128.9 |
| 7 years | 207 | 124.6 | 0.53 | 113.5 | 116.5 | 118.6 | 121.1 | 125.1 | 128.5 | 130.4 | 131.7 | 134.2 |
| 8 years | 203 | 131.3 | 0.84 | 121.2 | 122.5 | 124.9 | 126.5 | 130.7 | 135.1 | 137.4 | 139.7 | † |
| 9 years | 205 | 137.0 | 0.47 | 127.6 | 129.2 | 130.2 | 132.3 | 136.7 | 140.8 | 143.0 | 144.9 | 148.3 |
| 10 years | 183 | 144.5 | 0.52 | 133.9 | 134.6 | 136.8 | 138.7 | 144.5 | 149.8 | 151.8 | 153.3 | 155.4 |
| 11 years | 219 | 150.4 | 0.54 | 137.5 | 140.0 | 141.0 | 145.9 | 150.7 | 155.9 | 157.8 | 159.2 | 161.6 |
| 12 years | 166 | 156.1 | 0.64 | 142.9 | 145.0 | 149.4 | 151.3 | 156.7 | 161.7 | 163.1 | 164.6 | 166.3 |
| 13 years | 140 | 160.0 | 0.55 | 151.0 | 152.4 | 154.1 | 155.5 | 159.5 | 163.5 | 166.3 | 169.2 | 170.4 |
| 14 years | 168 | 161.6 | 0.76 | † | 152.8 | 153.7 | 156.4 | 161.9 | 166.5 | 168.6 | 169.9 | 174.7 |
| 15 years | 137 | 162.9 | 0.78 | 150.9 | 154.4 | 155.8 | 158.8 | 161.7 | 167.0 | 168.9 | 170.3 | 176.2 |
| 16 years | 156 | 162.2 | 0.64 | 151.9 | 154.1 | 155.7 | 157.3 | 161.4 | 166.8 | 169.5 | 170.5 | 171.6 |
| 17 years | 143 | 163.1 | 0.62 | 150.0 | 152.4 | 154.6 | 157.4 | 164.0 | 168.5 | 171.4 | 172.6 | 174.7 |
| 18 years | 137 | 163.1 | 0.59 | 153.8 | 154.8 | 157.1 | 159.2 | 163.0 | 167.1 | 169.6 | 171.2 | 173.0 |
| 19 years | 118 | 163.3 | 0.72 | 153.8 | 156.1 | 157.9 | 159.4 | 163.1 | 165.8 | 167.7 | 168.9 | 172.9 |

† Standard error not calculated by SUDAAN.

¹Refers to age at time of examination.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 8. Height in inches for children and adolescents aged 2–19 years and number of examined persons, mean, standard error of the mean, and selected percentiles, by sex and age: United States, 2007–2010

| Sex and age ¹ | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|--------------------------|----------------------------|------|----------------------------|---------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| Male | | | | Inches | | | | | | | | |
| 2 years | 285 | 36.2 | 0.15 | 33.1 | 33.7 | 34.2 | 34.9 | 36.2 | 37.4 | 37.9 | 38.4 | 39.2 |
| 3 years | 202 | 38.9 | 0.14 | 35.9 | 36.8 | 37.2 | 37.8 | 38.9 | 40.0 | 40.9 | 41.2 | 41.7 |
| 4 years | 244 | 41.8 | 0.17 | 38.5 | 39.4 | 39.8 | 40.6 | 41.7 | 42.8 | 43.8 | 44.4 | 45.2 |
| 5 years | 205 | 44.8 | 0.22 | 41.0 | 42.0 | 42.2 | 43.1 | 44.5 | 46.0 | 47.0 | 47.9 | † |
| 6 years | 193 | 47.0 | 0.18 | 42.7 | 44.1 | 44.4 | 45.4 | 47.0 | 48.5 | 49.1 | 49.7 | 50.5 |
| 7 years | 215 | 49.4 | 0.17 | 46.1 | 46.5 | 46.7 | 47.4 | 49.1 | 50.8 | 51.9 | 52.6 | 53.8 |
| 8 years | 210 | 51.8 | 0.26 | 48.0 | 48.6 | 49.3 | 50.4 | 51.7 | 53.3 | 54.1 | 54.6 | † |
| 9 years | 190 | 54.3 | 0.35 | 48.6 | 50.2 | 51.3 | 52.1 | 53.8 | 56.4 | 57.2 | 57.7 | 59.5 |
| 10 years | 197 | 56.0 | 0.25 | 51.8 | 52.5 | 53.3 | 54.1 | 56.1 | 57.9 | 58.5 | 59.0 | 60.2 |
| 11 years | 211 | 59.0 | 0.24 | 54.7 | 55.2 | 56.0 | 57.1 | 58.8 | 60.6 | 61.8 | 63.1 | 64.2 |
| 12 years | 159 | 60.9 | 0.24 | 56.3 | 56.9 | 57.5 | 58.6 | 60.4 | 63.2 | 64.3 | 65.3 | 66.2 |
| 13 years | 146 | 64.5 | 0.27 | 58.1 | 59.6 | 61.1 | 61.9 | 64.8 | 66.5 | 67.8 | 68.8 | † |
| 14 years | 177 | 66.3 | 0.37 | 61.0 | 62.1 | 63.0 | 64.0 | 66.7 | 68.6 | 69.4 | 69.9 | † |
| 15 years | 160 | 68.4 | 0.35 | 63.1 | 64.6 | 65.7 | 66.9 | 68.4 | 70.1 | 71.5 | 72.2 | 73.9 |
| 16 years | 175 | 68.9 | 0.20 | 64.3 | 65.4 | 66.2 | 67.3 | 69.1 | 70.3 | 71.7 | 72.2 | 73.4 |
| 17 years | 188 | 69.3 | 0.27 | 64.0 | 65.1 | 65.9 | 67.8 | 69.3 | 71.0 | 72.1 | 73.0 | † |
| 18 years | 142 | 69.4 | 0.21 | 64.6 | 66.5 | 66.8 | 67.8 | 69.6 | 70.9 | 72.0 | 72.6 | 73.1 |
| 19 years | 179 | 70.0 | 0.32 | 64.8 | 66.3 | 67.0 | 68.2 | 70.2 | 71.6 | 72.8 | 73.7 | † |
| Female | | | | | | | | | | | | |
| 2 years | 257 | 35.6 | 0.16 | 33.4 | 33.6 | 33.9 | 34.4 | 35.4 | 36.5 | 37.5 | 37.8 | 38.4 |
| 3 years | 189 | 38.9 | 0.15 | 35.8 | 36.4 | 36.9 | 37.4 | 39.0 | 40.0 | 40.7 | 41.3 | 42.1 |
| 4 years | 200 | 41.4 | 0.18 | 38.6 | 39.2 | 39.6 | 40.1 | 41.2 | 42.3 | 43.3 | 43.9 | 44.3 |
| 5 years | 177 | 44.3 | 0.18 | 41.0 | 41.6 | 42.3 | 43.1 | 44.1 | 45.6 | 46.3 | 47.4 | 48.1 |
| 6 years | 177 | 46.9 | 0.20 | 43.7 | 44.4 | 44.7 | 45.3 | 46.8 | 48.5 | 49.2 | 49.8 | 50.7 |
| 7 years | 207 | 49.1 | 0.21 | 44.7 | 45.9 | 46.7 | 47.7 | 49.3 | 50.6 | 51.3 | 51.9 | 52.8 |
| 8 years | 203 | 51.7 | 0.33 | 47.7 | 48.2 | 49.2 | 49.8 | 51.5 | 53.2 | 54.1 | 55.0 | † |
| 9 years | 205 | 54.0 | 0.18 | 50.2 | 50.9 | 51.3 | 52.1 | 53.8 | 55.4 | 56.3 | 57.1 | 58.4 |
| 10 years | 183 | 56.9 | 0.21 | 52.7 | 53.0 | 53.8 | 54.6 | 56.9 | 59.0 | 59.8 | 60.4 | 61.2 |
| 11 years | 219 | 59.2 | 0.21 | 54.1 | 55.1 | 55.5 | 57.4 | 59.3 | 61.4 | 62.1 | 62.7 | 63.6 |
| 12 years | 166 | 61.5 | 0.25 | 56.3 | 57.1 | 58.8 | 59.6 | 61.7 | 63.6 | 64.2 | 64.8 | 65.5 |
| 13 years | 140 | 63.0 | 0.22 | 59.5 | 60.0 | 60.7 | 61.2 | 62.8 | 64.4 | 65.5 | 66.6 | 67.1 |
| 14 years | 168 | 63.6 | 0.30 | 59.0 | 60.1 | 60.5 | 61.6 | 63.7 | 65.5 | 66.4 | 66.9 | 68.8 |
| 15 years | 137 | 64.1 | 0.31 | 59.4 | 60.8 | 61.3 | 62.5 | 63.6 | 65.8 | 66.5 | 67.1 | 69.4 |
| 16 years | 156 | 63.8 | 0.25 | 59.8 | 60.7 | 61.3 | 61.9 | 63.5 | 65.7 | 66.7 | 67.1 | 67.5 |
| 17 years | 143 | 64.2 | 0.25 | † | 60.0 | 60.9 | 62.0 | 64.6 | 66.4 | 67.5 | 67.9 | 68.8 |
| 18 years | 137 | 64.2 | 0.23 | 60.6 | 60.9 | 61.9 | 62.7 | 64.2 | 65.8 | 66.8 | 67.4 | 68.1 |
| 19 years | 118 | 64.3 | 0.28 | 60.6 | 61.5 | 62.2 | 62.7 | 64.2 | 65.3 | 66.0 | 66.5 | 68.1 |

† Standard error not calculated by SUDAAN.

¹Refers to age at time of examination.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 9. Height in centimeters for females aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|-------|----------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups ¹ | | | | Centimeters | | | | | | | | |
| 20 years and over | 5,971 | 162.1 | 0.14 | 150.7 | 153.1 | 154.7 | 157.3 | 162.1 | 166.8 | 169.2 | 170.9 | 173.7 |
| 20–29 years | 980 | 163.1 | 0.24 | 152.0 | 153.9 | 155.7 | 158.1 | 162.9 | 167.6 | 170.2 | 171.8 | 175.1 |
| 30–39 years | 1,029 | 163.4 | 0.29 | 151.4 | 154.6 | 156.1 | 158.6 | 163.4 | 167.9 | 170.4 | 172.4 | 174.9 |
| 40–49 years | 1,060 | 163.1 | 0.22 | 152.0 | 154.4 | 156.1 | 158.6 | 162.7 | 167.5 | 170.0 | 171.7 | 174.5 |
| 50–59 years | 873 | 162.2 | 0.30 | 151.3 | 153.5 | 154.9 | 157.4 | 162.6 | 166.7 | 169.1 | 170.2 | 172.6 |
| 60–69 years | 952 | 161.6 | 0.26 | 150.5 | 152.9 | 154.8 | 157.5 | 162.0 | 165.8 | 168.2 | 169.6 | 171.7 |
| 70–79 years | 679 | 159.1 | 0.32 | 148.2 | 150.6 | 151.9 | 154.2 | 159.4 | 163.3 | 166.1 | 167.9 | 169.8 |
| 80 years and over | 398 | 155.9 | 0.36 | 144.6 | 147.0 | 149.3 | 151.9 | 156.1 | 159.8 | 162.1 | 163.3 | 166.3 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,764 | 163.1 | 0.15 | 152.1 | 154.4 | 156.3 | 158.7 | 163.0 | 167.5 | 169.7 | 171.6 | 174.5 |
| 20–39 years | 824 | 164.9 | 0.25 | 153.9 | 156.6 | 158.1 | 160.6 | 164.8 | 168.9 | 171.7 | 173.7 | 176.5 |
| 40–59 years | 861 | 163.8 | 0.27 | 153.6 | 155.6 | 157.2 | 159.6 | 163.7 | 168.0 | 170.0 | 171.7 | 174.5 |
| 60 years and over | 1,079 | 160.3 | 0.22 | 149.2 | 151.8 | 153.4 | 156.1 | 160.3 | 164.5 | 167.1 | 168.6 | 170.7 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,154 | 163.0 | 0.25 | 152.2 | 154.6 | 156.0 | 158.3 | 162.8 | 167.7 | 169.8 | 171.4 | 173.6 |
| 20–39 years | 397 | 163.7 | 0.32 | 153.1 | 155.4 | 156.9 | 159.0 | 163.5 | 168.1 | 170.5 | 171.8 | 173.8 |
| 40–59 years | 384 | 163.5 | 0.38 | 152.8 | 155.1 | 156.5 | 158.7 | 163.0 | 168.2 | 170.1 | 171.8 | 173.1 |
| 60 years and over | 373 | 160.6 | 0.28 | 149.7 | 152.1 | 153.5 | 156.1 | 160.6 | 164.9 | 167.0 | 168.5 | 171.2 |
| Hispanic ² | | | | | | | | | | | | |
| 20 years and over | 1,763 | 157.1 | 0.19 | 146.3 | 148.8 | 150.1 | 152.6 | 156.9 | 161.5 | 163.9 | 165.6 | 168.3 |
| 20–39 years | 673 | 158.2 | 0.23 | 147.7 | 149.7 | 151.5 | 153.8 | 157.9 | 162.2 | 165.0 | 166.6 | 169.5 |
| 40–59 years | 580 | 157.1 | 0.33 | 146.8 | 148.8 | 150.7 | 152.8 | 156.7 | 161.6 | 163.6 | 164.8 | 167.2 |
| 60 years and over | 510 | 153.7 | 0.31 | 143.9 | 146.0 | 147.5 | 149.4 | 153.3 | 157.7 | 159.8 | 161.6 | 164.5 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 1,074 | 156.6 | 0.17 | 145.3 | 148.4 | 149.8 | 152.2 | 156.4 | 160.9 | 163.1 | 164.8 | 167.7 |
| 20–39 years | 427 | 157.5 | 0.27 | 145.9 | 149.5 | 151.2 | 153.3 | 157.5 | 161.4 | 163.9 | 165.4 | 168.4 |
| 40–59 years | 348 | 156.6 | 0.41 | 145.9 | 148.6 | 149.9 | 152.1 | 156.0 | 161.0 | 163.1 | 164.6 | 166.9 |
| 60 years and over | 299 | 153.3 | 0.40 | 143.8 | 145.8 | 147.0 | 149.3 | 153.2 | 157.0 | 159.8 | 161.4 | 163.6 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 10. Height in inches for females aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Inches | | | | | | | | |
| 20 years and over | 5,971 | 63.8 | 0.05 | 59.3 | 60.3 | 60.9 | 61.9 | 63.8 | 65.7 | 66.6 | 67.3 | 68.4 |
| 20–29 years | 980 | 64.2 | 0.09 | 59.9 | 60.6 | 61.3 | 62.2 | 64.1 | 66.0 | 67.0 | 67.6 | 68.9 |
| 30–39 years | 1,029 | 64.3 | 0.11 | 59.6 | 60.9 | 61.5 | 62.5 | 64.3 | 66.1 | 67.1 | 67.9 | 68.9 |
| 40–49 years | 1,060 | 64.2 | 0.09 | 59.8 | 60.8 | 61.4 | 62.4 | 64.0 | 66.0 | 66.9 | 67.6 | 68.7 |
| 50–59 years | 873 | 63.9 | 0.12 | 59.6 | 60.4 | 61.0 | 62.0 | 64.0 | 65.6 | 66.6 | 67.0 | 67.9 |
| 60–69 years | 952 | 63.6 | 0.10 | 59.3 | 60.2 | 61.0 | 62.0 | 63.8 | 65.3 | 66.2 | 66.8 | 67.6 |
| 70–79 years | 679 | 62.6 | 0.13 | 58.4 | 59.3 | 59.8 | 60.7 | 62.8 | 64.3 | 65.4 | 66.1 | 66.9 |
| 80 years and over | 398 | 61.4 | 0.14 | 56.9 | 57.9 | 58.8 | 59.8 | 61.5 | 62.9 | 63.8 | 64.3 | 65.5 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,764 | 64.2 | 0.06 | 59.9 | 60.8 | 61.5 | 62.5 | 64.2 | 66.0 | 66.8 | 67.5 | 68.7 |
| 20–39 years | 824 | 64.9 | 0.10 | 60.6 | 61.7 | 62.2 | 63.2 | 64.9 | 66.5 | 67.6 | 68.4 | 69.5 |
| 40–59 years | 861 | 64.5 | 0.11 | 60.5 | 61.2 | 61.9 | 62.8 | 64.4 | 66.1 | 66.9 | 67.6 | 68.7 |
| 60 years and over | 1,079 | 63.1 | 0.09 | 58.7 | 59.8 | 60.4 | 61.5 | 63.1 | 64.8 | 65.8 | 66.4 | 67.2 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,154 | 64.2 | 0.10 | 59.9 | 60.9 | 61.4 | 62.3 | 64.1 | 66.0 | 66.8 | 67.5 | 68.3 |
| 20–39 years | 397 | 64.4 | 0.13 | 60.3 | 61.2 | 61.8 | 62.6 | 64.4 | 66.2 | 67.1 | 67.6 | 68.4 |
| 40–59 years | 384 | 64.4 | 0.15 | 60.2 | 61.1 | 61.6 | 62.5 | 64.2 | 66.2 | 67.0 | 67.6 | 68.1 |
| 60 years and over | 373 | 63.2 | 0.11 | 58.9 | 59.9 | 60.4 | 61.4 | 63.2 | 64.9 | 65.8 | 66.3 | 67.4 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,763 | 61.9 | 0.07 | 57.6 | 58.6 | 59.1 | 60.1 | 61.8 | 63.6 | 64.5 | 65.2 | 66.3 |
| 20–39 years | 673 | 62.3 | 0.09 | 58.1 | 58.9 | 59.6 | 60.5 | 62.2 | 63.9 | 64.9 | 65.6 | 66.7 |
| 40–59 years | 580 | 61.9 | 0.13 | 57.8 | 58.6 | 59.3 | 60.1 | 61.7 | 63.6 | 64.4 | 64.9 | 65.8 |
| 60 years and over | 510 | 60.5 | 0.12 | 56.6 | 57.5 | 58.1 | 58.8 | 60.4 | 62.1 | 62.9 | 63.6 | 64.8 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 1,074 | 61.7 | 0.07 | 57.2 | 58.4 | 59.0 | 59.9 | 61.6 | 63.4 | 64.2 | 64.9 | 66.0 |
| 20–39 years | 427 | 62.0 | 0.10 | 57.4 | 58.9 | 59.5 | 60.3 | 62.0 | 63.6 | 64.5 | 65.1 | 66.3 |
| 40–59 years | 348 | 61.7 | 0.16 | 57.5 | 58.5 | 59.0 | 59.9 | 61.4 | 63.4 | 64.2 | 64.8 | 65.7 |
| 60 years and over | 299 | 60.4 | 0.16 | 56.6 | 57.4 | 57.9 | 58.8 | 60.3 | 61.8 | 62.9 | 63.5 | 64.4 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 11. Height in centimeters for males aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|-------|----------------------------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Centimeters | | | | | | | | |
| 20 years and over | 5,647 | 175.9 | 0.20 | 163.2 | 166.0 | 168.0 | 170.9 | 176.1 | 180.9 | 183.6 | 185.4 | 188.2 |
| 20–29 years | 895 | 176.3 | 0.33 | 163.6 | 166.4 | 168.8 | 171.2 | 176.3 | 181.7 | 184.3 | 185.8 | 188.3 |
| 30–39 years | 948 | 176.4 | 0.36 | 163.6 | 166.1 | 168.3 | 171.5 | 176.5 | 181.8 | 184.4 | 186.3 | 188.5 |
| 40–49 years | 934 | 176.8 | 0.42 | 164.9 | 167.7 | 169.1 | 171.8 | 176.8 | 181.6 | 184.4 | 186.7 | 188.9 |
| 50–59 years | 938 | 176.6 | 0.32 | 163.9 | 167.1 | 168.5 | 172.0 | 176.9 | 181.1 | 183.6 | 185.0 | 189.0 |
| 60–69 years | 932 | 174.9 | 0.25 | 162.2 | 164.6 | 166.9 | 169.9 | 175.3 | 179.7 | 182.6 | 184.5 | 187.0 |
| 70–79 years | 646 | 173.2 | 0.34 | 161.7 | 164.0 | 165.7 | 168.5 | 173.1 | 177.7 | 180.2 | 182.6 | 184.7 |
| 80 years and over | 354 | 170.7 | 0.39 | 158.7 | 161.9 | 163.5 | 166.0 | 170.9 | 175.7 | 177.6 | 178.9 | 181.6 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,738 | 177.4 | 0.19 | 165.9 | 168.6 | 170.3 | 172.7 | 177.3 | 182.0 | 184.5 | 186.3 | 188.8 |
| 20–39 years | 797 | 178.4 | 0.35 | 168.0 | 170.0 | 171.5 | 173.3 | 178.2 | 183.0 | 185.3 | 187.0 | 189.0 |
| 40–59 years | 836 | 178.3 | 0.28 | 167.7 | 170.2 | 171.7 | 173.9 | 178.3 | 182.2 | 184.8 | 186.8 | 189.5 |
| 60 years and over | 1,105 | 174.6 | 0.22 | 163.1 | 165.0 | 166.8 | 169.8 | 175.0 | 179.2 | 182.0 | 183.9 | 186.4 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,091 | 176.4 | 0.25 | 165.4 | 167.5 | 169.0 | 171.8 | 176.3 | 180.8 | 183.4 | 185.5 | 188.0 |
| 20–39 years | 356 | 176.9 | 0.39 | 166.4 | 168.2 | 170.1 | 172.4 | 176.4 | 181.4 | 183.8 | 186.1 | 187.9 |
| 40–59 years | 373 | 176.7 | 0.53 | 165.0 | 168.0 | 169.1 | 171.9 | 176.8 | 181.3 | 183.7 | 185.8 | 188.7 |
| 60 years and over | 362 | 174.4 | 0.42 | 163.1 | 164.9 | 166.8 | 169.5 | 175.1 | 178.5 | 181.6 | 183.2 | 185.8 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,541 | 170.4 | 0.34 | 159.0 | 161.4 | 162.8 | 165.3 | 170.1 | 175.1 | 178.1 | 180.0 | 183.9 |
| 20–39 years | 573 | 171.1 | 0.48 | 159.0 | 161.7 | 163.5 | 165.6 | 170.9 | 176.3 | 179.2 | 181.9 | 185.0 |
| 40–59 years | 577 | 170.3 | 0.36 | 160.0 | 161.7 | 162.8 | 165.5 | 170.3 | 174.7 | 177.2 | 179.0 | 181.5 |
| 60 years and over | 391 | 167.3 | 0.45 | 156.8 | 159.5 | 160.6 | 163.0 | 167.6 | 171.2 | 173.5 | 174.7 | 177.8 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 990 | 169.8 | 0.39 | 158.8 | 160.8 | 162.4 | 165.0 | 169.3 | 174.0 | 177.4 | 179.8 | 183.3 |
| 20–39 years | 386 | 170.5 | 0.61 | 158.7 | 160.8 | 162.5 | 165.2 | 170.0 | 175.4 | 178.6 | 181.7 | 184.9 |
| 40–59 years | 371 | 169.5 | 0.35 | 159.7 | 161.2 | 162.8 | 165.3 | 168.9 | 173.3 | 176.2 | 177.8 | 180.8 |
| 60 years and over | 233 | 167.2 | 0.54 | 157.2 | 158.9 | 160.5 | 163.0 | 167.4 | 170.6 | 173.1 | 174.0 | 177.3 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 12. Height in inches for males aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups ¹ | | | | Inches | | | | | | | | |
| 20 years and over | 5,647 | 69.3 | 0.08 | 64.3 | 65.4 | 66.2 | 67.3 | 69.3 | 71.2 | 72.3 | 73.0 | 74.1 |
| 20–29 years | 895 | 69.4 | 0.13 | 64.4 | 65.5 | 66.5 | 67.4 | 69.4 | 71.5 | 72.6 | 73.1 | 74.1 |
| 30–39 years | 948 | 69.5 | 0.14 | 64.4 | 65.4 | 66.3 | 67.5 | 69.5 | 71.6 | 72.6 | 73.3 | 74.2 |
| 40–49 years | 934 | 69.6 | 0.17 | 64.9 | 66.0 | 66.6 | 67.6 | 69.6 | 71.5 | 72.6 | 73.5 | 74.4 |
| 50–59 years | 938 | 69.5 | 0.13 | 64.5 | 65.8 | 66.3 | 67.7 | 69.7 | 71.3 | 72.3 | 72.8 | 74.4 |
| 60–69 years | 932 | 68.8 | 0.10 | 63.9 | 64.8 | 65.7 | 66.9 | 69.0 | 70.7 | 71.9 | 72.6 | 73.6 |
| 70–79 years | 646 | 68.2 | 0.13 | 63.6 | 64.6 | 65.2 | 66.3 | 68.2 | 70.0 | 70.9 | 71.9 | 72.7 |
| 80 years and over | 354 | 67.2 | 0.15 | 62.5 | 63.7 | 64.4 | 65.3 | 67.3 | 69.2 | 69.9 | 70.4 | 71.5 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,738 | 69.8 | 0.07 | 65.3 | 66.4 | 67.1 | 68.0 | 69.8 | 71.6 | 72.6 | 73.3 | 74.3 |
| 20–39 years | 797 | 70.2 | 0.14 | 66.2 | 66.9 | 67.5 | 68.2 | 70.2 | 72.1 | 73.0 | 73.6 | 74.4 |
| 40–59 years | 836 | 70.2 | 0.11 | 66.0 | 67.0 | 67.6 | 68.5 | 70.2 | 71.8 | 72.7 | 73.6 | 74.6 |
| 60 years and over | 1,105 | 68.7 | 0.09 | 64.2 | 64.9 | 65.7 | 66.9 | 68.9 | 70.6 | 71.6 | 72.4 | 73.4 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,091 | 69.5 | 0.10 | 65.1 | 65.9 | 66.5 | 67.6 | 69.4 | 71.2 | 72.2 | 73.0 | 74.0 |
| 20–39 years | 356 | 69.7 | 0.15 | 65.5 | 66.2 | 66.9 | 67.9 | 69.4 | 71.4 | 72.3 | 73.3 | 74.0 |
| 40–59 years | 373 | 69.6 | 0.21 | 65.0 | 66.1 | 66.6 | 67.7 | 69.6 | 71.4 | 72.3 | 73.2 | 74.3 |
| 60 years and over | 362 | 68.6 | 0.17 | 64.2 | 64.9 | 65.7 | 66.7 | 68.9 | 70.3 | 71.5 | 72.1 | 73.1 |
| Hispanic ² | | | | | | | | | | | | |
| 20 years and over | 1,541 | 67.1 | 0.13 | 62.6 | 63.5 | 64.1 | 65.1 | 67.0 | 68.9 | 70.1 | 70.9 | 72.4 |
| 20–39 years | 573 | 67.4 | 0.19 | 62.6 | 63.6 | 64.4 | 65.2 | 67.3 | 69.4 | 70.6 | 71.6 | 72.8 |
| 40–59 years | 577 | 67.1 | 0.14 | 63.0 | 63.7 | 64.1 | 65.1 | 67.0 | 68.8 | 69.8 | 70.5 | 71.5 |
| 60 years and over | 391 | 65.9 | 0.18 | 61.7 | 62.8 | 63.2 | 64.2 | 66.0 | 67.4 | 68.3 | 68.8 | 70.0 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 990 | 66.9 | 0.15 | 62.5 | 63.3 | 63.9 | 65.0 | 66.7 | 68.5 | 69.8 | 70.8 | 72.2 |
| 20–39 years | 386 | 67.1 | 0.24 | 62.5 | 63.3 | 64.0 | 65.0 | 66.9 | 69.1 | 70.3 | 71.5 | 72.8 |
| 40–59 years | 371 | 66.7 | 0.14 | 62.9 | 63.5 | 64.1 | 65.1 | 66.5 | 68.2 | 69.4 | 70.0 | 71.2 |
| 60 years and over | 233 | 65.8 | 0.21 | 61.9 | 62.6 | 63.2 | 64.2 | 65.9 | 67.2 | 68.2 | 68.5 | 69.8 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 13. Body mass index values for children and adolescents aged 2–19 years and number of examined persons, mean, standard error of the mean, and selected percentiles, by sex and age: United States, 2007–2010

| Sex and age ¹ | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|--------------------------|----------------------------|------|----------------------------|--------------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| Male | | | | Body mass indices | | | | | | | | |
| 2 years | 285 | 16.7 | 0.13 | 14.7 | 15.1 | 15.4 | 15.8 | 16.6 | 17.3 | 18.1 | 18.3 | 18.9 |
| 3 years | 202 | 16.5 | 0.16 | 14.4 | 14.7 | 15.1 | 15.4 | 16.2 | 17.4 | 17.8 | 18.3 | 19.1 |
| 4 years | 244 | 16.3 | 0.10 | 14.0 | 14.3 | 14.7 | 15.1 | 16.0 | 17.0 | 17.8 | 18.3 | 19.9 |
| 5 years | 205 | 16.3 | 0.15 | 13.9 | 14.1 | 14.4 | 15.0 | 15.7 | 16.8 | 18.0 | 18.5 | 21.0 |
| 6 years | 193 | 16.9 | 0.26 | 13.8 | 14.1 | 14.5 | 14.8 | 16.1 | 17.1 | 19.8 | 21.8 | 23.7 |
| 7 years | 215 | 16.9 | 0.21 | 13.6 | 14.1 | 14.4 | 14.9 | 15.8 | 18.1 | 20.1 | 21.0 | 22.8 |
| 8 years | 210 | 17.9 | 0.27 | 14.1 | 14.5 | 14.9 | 15.6 | 16.7 | 19.4 | 21.8 | 22.9 | 24.4 |
| 9 years | 190 | 18.9 | 0.38 | 14.1 | 14.8 | 15.1 | 16.0 | 17.3 | 21.3 | 23.6 | 25.1 | 27.5 |
| 10 years | 197 | 19.6 | 0.35 | 14.5 | 15.0 | 15.5 | 16.4 | 18.4 | 22.2 | 24.3 | 25.1 | 27.1 |
| 11 years | 211 | 20.5 | 0.36 | 15.4 | 16.0 | 16.4 | 17.0 | 19.1 | 23.1 | 25.4 | 26.4 | 28.7 |
| 12 years | 159 | 21.3 | 0.44 | 14.6 | 15.6 | 16.2 | 17.5 | 19.9 | 24.2 | 27.0 | 28.4 | 30.1 |
| 13 years | 146 | 21.9 | 0.47 | 16.3 | 17.1 | 17.6 | 18.4 | 20.4 | 24.8 | 26.5 | 29.5 | 33.7 |
| 14 years | 177 | 22.4 | 0.59 | 16.4 | 16.8 | 17.5 | 18.3 | 21.0 | 24.3 | 27.6 | 30.0 | 34.1 |
| 15 years | 160 | 23.1 | 0.55 | 16.8 | 18.2 | 18.6 | 19.3 | 21.5 | 25.7 | 27.6 | 30.4 | 33.8 |
| 16 years | 175 | 24.4 | 0.46 | 18.0 | 18.6 | 19.5 | 20.7 | 22.7 | 26.9 | 30.4 | 31.5 | 34.4 |
| 17 years | 188 | 24.9 | 0.70 | 17.8 | 19.0 | 19.4 | 20.6 | 23.3 | 27.5 | 30.3 | 33.2 | 38.6 |
| 18 years | 142 | 26.1 | 0.58 | 18.8 | 19.4 | 20.9 | 22.1 | 25.1 | 29.0 | 30.7 | 32.6 | 36.0 |
| 19 years | 179 | 25.2 | 0.46 | 19.0 | 20.3 | 20.6 | 21.3 | 24.0 | 26.7 | 28.8 | 31.2 | 38.8 |
| Female | | | | | | | | | | | | |
| 2 years | 254 | 16.5 | 0.13 | 14.7 | 15.1 | 15.2 | 15.5 | 16.4 | 17.4 | 18.0 | 18.4 | 18.8 |
| 3 years | 189 | 16.0 | 0.15 | 13.9 | 14.3 | 14.5 | 15.0 | 15.8 | 16.8 | 17.7 | 18.0 | 19.0 |
| 4 years | 200 | 16.0 | 0.11 | 13.6 | 14.3 | 14.5 | 14.8 | 15.7 | 16.6 | 17.8 | 18.2 | 19.1 |
| 5 years | 177 | 16.5 | 0.29 | 13.2 | 14.2 | 14.5 | 15.1 | 15.8 | 17.0 | 18.0 | 19.8 | † |
| 6 years | 177 | 16.5 | 0.25 | 13.8 | 14.1 | 14.3 | 15.0 | 15.8 | 17.3 | 18.5 | 19.5 | † |
| 7 years | 207 | 17.1 | 0.25 | 13.7 | 14.3 | 14.5 | 14.8 | 15.9 | 18.3 | 20.3 | 21.6 | 23.8 |
| 8 years | 203 | 18.3 | 0.38 | 13.8 | 14.3 | 14.7 | 15.1 | 17.1 | 20.5 | 22.7 | 23.6 | 25.4 |
| 9 years | 205 | 18.7 | 0.43 | 14.0 | 14.7 | 14.8 | 15.4 | 17.3 | 20.5 | 23.1 | 25.3 | 26.3 |
| 10 years | 183 | 19.5 | 0.28 | 14.1 | 15.3 | 15.7 | 16.3 | 18.9 | 21.4 | 23.3 | 24.5 | 27.4 |
| 11 years | 219 | 20.7 | 0.48 | 14.6 | 15.5 | 15.9 | 16.8 | 19.0 | 23.6 | 26.5 | 29.4 | 31.3 |
| 12 years | 166 | 21.3 | 0.49 | † | 16.2 | 16.5 | 17.9 | 20.6 | 23.6 | 26.6 | 28.1 | 30.3 |
| 13 years | 140 | 22.1 | 0.51 | 15.8 | 16.3 | 17.1 | 18.4 | 20.9 | 25.1 | 27.8 | 29.5 | 32.4 |
| 14 years | 168 | 23.5 | 0.39 | 17.3 | 17.8 | 18.8 | 20.0 | 22.4 | 25.4 | 27.6 | 28.5 | 36.1 |
| 15 years | 137 | 23.9 | 0.45 | 17.9 | 18.5 | 19.3 | 19.9 | 22.1 | 26.4 | 30.6 | 31.4 | 34.7 |
| 16 years | 156 | 23.7 | 0.39 | † | 18.6 | 18.9 | 20.2 | 22.1 | 25.8 | 30.0 | 32.0 | 34.9 |
| 17 years | 143 | 23.9 | 0.56 | 17.7 | 18.6 | 19.4 | 20.2 | 22.5 | 26.1 | 27.4 | 31.7 | 36.9 |
| 18 years | 137 | 24.6 | 0.61 | 18.4 | 19.2 | 19.4 | 19.9 | 21.8 | 26.9 | 31.8 | 33.3 | 37.7 |
| 19 years | 118 | 25.5 | 0.71 | 16.5 | 17.9 | 19.4 | 21.1 | 24.0 | 29.8 | 32.1 | 34.0 | 37.9 |

† Standard error not calculated by SUDAAN.

¹Refers to age at time of examination.NOTES: Pregnant females were excluded. Body mass index (BMI) is calculated as follows: BMI = weight(kilograms) / height(meters²).

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 14. Body mass index values for females aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|--------------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Body mass indices | | | | | | | | |
| 20 years and over | 5,841 | 28.7 | 0.12 | 19.5 | 20.7 | 21.7 | 23.3 | 27.3 | 32.5 | 36.1 | 38.2 | 42.0 |
| 20–29 years | 906 | 27.5 | 0.42 | 18.8 | 19.9 | 20.6 | 21.7 | 25.3 | 31.5 | 36.0 | 38.0 | 43.9 |
| 30–39 years | 982 | 28.7 | 0.33 | 19.4 | 20.6 | 21.6 | 23.4 | 27.2 | 32.8 | 36.0 | 38.1 | 41.6 |
| 40–49 years | 1,056 | 28.6 | 0.28 | 19.3 | 20.6 | 21.7 | 23.3 | 27.3 | 32.4 | 36.2 | 38.1 | 43.0 |
| 50–59 years | 873 | 29.3 | 0.27 | 19.7 | 21.3 | 22.1 | 24.0 | 28.3 | 33.5 | 36.4 | 39.3 | 41.8 |
| 60–69 years | 950 | 29.6 | 0.25 | 20.7 | 21.6 | 23.0 | 24.8 | 28.8 | 33.5 | 36.6 | 38.5 | 41.1 |
| 70–79 years | 677 | 29.5 | 0.26 | 20.1 | 21.6 | 22.7 | 24.7 | 28.6 | 33.4 | 36.3 | 38.7 | 42.1 |
| 80 years and over | 397 | 26.7 | 0.26 | 19.3 | 20.7 | 22.0 | 23.1 | 26.3 | 29.7 | 31.6 | 32.5 | 35.2 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,730 | 28.2 | 0.20 | 19.4 | 20.5 | 21.4 | 23.0 | 26.9 | 32.0 | 35.7 | 37.7 | 41.5 |
| 20–39 years | 792 | 27.5 | 0.41 | 19.0 | 19.9 | 20.7 | 22.1 | 25.6 | 31.3 | 35.4 | 37.5 | 42.8 |
| 40–59 years | 861 | 28.3 | 0.24 | 19.4 | 20.5 | 21.6 | 23.2 | 26.9 | 32.4 | 35.8 | 38.0 | 41.5 |
| 60 years and over | 1,077 | 28.7 | 0.20 | 20.1 | 21.4 | 22.5 | 24.0 | 27.8 | 32.2 | 35.5 | 37.6 | 40.7 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,126 | 32.0 | 0.31 | 20.5 | 22.1 | 24.0 | 25.9 | 30.8 | 36.5 | 40.2 | 42.8 | 47.2 |
| 20–39 years | 372 | 31.4 | 0.46 | 19.8 | 21.6 | 22.8 | 25.0 | 30.3 | 35.9 | 40.0 | 42.1 | 47.5 |
| 40–59 years | 383 | 33.1 | 0.49 | 21.2 | 23.0 | 24.5 | 26.7 | 31.2 | 37.7 | 41.3 | 44.8 | 48.0 |
| 60 years and over | 371 | 31.1 | 0.33 | 20.8 | 22.9 | 24.5 | 26.6 | 30.3 | 34.8 | 38.0 | 40.0 | 44.2 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,707 | 29.5 | 0.19 | 20.8 | 21.9 | 22.9 | 24.9 | 28.5 | 33.0 | 36.0 | 38.0 | 40.9 |
| 20–39 years | 619 | 28.8 | 0.23 | 20.3 | 21.3 | 22.1 | 23.6 | 26.9 | 32.7 | 36.1 | 38.2 | 40.9 |
| 40–59 years | 579 | 30.2 | 0.34 | 21.3 | 23.0 | 24.2 | 26.2 | 29.6 | 33.2 | 35.9 | 37.8 | 40.7 |
| 60 years and over | 509 | 29.9 | 0.17 | 21.1 | 22.8 | 23.9 | 25.7 | 29.4 | 33.2 | 36.0 | 37.7 | 41.1 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 1,031 | 29.8 | 0.17 | 21.1 | 22.2 | 23.3 | 25.2 | 29.1 | 33.6 | 36.1 | 38.1 | 40.9 |
| 20–39 years | 386 | 29.2 | 0.29 | 20.9 | 21.8 | 22.3 | 24.0 | 27.6 | 33.5 | 36.5 | 38.3 | 40.9 |
| 40–59 years | 347 | 30.6 | 0.37 | 21.6 | 23.5 | 25.0 | 26.7 | 30.1 | 33.8 | 35.9 | 36.7 | 40.8 |
| 60 years and over | 298 | 30.0 | 0.21 | 21.1 | 23.0 | 24.1 | 26.1 | 29.6 | 33.1 | 36.0 | 37.4 | 41.7 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.NOTES: Pregnant females were excluded. Body mass index (BMI) is calculated as follows: BMI = weight(kilograms) / height(meters²).

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 15. Body mass index values for males aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|--------------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Body mass indices | | | | | | | | |
| 20 years and over | 5,635 | 28.6 | 0.13 | 20.7 | 22.2 | 23.2 | 24.7 | 27.8 | 31.5 | 33.9 | 35.8 | 39.2 |
| 20–29 years | 894 | 26.8 | 0.24 | 19.4 | 20.7 | 21.4 | 22.9 | 25.6 | 29.9 | 32.3 | 33.8 | 36.5 |
| 30–39 years | 948 | 29.0 | 0.22 | 21.0 | 22.4 | 23.3 | 24.9 | 28.1 | 32.0 | 34.1 | 36.2 | 40.5 |
| 40–49 years | 933 | 29.0 | 0.29 | 21.2 | 22.9 | 24.0 | 25.4 | 28.2 | 31.7 | 34.4 | 36.1 | 39.6 |
| 50–59 years | 934 | 29.2 | 0.31 | 21.5 | 22.9 | 23.9 | 25.5 | 28.2 | 32.0 | 34.5 | 37.1 | 39.9 |
| 60–69 years | 930 | 29.5 | 0.25 | 21.3 | 22.7 | 23.8 | 25.3 | 28.8 | 32.5 | 34.7 | 37.0 | 40.0 |
| 70–79 years | 643 | 28.8 | 0.26 | 21.4 | 22.9 | 23.8 | 25.6 | 28.3 | 31.3 | 33.5 | 35.4 | 37.8 |
| 80 years and over | 353 | 27.2 | 0.22 | 20.7 | 21.8 | 22.8 | 24.4 | 27.0 | 29.6 | 31.3 | 32.7 | 34.5 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,728 | 28.7 | 0.15 | 20.8 | 22.4 | 23.3 | 24.8 | 27.9 | 31.5 | 33.9 | 35.8 | 39.1 |
| 20–39 years | 796 | 27.7 | 0.25 | 20.1 | 21.1 | 22.3 | 23.6 | 26.8 | 30.9 | 33.1 | 34.2 | 38.2 |
| 40–59 years | 832 | 29.2 | 0.22 | 21.3 | 23.1 | 24.1 | 25.5 | 28.3 | 31.8 | 34.5 | 36.8 | 39.7 |
| 60 years and over | 1,100 | 29.2 | 0.18 | 21.4 | 23.2 | 24.2 | 25.5 | 28.6 | 31.9 | 34.0 | 35.9 | 38.8 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,090 | 29.0 | 0.23 | 19.7 | 21.4 | 22.4 | 23.7 | 28.0 | 32.7 | 35.5 | 38.1 | 41.9 |
| 20–39 years | 356 | 28.7 | 0.39 | 19.6 | 21.1 | 21.8 | 23.1 | 27.3 | 32.6 | 35.8 | 38.1 | 42.7 |
| 40–59 years | 372 | 29.4 | 0.38 | 19.7 | 22.1 | 22.9 | 24.8 | 28.3 | 33.1 | 35.8 | 38.4 | 41.1 |
| 60 years and over | 362 | 28.8 | 0.32 | 19.8 | 21.6 | 22.6 | 24.1 | 28.2 | 31.6 | 34.3 | 36.9 | 40.8 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,540 | 28.9 | 0.25 | 21.3 | 23.0 | 23.9 | 25.5 | 28.1 | 31.6 | 33.8 | 35.6 | 39.0 |
| 20–39 years | 573 | 28.5 | 0.33 | 20.9 | 21.9 | 23.2 | 24.8 | 27.5 | 31.1 | 33.0 | 35.5 | 40.6 |
| 40–59 years | 577 | 29.5 | 0.24 | 23.1 | 24.2 | 25.2 | 26.5 | 28.8 | 32.1 | 34.4 | 35.7 | 37.7 |
| 60 years and over | 390 | 29.2 | 0.32 | 22.0 | 23.2 | 24.3 | 25.9 | 28.3 | 31.9 | 34.1 | 35.6 | 38.5 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 990 | 29.0 | 0.30 | 21.4 | 23.2 | 24.0 | 25.7 | 28.1 | 31.6 | 33.7 | 35.6 | 39.5 |
| 20–39 years | 386 | 28.8 | 0.42 | 20.9 | 22.2 | 23.5 | 25.1 | 27.8 | 31.4 | 33.0 | 35.3 | 41.1 |
| 40–59 years | 371 | 29.5 | 0.28 | 23.1 | 24.3 | 25.3 | 26.4 | 28.7 | 32.0 | 34.3 | 35.8 | 37.8 |
| 60 years and over | 233 | 29.2 | 0.44 | 22.1 | 23.2 | 24.2 | 25.9 | 28.3 | 31.8 | 33.9 | 35.3 | 39.0 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.NOTE: Body mass index (BMI) is calculated as follows: BMI = weight(kilograms) / height(meters²).

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 16. Head circumference in centimeters for infants from birth through age 6 months and number of examined persons, mean, standard error of the mean, and selected percentiles, by sex and age: United States, 2007–2010

| Sex and age ¹ | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|-----------------------------|----------------------------|-------|----------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| Male | | | | Centimeters | | | | | | | | |
| Birth to 2 months | 82 | 38.9 | 0.23 | 35.5 | 36.3 | 37.0 | 37.6 | 39.3 | 39.8 | 40.2 | 40.6 | 41.3 |
| 3–5 months | 111 | 42.4 | 0.15 | 39.8 | 40.1 | 40.5 | 41.7 | 42.4 | 43.3 | 43.8 | 44.1 | † |
| 6 months | 38 | *44.1 | 0.34 | † | *42.3 | *42.9 | *43.2 | *44.4 | *45 | *45.4 | *45.7 | *45.9 |
| Female | | | | | | | | | | | | |
| Birth to 2 months | 82 | 38.3 | 0.24 | 34.5 | 36.3 | 36.5 | 37.4 | 38.6 | 39.4 | 40.0 | 40.3 | 40.9 |
| 3–5 months | 104 | 41.6 | 0.12 | 39.3 | 39.7 | 40.0 | 40.5 | 41.8 | 42.6 | 42.9 | 43.3 | 43.5 |
| 6 months | 36 | *43.6 | 0.29 | † | *41.7 | *41.9 | *42.2 | *43.5 | *44.6 | *45.4 | *45.5 | † |

† Standard error not calculated by SUDAAN.

* Estimate does not meet standards of reliability or precision based on less than 12 degrees of freedom.

¹Refers to age at time of examination.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 17. Recumbent length in centimeters for children from birth through age 36 months and number of examined persons, mean, standard error of the mean, and selected percentiles, by sex and age: United States, 2007–2010

| Sex and age ¹ | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|-----------------------------|----------------------------|------|----------------------------|-------------|------|------|------|-------|-------|-------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| Male | | | | Centimeters | | | | | | | | |
| Birth to 2 months | 82 | 56.8 | 0.36 | 50.7 | 51.4 | 53.1 | 54.8 | 57.5 | 58.7 | 59.1 | 60.3 | 61.0 |
| 3–5 months | 110 | 63.7 | 0.35 | 59.0 | 59.6 | 61.1 | 61.5 | 63.4 | 65.8 | 67.3 | 68.1 | † |
| 6–8 months | 103 | 69.0 | 0.41 | 64.7 | 66.1 | 66.6 | 67.4 | 69.2 | 70.3 | 71.8 | 72.6 | 73.3 |
| 9–11 months | 108 | 73.8 | 0.32 | 69.7 | 70.4 | 70.8 | 71.8 | 73.2 | 75.7 | 76.8 | 77.9 | 78.3 |
| 1 year | 316 | 81.1 | 0.37 | 73.7 | 74.8 | 75.8 | 77.9 | 81.0 | 84.3 | 85.3 | 86.8 | 89.4 |
| 2 years | 313 | 92.1 | 0.36 | 84.4 | 85.7 | 86.8 | 88.8 | 92.4 | 95.0 | 96.7 | 98.0 | 100.0 |
| 3 years | 197 | 99.9 | 0.37 | 92.0 | 94.8 | 95.4 | 97.0 | 99.8 | 102.0 | 104.8 | 106.7 | 107.1 |
| Female | | | | | | | | | | | | |
| Birth to 2 months | 81 | 56.0 | 0.55 | 47.7 | 51.5 | 52.6 | 54.7 | 56.5 | 58.1 | 58.6 | 58.8 | † |
| 3–5 months | 104 | 62.5 | 0.26 | 57.3 | 59.1 | 59.8 | 60.9 | 62.4 | 64.7 | 65.4 | 66.0 | 66.4 |
| 6–8 months | 103 | 67.5 | 0.29 | 63.2 | 64.3 | 64.8 | 65.6 | 67.5 | 69.0 | 70.2 | 70.4 | 71.5 |
| 9–11 months | 119 | 71.5 | 0.29 | † | 67.5 | 68.4 | 69.7 | 71.3 | 73.1 | 74.8 | 75.1 | 75.7 |
| 1 year | 296 | 80.1 | 0.36 | 72.3 | 73.6 | 74.9 | 77.0 | 80.2 | 83.2 | 84.6 | 85.9 | 88.2 |
| 2 years | 261 | 90.6 | 0.36 | 84.5 | 85.3 | 86.5 | 87.3 | 90.1 | 93.8 | 95.2 | 96.2 | 97.8 |
| 3 years | 183 | 99.9 | 0.39 | 92.8 | 93.7 | 94.4 | 96.5 | 100.0 | 102.8 | 104.5 | 105.7 | 108.1 |

† Standard error not calculated by SUDAAN.

¹Refers to age at time of examination.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 18. Waist circumference in centimeters for children and adolescents aged 2–19 years and number of examined persons, mean, standard error of the mean, and selected percentiles, by sex and age: United States, 2007–2010

| Sex and age ¹ | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|--------------------------|----------------------------|------|----------------------------|-------------|------|------|------|------|------|-------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| Male | | | | Centimeters | | | | | | | | |
| 2 years | 270 | 48.5 | 0.29 | 43.4 | 44.8 | 45.6 | 46.5 | 48.2 | 50.3 | 51.2 | 52.0 | 53.4 |
| 3 years | 182 | 50.5 | 0.35 | 44.5 | 46.0 | 46.9 | 47.9 | 50.1 | 52.3 | 53.3 | 54.6 | 56.9 |
| 4 years | 231 | 52.7 | 0.31 | 46.8 | 47.9 | 48.9 | 50.1 | 51.5 | 54.2 | 56.7 | 57.5 | 62.7 |
| 5 years | 194 | 54.8 | 0.42 | 47.7 | 49.0 | 50.2 | 51.3 | 53.6 | 56.0 | 58.3 | 60.8 | 66.0 |
| 6 years | 188 | 57.4 | 0.74 | 48.4 | 49.5 | 50.6 | 52.1 | 54.6 | 59.1 | 65.3 | 69.6 | 78.7 |
| 7 years | 208 | 59.0 | 0.56 | 50.4 | 50.9 | 51.9 | 53.4 | 56.7 | 62.8 | 68.1 | 71.3 | 74.6 |
| 8 years | 205 | 62.7 | 0.79 | 51.2 | 53.3 | 54.1 | 56.3 | 59.5 | 66.7 | 73.0 | 78.1 | 81.0 |
| 9 years | 183 | 66.0 | 1.13 | 53.4 | 54.6 | 55.8 | 57.2 | 61.0 | 72.9 | 79.5 | 85.0 | 91.2 |
| 10 years | 194 | 69.2 | 1.09 | 55.4 | 57.1 | 57.9 | 59.8 | 66.5 | 76.5 | 81.1 | 85.6 | 89.9 |
| 11 years | 205 | 71.9 | 0.98 | 57.4 | 58.9 | 60.3 | 62.4 | 67.2 | 78.6 | 87.2 | 90.4 | 97.0 |
| 12 years | 156 | 74.6 | 0.98 | 56.7 | 59.9 | 61.3 | 64.0 | 71.5 | 83.1 | 91.6 | 93.7 | 98.5 |
| 13 years | 141 | 76.8 | 1.34 | 62.4 | 64.6 | 65.5 | 68.2 | 72.7 | 81.2 | 90.8 | 96.7 | 104.7 |
| 14 years | 173 | 78.8 | 1.48 | 61.7 | 64.4 | 65.8 | 68.1 | 74.2 | 84.5 | 93.9 | 101.3 | 107.4 |
| 15 years | 157 | 80.9 | 1.41 | 65.9 | 67.1 | 67.6 | 71.1 | 76.3 | 87.6 | 94.8 | 99.9 | 113.1 |
| 16 years | 170 | 83.9 | 1.21 | 67.8 | 68.3 | 70.4 | 73.4 | 80.0 | 92.3 | 99.3 | 106.1 | 110.5 |
| 17 years | 184 | 85.6 | 1.82 | 68.5 | 70.0 | 73.0 | 74.8 | 79.5 | 92.2 | 101.6 | 108.0 | 118.6 |
| 18 years | 137 | 88.1 | 1.62 | 70.6 | 72.2 | 73.7 | 77.5 | 85.3 | 95.5 | 101.6 | 105.9 | † |
| 19 years | 176 | 85.9 | 1.17 | 71.7 | 73.1 | 74.1 | 76.8 | 82.8 | 91.1 | 93.9 | 101.3 | † |
| Female | | | | | | | | | | | | |
| 2 years | 235 | 48.2 | 0.36 | 43.4 | 43.9 | 44.5 | 45.4 | 47.5 | 50.3 | 51.6 | 52.9 | 54.7 |
| 3 years | 179 | 50.2 | 0.36 | 43.1 | 45.4 | 46.4 | 47.4 | 49.9 | 52.3 | 54.3 | 55.0 | 57.3 |
| 4 years | 191 | 52.1 | 0.27 | 46.2 | 46.9 | 47.7 | 48.9 | 51.1 | 54.2 | 56.2 | 58.3 | 60.2 |
| 5 years | 168 | 55.6 | 0.84 | 47.9 | 49.2 | 50.4 | 51.3 | 54.0 | 57.4 | 60.4 | 63.3 | † |
| 6 years | 173 | 56.5 | 0.60 | 48.5 | 49.8 | 50.8 | 52.3 | 56.0 | 58.8 | 63.5 | 64.3 | 67.9 |
| 7 years | 202 | 59.4 | 0.67 | 49.1 | 51.0 | 51.4 | 53.7 | 57.0 | 61.9 | 67.3 | 72.9 | 78.1 |
| 8 years | 199 | 63.8 | 1.08 | 49.7 | 52.3 | 53.2 | 55.2 | 61.8 | 71.3 | 75.2 | 78.7 | 82.7 |
| 9 years | 198 | 66.6 | 1.08 | 53.1 | 54.5 | 56.0 | 57.6 | 63.3 | 72.3 | 79.6 | 83.0 | 88.1 |
| 10 years | 174 | 69.8 | 0.97 | 57.1 | 58.3 | 59.1 | 61.2 | 68.6 | 75.1 | 82.0 | 84.1 | 88.8 |
| 11 years | 212 | 73.2 | 1.27 | 56.2 | 58.9 | 60.8 | 62.7 | 69.2 | 81.5 | 87.2 | 93.6 | 103.0 |
| 12 years | 162 | 74.7 | 1.22 | † | 60.6 | 63.6 | 65.7 | 73.9 | 82.0 | 87.3 | 95.1 | 98.8 |
| 13 years | 130 | 77.6 | 1.40 | 63.3 | 64.8 | 65.7 | 68.4 | 73.7 | 85.6 | 92.1 | 96.8 | 100.6 |
| 14 years | 164 | 80.4 | 0.95 | 65.5 | 67.5 | 68.3 | 71.2 | 77.3 | 85.5 | 91.2 | 94.4 | 108.0 |
| 15 years | 134 | 81.7 | 1.20 | 64.7 | 68.5 | 70.6 | 72.6 | 78.4 | 87.0 | 95.3 | 101.4 | 106.0 |
| 16 years | 152 | 81.0 | 1.03 | 66.9 | 67.9 | 69.7 | 71.6 | 78.2 | 85.4 | 92.2 | 102.2 | 106.6 |
| 17 years | 141 | 82.2 | 1.50 | 66.6 | 67.1 | 69.0 | 72.0 | 79.6 | 86.9 | 95.5 | 99.5 | 114.1 |
| 18 years | 131 | 83.1 | 1.35 | 67.9 | 70.0 | 70.8 | 72.3 | 77.2 | 90.1 | 99.6 | 107.1 | 112.6 |
| 19 years | 115 | 85.4 | 1.72 | 65.2 | 68.4 | 70.5 | 72.8 | 80.8 | 93.4 | 103.2 | 109.6 | 118.4 |

† Standard error not calculated by SUDAAN.

¹Refers to age at time of examination.

NOTE: Pregnant females were excluded.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 19. Waist circumference in centimeters for females aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|-------|----------------------------|--------------------|------|------|------|-------|-------|-------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Centimeters | | | | | | | | |
| 20 years and over | 5,552 | 95.2 | 0.34 | 72.0 | 75.5 | 78.3 | 83.2 | 93.1 | 105.4 | 112.6 | 117.6 | 124.9 |
| 20–29 years | 870 | 90.2 | 1.04 | 69.2 | 72.1 | 74.3 | 77.0 | 85.6 | 99.3 | 107.9 | 115.2 | 125.2 |
| 30–39 years | 939 | 93.8 | 0.75 | 71.3 | 74.2 | 77.6 | 82.0 | 90.9 | 103.7 | 111.5 | 116.7 | 123.3 |
| 40–49 years | 1,024 | 94.6 | 0.62 | 71.8 | 75.5 | 78.3 | 82.9 | 91.8 | 104.0 | 111.8 | 117.0 | 124.2 |
| 50–59 years | 839 | 97.5 | 0.55 | 73.4 | 77.4 | 81.4 | 85.8 | 95.5 | 107.4 | 114.0 | 119.6 | 126.4 |
| 60–69 years | 903 | 99.9 | 0.57 | 77.7 | 82.2 | 84.8 | 88.3 | 99.2 | 109.1 | 115.2 | 119.8 | 127.1 |
| 70–79 years | 632 | 99.8 | 0.62 | 77.0 | 81.4 | 85.4 | 89.5 | 98.5 | 108.9 | 115.9 | 119.7 | 125.9 |
| 80 years and over | 345 | 93.5 | 0.59 | 74.8 | 77.9 | 80.8 | 84.7 | 92.6 | 101.4 | 107.1 | 110.6 | 114.1 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,602 | 94.9 | 0.49 | 71.9 | 75.0 | 77.9 | 82.9 | 92.5 | 104.9 | 112.4 | 117.4 | 124.4 |
| 20–39 years | 762 | 91.1 | 1.00 | 70.3 | 72.8 | 74.7 | 78.3 | 87.2 | 100.3 | 108.3 | 115.2 | 123.1 |
| 40–59 years | 829 | 95.2 | 0.58 | 72.1 | 75.6 | 78.6 | 83.1 | 92.5 | 105.3 | 113.0 | 118.2 | 124.9 |
| 60 years and over | 1,011 | 98.4 | 0.48 | 75.7 | 80.7 | 83.4 | 87.6 | 97.4 | 107.2 | 114.0 | 118.7 | 125.0 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,046 | 100.7 | 0.70 | 73.6 | 79.5 | 82.3 | 87.7 | 99.2 | 111.5 | 119.5 | 124.1 | 129.9 |
| 20–39 years | 349 | 97.6 | 1.17 | 70.1 | 75.0 | 78.9 | 83.3 | 94.6 | 109.3 | 117.1 | 124.7 | 129.5 |
| 40–59 years | 365 | 103.1 | 0.81 | 76.9 | 81.5 | 84.0 | 90.6 | 101.0 | 114.6 | 121.8 | 125.8 | 132.0 |
| 60 years and over | 332 | 102.2 | 0.72 | 79.5 | 85.0 | 87.9 | 93.0 | 100.6 | 110.0 | 116.6 | 119.6 | 127.5 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,642 | 95.8 | 0.46 | 74.6 | 77.6 | 80.8 | 85.3 | 94.4 | 105.0 | 110.0 | 115.0 | 121.6 |
| 20–39 years | 598 | 93.5 | 0.60 | 73.1 | 75.6 | 78.1 | 81.8 | 91.1 | 103.4 | 109.6 | 114.8 | 121.3 |
| 40–59 years | 567 | 97.4 | 0.80 | 76.4 | 81.3 | 83.5 | 88.6 | 96.3 | 104.7 | 109.7 | 114.7 | 121.3 |
| 60 years and over | 477 | 99.4 | 0.40 | 77.8 | 84.1 | 86.4 | 91.0 | 99.0 | 107.5 | 111.9 | 115.8 | 122.0 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 998 | 96.9 | 0.47 | 75.4 | 78.7 | 81.6 | 86.4 | 95.7 | 106.2 | 111.4 | 115.6 | 122.7 |
| 20–39 years | 372 | 94.9 | 0.74 | 74.2 | 76.5 | 78.9 | 82.9 | 92.0 | 105.6 | 111.5 | 115.9 | 123.1 |
| 40–59 years | 342 | 98.5 | 0.89 | 77.5 | 82.1 | 84.6 | 90.0 | 97.5 | 106.3 | 110.0 | 115.3 | 120.6 |
| 60 years and over | 284 | 100.2 | 0.50 | 79.8 | 84.9 | 87.4 | 91.7 | 99.8 | 107.6 | 112.0 | 115.4 | 122.7 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

NOTE: Pregnant females were excluded.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 20. Waist circumference in centimeters for males aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|-------|----------------------------|--------------------|------|------|------|-------|-------|-------|-------|-------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Centimeters | | | | | | | | |
| 20 years and over | 5,410 | 100.9 | 0.41 | 77.9 | 81.8 | 85.4 | 90.5 | 99.4 | 109.5 | 116.1 | 120.8 | 128.1 |
| 20–29 years | 862 | 92.5 | 0.64 | 73.3 | 75.9 | 78.1 | 81.2 | 90.2 | 101.1 | 107.7 | 112.1 | 118.4 |
| 30–39 years | 900 | 99.4 | 0.52 | 79.1 | 82.2 | 85.2 | 88.9 | 97.4 | 106.9 | 113.4 | 119.7 | 127.2 |
| 40–49 years | 907 | 101.9 | 0.68 | 80.6 | 85.5 | 88.5 | 92.8 | 99.6 | 109.5 | 116.2 | 120.6 | 127.0 |
| 50–59 years | 906 | 104.1 | 0.81 | 81.7 | 87.5 | 90.6 | 93.8 | 102.8 | 111.8 | 118.2 | 123.1 | 130.0 |
| 60–69 years | 899 | 106.2 | 0.64 | 83.2 | 88.8 | 91.9 | 96.0 | 105.3 | 115.0 | 121.3 | 125.7 | 130.2 |
| 70–79 years | 609 | 106.8 | 0.64 | 86.2 | 91.2 | 94.2 | 98.5 | 106.2 | 114.7 | 120.4 | 125.1 | 129.5 |
| 80 years and over | 327 | 103.5 | 0.69 | 84.0 | 87.8 | 90.7 | 96.0 | 103.4 | 111.1 | 115.1 | 118.8 | 123.7 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,624 | 102.2 | 0.43 | 79.2 | 83.3 | 86.9 | 91.9 | 101.1 | 111.0 | 117.8 | 122.1 | 128.6 |
| 20–39 years | 762 | 96.5 | 0.65 | 76.0 | 79.0 | 81.0 | 85.2 | 94.8 | 104.7 | 111.9 | 116.0 | 124.1 |
| 40–59 years | 812 | 104.1 | 0.60 | 81.8 | 87.7 | 90.6 | 93.6 | 102.6 | 111.8 | 119.0 | 123.0 | 129.9 |
| 60 years and over | 1,050 | 106.9 | 0.41 | 87.1 | 91.0 | 93.8 | 97.6 | 106.1 | 115.0 | 120.5 | 125.1 | 129.5 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,033 | 98.0 | 0.62 | 73.0 | 76.5 | 79.0 | 84.7 | 96.3 | 108.4 | 115.7 | 120.3 | 131.8 |
| 20–39 years | 335 | 93.6 | 0.86 | 71.5 | 73.8 | 75.8 | 79.3 | 90.6 | 104.2 | 112.7 | 118.5 | 129.0 |
| 40–59 years | 351 | 100.5 | 0.91 | 75.9 | 80.2 | 83.4 | 89.4 | 98.6 | 109.9 | 116.1 | 120.3 | 133.2 |
| 60 years and over | 347 | 103.4 | 0.90 | 78.2 | 83.3 | 86.0 | 92.6 | 102.2 | 112.3 | 119.7 | 124.4 | 133.9 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,490 | 99.6 | 0.68 | 79.5 | 83.0 | 86.2 | 90.5 | 98.0 | 106.7 | 112.5 | 116.9 | 125.3 |
| 20–39 years | 555 | 96.9 | 0.84 | 75.8 | 80.8 | 82.7 | 87.2 | 94.9 | 104.1 | 108.6 | 113.5 | 125.6 |
| 40–59 years | 567 | 102.4 | 0.66 | 85.3 | 89.3 | 91.9 | 94.8 | 100.4 | 108.8 | 114.7 | 118.1 | 123.5 |
| 60 years and over | 368 | 104.8 | 0.57 | 87.2 | 90.0 | 92.4 | 95.7 | 104.1 | 111.8 | 116.0 | 120.3 | 127.9 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 957 | 99.9 | 0.80 | 80.1 | 84.0 | 87.4 | 91.4 | 98.5 | 106.7 | 112.2 | 116.3 | 125.4 |
| 20–39 years | 371 | 97.6 | 1.01 | 76.8 | 81.4 | 83.8 | 88.5 | 95.5 | 104.9 | 109.0 | 113.0 | 126.1 |
| 40–59 years | 367 | 102.3 | 0.82 | 85.9 | 90.1 | 92.4 | 94.6 | 100.2 | 108.6 | 114.8 | 117.3 | 123.1 |
| 60 years and over | 219 | 104.6 | 0.75 | 87.1 | 90.3 | 93.2 | 95.6 | 104.0 | 111.5 | 115.6 | 118.6 | 127.3 |

¹Persons of other races and ethnicities are included.
²Mexican-American persons are included in the Hispanic group.
 SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 21. Midarm circumference in centimeters for children and adolescents aged 2 months to 19 years and number of examined persons, mean, standard error of the mean, and selected percentiles, by sex and age: United States, 2007–2010

| Sex and age ¹ | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|--------------------------|----------------------------|------|----------------------------|--------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| Male | | | | Centimeters | | | | | | | | |
| 2–5 months | 122 | 13.8 | 0.11 | 12.0 | 12.7 | 12.9 | 13.2 | 13.6 | 14.4 | 14.7 | 14.9 | 15.3 |
| 6–8 months | 100 | 14.7 | 0.16 | 12.8 | 13.3 | 13.4 | 13.7 | 14.5 | 15.7 | 16.0 | 16.4 | 16.7 |
| 9–11 months | 107 | 15.2 | 0.18 | 13.4 | 13.7 | 13.9 | 14.3 | 14.9 | 15.9 | 16.7 | 17.4 | † |
| 1 year | 308 | 15.4 | 0.08 | 13.4 | 13.8 | 14.0 | 14.5 | 15.2 | 16.1 | 16.5 | 16.8 | 17.2 |
| 2 years | 304 | 16.1 | 0.10 | 14.2 | 14.5 | 14.9 | 15.2 | 16.0 | 16.7 | 17.2 | 17.7 | 18.4 |
| 3 years | 185 | 16.8 | 0.14 | 14.8 | 15.1 | 15.4 | 15.6 | 16.5 | 17.4 | 17.9 | 18.4 | 19.8 |
| 4 years | 232 | 17.3 | 0.16 | 14.9 | 15.2 | 15.5 | 15.9 | 17.0 | 18.0 | 19.0 | 19.7 | 21.2 |
| 5 years | 195 | 18.0 | 0.16 | 15.5 | 15.8 | 16.0 | 16.7 | 17.7 | 18.6 | 19.3 | 20.0 | 22.8 |
| 6 years | 189 | 19.0 | 0.25 | 15.5 | 16.2 | 16.6 | 17.0 | 18.2 | 19.8 | 22.0 | 23.6 | 25.5 |
| 7 years | 209 | 19.6 | 0.24 | 16.0 | 16.6 | 17.1 | 17.4 | 18.8 | 21.3 | 23.0 | 23.8 | 25.4 |
| 8 years | 205 | 20.8 | 0.29 | 16.5 | 17.2 | 17.8 | 18.2 | 19.9 | 22.6 | 24.4 | 25.1 | 26.8 |
| 9 years | 183 | 22.1 | 0.43 | 17.0 | 17.5 | 18.1 | 19.0 | 20.7 | 25.0 | 27.1 | 28.3 | 29.8 |
| 10 years | 194 | 23.3 | 0.36 | 18.3 | 19.1 | 19.5 | 19.9 | 22.5 | 25.7 | 27.9 | 28.7 | 29.7 |
| 11 years | 206 | 24.9 | 0.30 | 19.3 | 20.0 | 20.5 | 21.4 | 23.5 | 27.5 | 29.6 | 30.6 | 32.9 |
| 12 years | 156 | 25.7 | 0.40 | 19.3 | 19.7 | 20.2 | 21.6 | 25.2 | 28.9 | 30.4 | 31.5 | 33.1 |
| 13 years | 142 | 27.0 | 0.42 | 21.3 | 22.1 | 22.7 | 23.8 | 25.9 | 28.7 | 31.3 | 33.1 | 37.7 |
| 14 years | 174 | 27.8 | 0.52 | 20.8 | 21.8 | 22.9 | 24.1 | 26.9 | 30.2 | 33.0 | 35.4 | 37.3 |
| 15 years | 157 | 29.2 | 0.50 | 22.9 | 23.6 | 24.5 | 25.6 | 28.2 | 31.7 | 33.6 | 35.7 | 39.0 |
| 16 years | 170 | 30.6 | 0.41 | 23.9 | 25.4 | 26.1 | 27.1 | 29.9 | 33.5 | 35.5 | 36.8 | 38.3 |
| 17 years | 183 | 31.5 | 0.62 | 24.8 | 25.9 | 26.7 | 27.8 | 29.9 | 34.2 | 36.7 | 38.4 | 42.7 |
| 18 years | 137 | 32.6 | 0.44 | 25.9 | 27.4 | 27.9 | 29.2 | 31.8 | 34.8 | 37.4 | 38.6 | 40.1 |
| 19 years | 176 | 31.9 | 0.32 | 25.7 | 27.1 | 27.8 | 28.9 | 31.1 | 34.3 | 35.7 | 36.5 | 39.5 |
| Female | | | | | | | | | | | | |
| 2–5 months | 112 | 13.6 | 0.13 | 11.5 | 12.0 | 12.4 | 12.9 | 13.5 | 13.9 | 14.3 | 14.7 | 15.9 |
| 6–8 months | 103 | 14.4 | 0.13 | 12.4 | 12.9 | 13.0 | 13.5 | 14.5 | 15.1 | 15.4 | 15.6 | 16.1 |
| 9–11 months | 118 | 14.8 | 0.13 | 12.9 | 13.2 | 13.4 | 13.9 | 14.7 | 15.5 | 15.9 | 16.2 | 16.7 |
| 1 year | 284 | 15.3 | 0.08 | 13.4 | 13.8 | 13.9 | 14.2 | 15.1 | 16.1 | 16.6 | 16.9 | 17.4 |
| 2 years | 260 | 16.0 | 0.11 | 14.0 | 14.4 | 14.7 | 15.1 | 15.8 | 16.8 | 17.4 | 17.7 | 18.2 |
| 3 years | 183 | 16.5 | 0.13 | 14.2 | 14.6 | 15.0 | 15.5 | 16.4 | 17.4 | 17.8 | 18.3 | 19.0 |
| 4 years | 190 | 17.3 | 0.15 | 14.9 | 15.5 | 15.9 | 16.3 | 17.0 | 18.0 | 18.7 | 19.2 | 19.9 |
| 5 years | 171 | 18.4 | 0.23 | 15.9 | 16.1 | 16.3 | 16.8 | 17.7 | 19.0 | 20.0 | 21.7 | 23.0 |
| 6 years | 174 | 18.8 | 0.21 | 16.1 | 16.3 | 16.7 | 17.0 | 18.3 | 20.1 | 20.7 | 21.7 | 23.0 |
| 7 years | 202 | 19.9 | 0.23 | 16.4 | 16.9 | 17.2 | 17.7 | 19.0 | 21.6 | 22.9 | 23.5 | 25.3 |
| 8 years | 200 | 21.4 | 0.39 | 17.1 | 17.7 | 18.0 | 18.6 | 20.5 | 23.7 | 25.7 | 26.0 | 28.2 |
| 9 years | 200 | 22.2 | 0.40 | 17.6 | 18.0 | 18.4 | 19.1 | 21.7 | 24.3 | 26.5 | 27.6 | 29.1 |
| 10 years | 177 | 23.4 | 0.26 | 18.7 | 19.0 | 19.9 | 20.9 | 23.0 | 25.4 | 27.0 | 28.1 | 29.6 |
| 11 years | 211 | 24.6 | 0.45 | 18.9 | 19.8 | 20.3 | 20.9 | 23.4 | 27.1 | 29.9 | 31.5 | 33.6 |
| 12 years | 163 | 25.4 | 0.43 | 19.5 | 20.4 | 21.0 | 22.0 | 25.0 | 27.9 | 30.2 | 31.6 | 33.3 |
| 13 years | 131 | 26.5 | 0.50 | 20.6 | 21.2 | 21.8 | 23.3 | 25.6 | 28.2 | 31.9 | 33.2 | 35.3 |
| 14 years | 164 | 27.9 | 0.31 | 21.9 | 22.9 | 23.6 | 25.1 | 27.9 | 30.1 | 32.0 | 32.7 | 35.9 |
| 15 years | 135 | 28.0 | 0.39 | † | 23.7 | 24.0 | 25.0 | 27.1 | 30.3 | 33.6 | 34.5 | 35.3 |
| 16 years | 154 | 28.0 | 0.31 | 22.9 | 23.4 | 23.9 | 24.9 | 26.5 | 30.7 | 32.7 | 34.1 | 35.5 |
| 17 years | 142 | 28.3 | 0.49 | 22.9 | 23.6 | 24.0 | 25.0 | 27.5 | 29.9 | 32.1 | 35.4 | 38.4 |
| 18 years | 132 | 28.7 | 0.45 | 23.3 | 24.2 | 24.6 | 25.0 | 27.1 | 30.3 | 33.4 | 35.2 | 38.0 |
| 19 years | 116 | 29.3 | 0.67 | 21.6 | 23.0 | 23.8 | 25.5 | 27.9 | 32.8 | 34.6 | 36.0 | † |

† Standard error not calculated by SUDAAN.

¹Refers to age at time of examination.

NOTE: Pregnant females were excluded.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 22. Midarm circumference in centimeters for females aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|--------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Centimeters | | | | | | | | |
| 20 years and over | 5,632 | 31.9 | 0.11 | 24.4 | 25.6 | 26.5 | 28.1 | 31.1 | 34.9 | 37.5 | 39.2 | 42.0 |
| 20–29 years | 878 | 31.1 | 0.32 | 23.9 | 24.7 | 25.5 | 26.8 | 29.8 | 33.9 | 36.7 | 39.2 | 42.6 |
| 30–39 years | 952 | 32.2 | 0.27 | 24.6 | 25.7 | 26.9 | 28.3 | 31.4 | 35.4 | 38.0 | 39.5 | 42.4 |
| 40–49 years | 1,036 | 32.1 | 0.23 | 24.8 | 25.9 | 26.7 | 28.3 | 31.4 | 35.1 | 37.5 | 39.2 | 42.0 |
| 50–59 years | 846 | 32.5 | 0.23 | 25.3 | 26.4 | 27.2 | 28.7 | 31.8 | 35.5 | 38.0 | 39.6 | 42.6 |
| 60–69 years | 914 | 32.6 | 0.21 | 25.4 | 26.8 | 27.7 | 28.9 | 31.9 | 35.4 | 38.0 | 39.5 | 41.5 |
| 70–79 years | 646 | 32.1 | 0.22 | 24.4 | 25.7 | 26.9 | 28.4 | 31.3 | 35.5 | 37.5 | 38.8 | 41.2 |
| 80 years and over | 360 | 29.0 | 0.24 | 22.1 | 23.9 | 24.7 | 25.9 | 28.9 | 31.3 | 33.0 | 34.5 | 36.1 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,634 | 31.7 | 0.16 | 24.4 | 25.5 | 26.5 | 28.0 | 30.8 | 34.6 | 37.1 | 38.7 | 41.5 |
| 20–39 years | 770 | 31.4 | 0.32 | 24.2 | 25.1 | 25.9 | 27.4 | 30.3 | 34.3 | 37.1 | 39.1 | 42.4 |
| 40–59 years | 838 | 32.0 | 0.22 | 24.9 | 26.0 | 26.8 | 28.3 | 31.2 | 34.9 | 37.3 | 38.6 | 41.7 |
| 60 years and over | 1,026 | 31.6 | 0.16 | 24.1 | 25.5 | 26.6 | 28.0 | 30.8 | 34.5 | 36.8 | 38.4 | 40.7 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,071 | 34.4 | 0.22 | 25.4 | 27.1 | 28.3 | 30.3 | 33.7 | 38.2 | 40.9 | 42.4 | 45.7 |
| 20–39 years | 357 | 34.1 | 0.39 | 24.5 | 26.1 | 27.7 | 29.7 | 33.3 | 38.3 | 40.8 | 42.4 | 45.7 |
| 40–59 years | 370 | 35.1 | 0.28 | 25.8 | 27.8 | 29.3 | 30.9 | 34.2 | 38.7 | 41.3 | 42.9 | 45.8 |
| 60 years and over | 344 | 33.8 | 0.34 | 25.2 | 27.2 | 28.5 | 29.9 | 33.5 | 36.6 | 40.0 | 41.6 | 43.7 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,660 | 32.1 | 0.18 | 25.3 | 26.4 | 27.2 | 28.6 | 31.5 | 34.9 | 36.6 | 38.1 | 40.6 |
| 20–39 years | 602 | 31.4 | 0.21 | 24.7 | 25.9 | 26.5 | 27.8 | 30.5 | 34.4 | 36.4 | 37.9 | 40.4 |
| 40–59 years | 571 | 32.9 | 0.29 | 26.2 | 27.6 | 28.5 | 29.7 | 32.3 | 35.3 | 36.9 | 38.3 | 41.0 |
| 60 years and over | 487 | 32.1 | 0.16 | 25.1 | 26.2 | 27.4 | 29.0 | 31.6 | 34.7 | 36.7 | 38.6 | 40.8 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 1,011 | 32.2 | 0.15 | 25.5 | 26.5 | 27.5 | 28.9 | 31.8 | 35.0 | 36.6 | 37.9 | 40.3 |
| 20–39 years | 377 | 31.6 | 0.20 | 25.1 | 26.2 | 26.7 | 28.1 | 30.8 | 34.7 | 36.4 | 37.9 | 39.9 |
| 40–59 years | 344 | 33.1 | 0.29 | 26.8 | 28.2 | 28.9 | 30.0 | 32.8 | 35.4 | 36.8 | 38.0 | 40.6 |
| 60 years and over | 290 | 32.1 | 0.21 | 25.2 | 26.1 | 27.2 | 29.2 | 31.8 | 34.6 | 36.3 | 37.6 | 40.5 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

NOTE: Pregnant females were excluded.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 23. Midarm circumference in centimeters for males aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|--------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Centimeters | | | | | | | | |
| 20 years and over | 5,456 | 34.2 | 0.10 | 27.5 | 28.9 | 29.9 | 31.2 | 33.8 | 36.8 | 38.5 | 39.6 | 41.7 |
| 20–29 years | 866 | 33.4 | 0.20 | 26.6 | 27.9 | 28.8 | 30.1 | 33.0 | 36.3 | 38.2 | 39.0 | 41.3 |
| 30–39 years | 908 | 34.9 | 0.17 | 28.4 | 29.7 | 30.4 | 31.7 | 34.4 | 37.5 | 39.3 | 40.4 | 43.1 |
| 40–49 years | 912 | 34.9 | 0.21 | 28.9 | 30.4 | 30.9 | 32.2 | 34.5 | 37.2 | 39.0 | 40.0 | 41.9 |
| 50–59 years | 910 | 34.7 | 0.25 | 28.5 | 29.5 | 30.7 | 32.0 | 34.2 | 36.9 | 38.6 | 39.9 | 42.2 |
| 60–69 years | 906 | 34.1 | 0.17 | 27.2 | 28.8 | 29.6 | 31.3 | 34.0 | 36.7 | 38.1 | 39.2 | 41.2 |
| 70–79 years | 618 | 32.9 | 0.23 | 27.0 | 28.1 | 29.0 | 30.4 | 32.7 | 35.3 | 36.6 | 37.6 | 39.9 |
| 80 years and over | 336 | 30.6 | 0.20 | 24.3 | 26.2 | 27.0 | 28.4 | 30.4 | 32.8 | 34.1 | 35.3 | 36.5 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,649 | 34.3 | 0.13 | 27.7 | 29.0 | 30.0 | 31.5 | 34.0 | 36.8 | 38.5 | 39.6 | 41.6 |
| 20–39 years | 767 | 34.2 | 0.22 | 27.3 | 28.5 | 29.5 | 31.1 | 33.8 | 37.0 | 38.7 | 39.6 | 41.7 |
| 40–59 years | 816 | 34.9 | 0.18 | 28.6 | 30.2 | 31.0 | 32.3 | 34.5 | 37.1 | 38.9 | 39.9 | 42.0 |
| 60 years and over | 1,066 | 33.4 | 0.16 | 26.8 | 28.3 | 29.3 | 30.6 | 33.3 | 36.0 | 37.5 | 38.5 | 40.3 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,039 | 35.2 | 0.14 | 27.5 | 28.9 | 29.9 | 31.4 | 34.9 | 38.4 | 40.2 | 42.0 | 44.0 |
| 20–39 years | 336 | 35.4 | 0.24 | 27.6 | 29.1 | 30.0 | 31.1 | 35.0 | 38.6 | 41.0 | 42.5 | 44.9 |
| 40–59 years | 354 | 35.5 | 0.31 | 27.6 | 29.1 | 30.4 | 32.0 | 35.5 | 38.6 | 40.3 | 41.8 | 44.0 |
| 60 years and over | 349 | 33.9 | 0.24 | 26.7 | 28.0 | 28.9 | 30.6 | 33.8 | 36.6 | 38.4 | 40.0 | 42.2 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,506 | 33.8 | 0.17 | 27.9 | 29.1 | 29.9 | 31.1 | 33.4 | 36.1 | 37.6 | 38.9 | 40.9 |
| 20–39 years | 561 | 33.8 | 0.23 | 27.8 | 28.9 | 29.8 | 30.7 | 33.3 | 36.0 | 37.7 | 39.2 | 41.3 |
| 40–59 years | 570 | 34.3 | 0.15 | 29.3 | 30.2 | 30.8 | 31.9 | 33.8 | 36.4 | 37.8 | 38.8 | 40.7 |
| 60 years and over | 375 | 32.4 | 0.29 | 26.5 | 27.6 | 28.3 | 29.5 | 32.3 | 34.8 | 36.3 | 37.5 | 39.4 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 967 | 33.7 | 0.19 | 28.0 | 29.2 | 30.0 | 31.1 | 33.3 | 36.0 | 37.3 | 38.5 | 40.8 |
| 20–39 years | 376 | 33.8 | 0.28 | 27.9 | 29.0 | 29.9 | 30.7 | 33.3 | 36.0 | 37.3 | 38.6 | 41.4 |
| 40–59 years | 368 | 34.1 | 0.19 | 28.9 | 30.2 | 30.7 | 31.6 | 33.5 | 36.3 | 37.6 | 38.5 | 39.6 |
| 60 years and over | 223 | 32.4 | 0.33 | 26.8 | 27.8 | 28.4 | 29.5 | 32.3 | 34.7 | 36.0 | 37.1 | 39.4 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 24. Upper arm length in centimeters for children and adolescents aged 2 months to 19 years and number of examined persons, mean, standard error of the mean, and selected percentiles, by sex and age: United States, 2007–2010

| Sex and age ¹ | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|--------------------------|----------------------------|------|----------------------------|--------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| Male | | | | Centimeters | | | | | | | | |
| 2–5 months | 123 | 12.4 | 0.09 | 10.7 | 11.0 | 11.5 | 11.9 | 12.4 | 12.9 | 13.3 | 13.6 | 13.9 |
| 6–8 months | 99 | 14.0 | 0.17 | 11.9 | 12.7 | 12.9 | 13.1 | 14.0 | 14.7 | 15.0 | 15.3 | 15.7 |
| 9–11 months | 107 | 14.9 | 0.13 | † | 13.4 | 13.6 | 14.0 | 14.7 | 15.5 | 15.9 | 16.0 | † |
| 1 year | 308 | 16.4 | 0.09 | 14.4 | 14.7 | 15.0 | 15.5 | 16.4 | 17.2 | 17.5 | 17.9 | 18.2 |
| 2 years | 304 | 18.6 | 0.10 | 16.5 | 17.0 | 17.4 | 17.8 | 18.5 | 19.5 | 19.9 | 20.2 | 20.9 |
| 3 years | 185 | 20.3 | 0.09 | 18.1 | 18.9 | 19.0 | 19.4 | 20.3 | 21.0 | 21.4 | 21.8 | 22.2 |
| 4 years | 231 | 21.8 | 0.13 | 19.5 | 20.1 | 20.4 | 20.8 | 21.6 | 22.8 | 23.2 | 23.8 | 24.4 |
| 5 years | 195 | 23.4 | 0.15 | 20.9 | 21.3 | 21.8 | 22.4 | 23.4 | 24.5 | 24.9 | 25.4 | 25.9 |
| 6 years | 189 | 24.9 | 0.15 | 21.5 | 22.4 | 22.9 | 23.7 | 25.0 | 25.9 | 26.7 | 26.9 | 27.9 |
| 7 years | 209 | 26.1 | 0.13 | 23.5 | 24.0 | 24.3 | 25.0 | 26.0 | 27.2 | 27.6 | 28.2 | 28.6 |
| 8 years | 205 | 27.6 | 0.20 | 24.6 | 25.3 | 25.6 | 26.3 | 27.4 | 28.7 | 29.4 | 29.9 | 30.7 |
| 9 years | 183 | 29.2 | 0.27 | 24.9 | 25.8 | 26.5 | 27.6 | 29.1 | 30.7 | 31.8 | 32.2 | 33.0 |
| 10 years | 194 | 30.4 | 0.18 | 27.0 | 27.5 | 28.1 | 29.0 | 30.4 | 31.7 | 32.0 | 32.5 | 33.6 |
| 11 years | 205 | 32.1 | 0.16 | 28.9 | 29.5 | 29.9 | 30.6 | 31.9 | 33.5 | 34.0 | 34.9 | 35.7 |
| 12 years | 156 | 33.3 | 0.17 | 29.5 | 30.2 | 30.8 | 31.6 | 33.4 | 34.5 | 35.4 | 35.8 | 37.0 |
| 13 years | 142 | 35.5 | 0.24 | 31.8 | 32.5 | 33.4 | 33.9 | 35.4 | 36.9 | 37.8 | 38.3 | 39.5 |
| 14 years | 174 | 36.3 | 0.25 | 32.2 | 33.2 | 33.4 | 34.7 | 36.1 | 38.0 | 39.0 | 39.5 | 40.0 |
| 15 years | 157 | 37.7 | 0.28 | 33.7 | 34.7 | 35.0 | 35.9 | 37.7 | 39.3 | 39.9 | 40.9 | 42.1 |
| 16 years | 170 | 38.2 | 0.17 | 34.5 | 35.3 | 35.7 | 36.8 | 38.2 | 39.5 | 40.5 | 41.0 | 41.5 |
| 17 years | 184 | 38.3 | 0.18 | 34.6 | 35.9 | 36.4 | 37.0 | 38.1 | 39.5 | 40.4 | 41.2 | 41.8 |
| 18 years | 136 | 38.9 | 0.25 | 34.9 | 35.8 | 36.6 | 37.4 | 38.7 | 40.3 | 41.3 | 42.0 | 42.4 |
| 19 years | 175 | 38.6 | 0.22 | 34.6 | 35.6 | 36.6 | 37.0 | 38.7 | 40.0 | 40.9 | 41.3 | 42.4 |
| Female | | | | | | | | | | | | |
| 2–5 months | 112 | 12.1 | 0.14 | 10.2 | 10.9 | 11.0 | 11.4 | 11.9 | 12.7 | 13.1 | 13.4 | 13.9 |
| 6–8 months | 103 | 13.6 | 0.11 | 11.5 | 12.1 | 12.3 | 12.8 | 13.8 | 14.3 | 14.5 | 14.7 | 14.9 |
| 9–11 months | 118 | 14.4 | 0.13 | 12.8 | 13.0 | 13.3 | 13.7 | 14.3 | 14.9 | 15.3 | 15.5 | 15.9 |
| 1 year | 285 | 16.1 | 0.10 | 13.9 | 14.4 | 14.9 | 15.1 | 16.0 | 16.9 | 17.5 | 17.9 | 18.0 |
| 2 years | 261 | 18.3 | 0.11 | 16.5 | 16.9 | 17.0 | 17.4 | 18.3 | 19.0 | 19.4 | 19.7 | 20.6 |
| 3 years | 183 | 20.1 | 0.11 | 17.9 | 18.2 | 18.5 | 19.0 | 20.0 | 20.9 | 21.4 | 21.6 | 22.0 |
| 4 years | 191 | 21.4 | 0.12 | 18.9 | 19.5 | 19.8 | 20.4 | 21.2 | 22.4 | 23.0 | 23.2 | 23.8 |
| 5 years | 171 | 23.1 | 0.17 | 20.9 | 21.2 | 21.5 | 22.0 | 22.9 | 23.9 | 24.4 | 25.0 | † |
| 6 years | 173 | 24.5 | 0.16 | 21.9 | 22.4 | 22.9 | 23.4 | 24.4 | 25.5 | 26.2 | 26.4 | 26.8 |
| 7 years | 202 | 25.9 | 0.14 | † | 23.7 | 24.1 | 24.8 | 25.6 | 27.0 | 27.7 | 28.0 | 28.6 |
| 8 years | 200 | 27.7 | 0.27 | 24.3 | 25.0 | 25.6 | 26.0 | 27.4 | 29.1 | 29.9 | 30.3 | † |
| 9 years | 200 | 29.0 | 0.15 | 26.0 | 26.8 | 27.3 | 27.7 | 28.7 | 30.0 | 30.7 | 31.5 | 32.2 |
| 10 years | 177 | 30.7 | 0.16 | 27.4 | 27.9 | 28.4 | 29.0 | 30.6 | 32.1 | 32.7 | 33.3 | 34.2 |
| 11 years | 211 | 32.3 | 0.16 | 28.6 | 29.1 | 30.0 | 30.5 | 32.0 | 33.8 | 34.5 | 35.1 | 36.0 |
| 12 years | 163 | 33.5 | 0.17 | 29.2 | 30.3 | 31.2 | 32.2 | 33.7 | 34.9 | 35.5 | 35.8 | 37.0 |
| 13 years | 132 | 34.6 | 0.21 | 30.9 | 32.0 | 32.6 | 32.9 | 34.5 | 36.0 | 37.4 | 37.7 | 38.4 |
| 14 years | 164 | 35.1 | 0.18 | 32.2 | 32.6 | 32.9 | 33.4 | 34.9 | 36.5 | 37.1 | 37.5 | 37.9 |
| 15 years | 135 | 35.2 | 0.25 | 31.9 | 32.4 | 32.8 | 33.6 | 35.1 | 36.5 | 37.4 | 38.0 | 38.9 |
| 16 years | 154 | 35.3 | 0.23 | 32.0 | 32.8 | 33.3 | 33.8 | 35.4 | 36.7 | 37.4 | 37.8 | 38.6 |
| 17 years | 142 | 35.3 | 0.21 | 31.5 | 32.2 | 32.9 | 33.7 | 35.2 | 36.6 | 37.2 | 37.5 | 38.3 |
| 18 years | 132 | 35.6 | 0.24 | 32.4 | 32.8 | 33.2 | 34.4 | 35.6 | 36.7 | 37.4 | 38.2 | 39.1 |
| 19 years | 115 | 35.8 | 0.26 | 32.8 | 33.2 | 33.7 | 34.4 | 35.7 | 37.1 | 37.9 | 38.0 | † |

† Standard error not calculated by SUDAAN.

¹Refers to age at time of examination.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 25. Upper arm length in centimeters for females aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|--------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Centimeters | | | | | | | | |
| 20 years and over | 5,753 | 35.8 | 0.06 | 32.2 | 33.0 | 33.6 | 34.3 | 35.8 | 37.1 | 38.0 | 38.5 | 39.4 |
| 20–29 years | 947 | 35.6 | 0.08 | 32.0 | 32.7 | 33.3 | 34.0 | 35.5 | 37.0 | 37.9 | 38.3 | 39.1 |
| 30–39 years | 998 | 35.8 | 0.09 | 32.2 | 33.2 | 33.6 | 34.3 | 35.7 | 37.2 | 38.0 | 38.5 | 39.4 |
| 40–49 years | 1,041 | 35.8 | 0.10 | 32.4 | 33.1 | 33.7 | 34.4 | 35.6 | 37.0 | 38.0 | 38.7 | 39.5 |
| 50–59 years | 845 | 35.9 | 0.12 | 32.3 | 33.2 | 33.7 | 34.4 | 35.9 | 37.0 | 38.0 | 38.5 | 39.7 |
| 60–69 years | 915 | 36.1 | 0.10 | 32.6 | 33.5 | 33.9 | 34.7 | 36.0 | 37.4 | 38.1 | 39.0 | 39.5 |
| 70–79 years | 647 | 36.1 | 0.09 | 32.3 | 33.1 | 33.7 | 34.6 | 36.0 | 37.5 | 38.1 | 38.6 | 39.4 |
| 80 years and over | 360 | 35.2 | 0.13 | 31.9 | 32.6 | 33.0 | 33.9 | 35.2 | 36.5 | 37.2 | 37.8 | 38.5 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,668 | 36.0 | 0.08 | 32.7 | 33.4 | 33.9 | 34.5 | 35.9 | 37.2 | 38.0 | 38.5 | 39.4 |
| 20–39 years | 801 | 35.9 | 0.08 | 32.7 | 33.5 | 33.9 | 34.4 | 35.9 | 37.3 | 38.0 | 38.4 | 39.1 |
| 40–59 years | 839 | 36.0 | 0.11 | 32.9 | 33.5 | 33.9 | 34.5 | 35.9 | 37.1 | 38.0 | 38.6 | 39.5 |
| 60 years and over | 1,028 | 36.0 | 0.08 | 32.5 | 33.4 | 33.9 | 34.6 | 35.9 | 37.2 | 38.0 | 38.5 | 39.4 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,090 | 36.8 | 0.10 | 33.4 | 34.0 | 34.5 | 35.2 | 36.8 | 38.2 | 39.0 | 39.6 | 40.6 |
| 20–39 years | 378 | 36.6 | 0.13 | 33.4 | 33.9 | 34.3 | 35.0 | 36.5 | 38.0 | 38.9 | 39.4 | 40.5 |
| 40–59 years | 370 | 36.9 | 0.13 | 33.4 | 34.1 | 34.9 | 35.5 | 36.9 | 38.3 | 38.9 | 39.7 | 40.6 |
| 60 years and over | 342 | 37.0 | 0.14 | 33.7 | 34.0 | 34.7 | 35.3 | 37.0 | 38.3 | 39.2 | 39.9 | 40.7 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,716 | 34.7 | 0.07 | 31.6 | 32.0 | 32.5 | 33.3 | 34.7 | 36.0 | 36.8 | 37.3 | 38.0 |
| 20–39 years | 655 | 34.7 | 0.11 | 31.5 | 32.0 | 32.5 | 33.2 | 34.7 | 36.0 | 36.9 | 37.4 | 38.1 |
| 40–59 years | 572 | 34.9 | 0.09 | 31.8 | 32.3 | 32.8 | 33.5 | 34.8 | 36.0 | 36.8 | 37.2 | 38.0 |
| 60 years and over | 489 | 34.6 | 0.09 | 31.5 | 32.1 | 32.7 | 33.3 | 34.5 | 35.7 | 36.5 | 37.0 | 37.9 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 1,053 | 34.7 | 0.07 | 31.6 | 32.0 | 32.5 | 33.3 | 34.8 | 36.0 | 36.7 | 37.1 | 38.0 |
| 20–39 years | 417 | 34.6 | 0.11 | 31.5 | 31.9 | 32.4 | 33.1 | 34.8 | 36.0 | 36.6 | 37.2 | 38.0 |
| 40–59 years | 345 | 34.9 | 0.11 | 31.7 | 32.4 | 32.8 | 33.4 | 34.9 | 36.0 | 36.9 | 37.0 | 38.0 |
| 60 years and over | 291 | 34.6 | 0.11 | 31.6 | 32.3 | 32.7 | 33.3 | 34.7 | 35.6 | 36.4 | 36.8 | 37.5 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 26. Upper arm length in centimeters for males aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|--------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Centimeters | | | | | | | | |
| 20 years and over | 5,462 | 39.1 | 0.07 | 35.2 | 36.0 | 36.6 | 37.5 | 39.0 | 40.6 | 41.5 | 42.0 | 42.9 |
| 20–29 years | 869 | 38.6 | 0.12 | 34.9 | 35.6 | 36.0 | 36.9 | 38.5 | 40.4 | 41.1 | 41.6 | 42.2 |
| 30–39 years | 908 | 39.0 | 0.08 | 35.1 | 36.0 | 36.7 | 37.4 | 39.0 | 40.4 | 41.5 | 42.0 | 42.8 |
| 40–49 years | 912 | 39.2 | 0.10 | 35.2 | 36.2 | 36.9 | 37.6 | 39.0 | 40.7 | 41.5 | 42.0 | 42.9 |
| 50–59 years | 912 | 39.3 | 0.13 | 35.7 | 36.5 | 36.9 | 37.9 | 39.3 | 40.8 | 41.6 | 42.0 | 42.9 |
| 60–69 years | 906 | 39.3 | 0.10 | 35.2 | 36.1 | 36.9 | 37.8 | 39.2 | 41.0 | 41.9 | 42.4 | 43.4 |
| 70–79 years | 619 | 39.1 | 0.13 | 35.2 | 36.2 | 36.9 | 37.8 | 39.0 | 40.4 | 41.3 | 42.0 | 43.1 |
| 80 years and over | 336 | 38.7 | 0.12 | 34.9 | 35.9 | 36.4 | 37.1 | 38.6 | 40.1 | 41.0 | 41.3 | 41.9 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,648 | 39.4 | 0.07 | 35.8 | 36.6 | 37.2 | 37.9 | 39.4 | 40.9 | 41.7 | 42.1 | 42.9 |
| 20–39 years | 767 | 39.2 | 0.11 | 35.4 | 36.1 | 36.9 | 37.7 | 39.2 | 40.7 | 41.5 | 42.0 | 42.7 |
| 40–59 years | 817 | 39.6 | 0.08 | 36.3 | 36.9 | 37.4 | 38.0 | 39.6 | 40.9 | 41.7 | 42.1 | 42.9 |
| 60 years and over | 1,064 | 39.4 | 0.11 | 35.7 | 36.5 | 37.2 | 37.9 | 39.3 | 40.9 | 41.9 | 42.3 | 43.2 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,042 | 39.5 | 0.11 | 35.9 | 36.6 | 37.2 | 37.9 | 39.2 | 40.9 | 41.9 | 42.4 | 43.4 |
| 20–39 years | 337 | 39.3 | 0.16 | 35.9 | 36.5 | 37.0 | 37.9 | 39.2 | 40.5 | 41.4 | 42.0 | 42.8 |
| 40–59 years | 354 | 39.6 | 0.16 | 35.8 | 36.7 | 37.2 | 37.9 | 39.2 | 41.1 | 42.1 | 42.9 | 43.8 |
| 60 years and over | 351 | 39.7 | 0.19 | 36.1 | 37.1 | 37.6 | 38.3 | 39.4 | 41.0 | 41.9 | 42.6 | 43.4 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,508 | 37.9 | 0.08 | 34.4 | 35.1 | 35.6 | 36.3 | 37.7 | 39.2 | 40.0 | 40.6 | 41.5 |
| 20–39 years | 562 | 37.9 | 0.11 | 34.3 | 35.0 | 35.6 | 36.3 | 37.7 | 39.3 | 40.2 | 40.9 | 41.9 |
| 40–59 years | 570 | 37.9 | 0.08 | 34.5 | 35.2 | 35.7 | 36.5 | 37.9 | 39.2 | 39.9 | 40.4 | 41.0 |
| 60 years and over | 376 | 37.5 | 0.10 | 34.3 | 35.1 | 35.5 | 36.2 | 37.3 | 38.8 | 39.4 | 40.0 | 40.8 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 968 | 37.7 | 0.07 | 34.3 | 35.1 | 35.5 | 36.3 | 37.6 | 39.0 | 39.9 | 40.5 | 41.2 |
| 20–39 years | 377 | 37.8 | 0.12 | 34.0 | 35.0 | 35.6 | 36.2 | 37.6 | 39.1 | 40.0 | 40.7 | 41.5 |
| 40–59 years | 368 | 37.7 | 0.09 | 34.4 | 35.2 | 35.5 | 36.3 | 37.9 | 39.0 | 39.6 | 40.1 | 40.9 |
| 60 years and over | 223 | 37.5 | 0.13 | 34.2 | 35.2 | 35.5 | 36.2 | 37.3 | 38.7 | 39.1 | 39.8 | 41.0 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 27. Subscapular skinfold thickness in millimeters for children and adolescents aged 2 months to 19 years and number of examined persons, mean, standard error of the mean, and selected percentiles, by sex and age: United States, 2007–2010

| Sex and age ¹ | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|--------------------------|----------------------------|------|----------------------------|-------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| Male | | | | Millimeters | | | | | | | | |
| 2–5 months | 121 | 7.9 | 0.17 | 5.5 | 5.8 | 6.2 | 6.5 | 7.7 | 8.8 | 9.9 | 10.0 | 11.2 |
| 6–8 months | 98 | 7.9 | 0.26 | † | 5.4 | 5.9 | 6.5 | 7.7 | 9.1 | 9.9 | 10.1 | 10.3 |
| 9–11 months | 106 | 7.5 | 0.22 | † | 5.3 | 5.5 | 5.9 | 7.0 | 8.3 | 9.0 | 10.2 | 11.5 |
| 1 year | 305 | 6.9 | 0.11 | 4.7 | 5.0 | 5.2 | 5.7 | 6.5 | 7.7 | 8.4 | 9.0 | 9.8 |
| 2 years | 289 | 6.5 | 0.18 | 4.4 | 4.8 | 5.0 | 5.2 | 6.2 | 7.1 | 7.9 | 8.4 | 9.6 |
| 3 years | 179 | 6.4 | 0.17 | † | 4.5 | 4.7 | 5.1 | 5.9 | 6.8 | 7.9 | 9.0 | 10.5 |
| 4 years | 226 | 6.3 | 0.17 | 4.0 | 4.2 | 4.5 | 4.9 | 5.7 | 6.9 | 7.6 | 8.4 | 10.1 |
| 5 years | 190 | 6.3 | 0.16 | 4.0 | 4.2 | 4.4 | 4.7 | 5.7 | 6.9 | 7.9 | 8.7 | 11.0 |
| 6 years | 187 | 7.0 | 0.31 | 4.0 | 4.3 | 4.5 | 4.8 | 5.4 | 6.8 | 8.9 | 13.4 | 17.2 |
| 7 years | 207 | 7.6 | 0.36 | 4.0 | 4.3 | 4.5 | 4.9 | 5.6 | 8.1 | 11.8 | 13.1 | 18.1 |
| 8 years | 201 | 8.9 | 0.49 | 4.1 | 4.2 | 4.9 | 5.1 | 6.6 | 9.8 | 13.9 | 15.6 | 21.0 |
| 9 years | 177 | 9.6 | 0.57 | 4.2 | 4.5 | 4.7 | 5.2 | 6.7 | 11.1 | 15.7 | 20.5 | 23.2 |
| 10 years | 192 | 11.0 | 0.62 | 4.2 | 4.9 | 5.2 | 5.7 | 7.9 | 14.2 | 17.4 | 19.9 | 25.9 |
| 11 years | 200 | 10.9 | 0.52 | 4.9 | 5.0 | 5.2 | 5.9 | 8.0 | 14.5 | 18.2 | 20.6 | 23.7 |
| 12 years | 151 | 12.0 | 0.50 | 4.6 | 4.9 | 5.4 | 5.9 | 8.9 | 16.1 | 19.8 | 24.6 | 26.8 |
| 13 years | 140 | 11.4 | 0.84 | 5.1 | 5.9 | 6.1 | 6.7 | 8.2 | 13.5 | 19.8 | 22.0 | 26.3 |
| 14 years | 169 | 11.0 | 0.68 | 4.9 | 5.7 | 6.0 | 6.3 | 8.2 | 12.9 | 18.2 | 22.0 | 25.5 |
| 15 years | 152 | 11.8 | 0.55 | 5.7 | 6.3 | 6.8 | 7.4 | 9.1 | 14.0 | 16.6 | 20.4 | 27.7 |
| 16 years | 165 | 12.8 | 0.59 | † | 6.9 | 7.4 | 8.2 | 10.0 | 15.3 | 19.2 | 22.0 | 28.3 |
| 17 years | 176 | 13.0 | 0.70 | 6.3 | 7.0 | 7.7 | 8.4 | 10.1 | 15.2 | 20.6 | 23.4 | 25.9 |
| 18 years | 130 | 14.8 | 0.71 | 7.3 | 7.6 | 8.5 | 9.3 | 13.2 | 19.0 | 21.2 | 24.7 | 27.5 |
| 19 years | 167 | 13.6 | 0.60 | 6.6 | 7.0 | 7.9 | 9.0 | 11.3 | 16.4 | 19.9 | 23.0 | 26.5 |
| Female | | | | | | | | | | | | |
| 2–5 months | 111 | 8.2 | 0.19 | 5.2 | 5.4 | 5.8 | 6.7 | 8.0 | 9.2 | 10.4 | 11.1 | 11.8 |
| 6–8 months | 103 | 7.5 | 0.17 | † | 5.4 | 5.7 | 6.5 | 7.4 | 8.2 | 9.0 | 9.3 | † |
| 9–11 months | 118 | 7.8 | 0.23 | 5.0 | 5.3 | 5.8 | 6.6 | 7.5 | 8.9 | 9.2 | 9.7 | 11.1 |
| 1 year | 284 | 7.2 | 0.14 | 4.8 | 5.2 | 5.4 | 5.8 | 6.8 | 8.0 | 8.7 | 9.2 | 10.4 |
| 2 years | 253 | 6.8 | 0.19 | 4.5 | 4.9 | 5.0 | 5.5 | 6.4 | 7.5 | 8.2 | 9.0 | 10.5 |
| 3 years | 179 | 6.7 | 0.19 | 4.6 | 4.9 | 5.0 | 5.3 | 6.2 | 7.5 | 8.8 | 9.3 | 9.8 |
| 4 years | 188 | 6.9 | 0.14 | 4.6 | 4.8 | 4.9 | 5.2 | 6.1 | 7.5 | 8.2 | 9.3 | 12.1 |
| 5 years | 166 | 7.9 | 0.39 | 4.4 | 4.6 | 4.9 | 5.2 | 6.3 | 8.6 | 11.1 | 13.4 | 17.2 |
| 6 years | 172 | 7.5 | 0.31 | 4.3 | 4.7 | 4.8 | 5.2 | 6.2 | 8.3 | 10.4 | 11.7 | 14.3 |
| 7 years | 200 | 9.0 | 0.47 | 4.3 | 4.7 | 4.9 | 5.5 | 6.5 | 10.2 | 13.9 | 16.6 | 20.0 |
| 8 years | 192 | 10.6 | 0.67 | 4.5 | 5.1 | 5.3 | 6.1 | 7.8 | 14.0 | 17.4 | 19.7 | 24.3 |
| 9 years | 190 | 11.3 | 0.77 | 4.3 | 5.1 | 5.6 | 6.0 | 7.8 | 15.5 | 19.7 | 22.6 | 27.5 |
| 10 years | 169 | 12.0 | 0.55 | 5.6 | 6.0 | 6.5 | 7.1 | 9.7 | 15.2 | 18.6 | 21.7 | 23.0 |
| 11 years | 196 | 12.9 | 0.64 | 4.9 | 5.7 | 6.3 | 7.0 | 10.2 | 17.5 | 21.3 | 25.4 | 27.2 |
| 12 years | 156 | 13.1 | 0.75 | 5.5 | 5.9 | 6.4 | 7.5 | 10.7 | 16.8 | 20.5 | 24.7 | 28.0 |
| 13 years | 122 | 14.2 | 0.81 | † | 6.8 | 7.7 | 8.3 | 11.0 | 17.4 | 24.0 | 25.4 | 31.3 |
| 14 years | 155 | 15.1 | 0.60 | 6.3 | 7.2 | 8.2 | 9.8 | 13.6 | 18.4 | 21.9 | 24.9 | 30.3 |
| 15 years | 129 | 16.7 | 0.97 | 6.9 | 8.1 | 9.1 | 10.0 | 14.2 | 22.7 | 25.8 | 30.0 | 31.8 |
| 16 years | 138 | 15.6 | 0.85 | † | 7.9 | 8.7 | 10.2 | 12.7 | 20.1 | 23.2 | 25.7 | 29.0 |
| 17 years | 132 | 15.6 | 0.70 | 7.2 | 8.6 | 9.3 | 11.0 | 13.0 | 19.1 | 24.0 | 26.1 | 28.5 |
| 18 years | 118 | 16.0 | 0.91 | 8.1 | 8.6 | 8.8 | 9.5 | 12.7 | 21.8 | 24.4 | 28.6 | 30.9 |
| 19 years | 108 | 18.3 | 0.85 | † | 9.3 | 10.6 | 12.7 | 16.8 | 22.1 | 27.2 | 31.1 | 33.6 |

† Standard error not calculated by SUDAAN.

¹Refers to age at time of examination.

NOTE: Pregnant females were excluded.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 28. Subscapular skinfold thickness in millimeters for females aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|--------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Millimeters | | | | | | | | |
| 20 years and over | 4,723 | 21.7 | 0.17 | 8.6 | 10.3 | 11.9 | 14.5 | 21.2 | 28.1 | 31.6 | 33.9 | 36.0 |
| 20–29 years | 740 | 20.0 | 0.53 | 8.5 | 9.6 | 10.9 | 13.0 | 18.9 | 25.9 | 30.7 | 33.6 | 35.9 |
| 30–39 years | 762 | 22.2 | 0.46 | 8.9 | 10.4 | 11.9 | 15.3 | 22.2 | 29.1 | 32.0 | 33.9 | 36.6 |
| 40–49 years | 844 | 22.4 | 0.37 | 8.7 | 10.9 | 12.2 | 15.5 | 22.6 | 28.4 | 32.0 | 33.9 | 36.5 |
| 50–59 years | 676 | 22.9 | 0.38 | 9.2 | 11.0 | 12.9 | 16.4 | 22.8 | 29.6 | 32.9 | 35.0 | 36.8 |
| 60–69 years | 782 | 23.3 | 0.36 | 9.6 | 12.3 | 14.2 | 17.7 | 23.1 | 29.4 | 31.9 | 33.7 | 35.5 |
| 70–79 years | 586 | 21.5 | 0.36 | 8.8 | 10.1 | 11.8 | 14.7 | 21.1 | 27.9 | 30.9 | 32.8 | 35.1 |
| 80 years and over | 333 | 15.4 | 0.29 | 5.6 | 7.2 | 8.4 | 10.3 | 14.4 | 19.9 | 22.3 | 23.9 | 27.1 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,325 | 20.7 | 0.22 | 8.2 | 9.6 | 11.1 | 13.6 | 20.1 | 27.0 | 30.8 | 32.8 | 35.3 |
| 20–39 years | 659 | 19.8 | 0.52 | 8.1 | 9.3 | 10.5 | 12.6 | 18.4 | 26.1 | 30.6 | 32.7 | 35.4 |
| 40–59 years | 725 | 21.6 | 0.31 | 8.6 | 10.2 | 11.9 | 14.6 | 21.1 | 27.3 | 31.1 | 33.6 | 35.9 |
| 60 years and over | 941 | 20.5 | 0.24 | 7.5 | 9.3 | 11.1 | 13.9 | 20.0 | 26.8 | 30.1 | 31.8 | 34.6 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 773 | 26.1 | 0.39 | 10.3 | 13.2 | 16.4 | 19.9 | 27.1 | 32.9 | 35.3 | 36.7 | 38.0 |
| 20–39 years | 250 | 25.1 | 0.49 | 10.0 | 11.9 | 15.1 | 18.4 | 25.5 | 32.7 | 35.0 | 36.3 | 37.4 |
| 40–59 years | 256 | 27.3 | 0.48 | 11.1 | 14.9 | 17.7 | 21.2 | 28.6 | 34.3 | 36.2 | 37.2 | 38.6 |
| 60 years and over | 267 | 25.4 | 0.54 | 10.1 | 13.2 | 17.0 | 20.3 | 26.2 | 31.8 | 33.0 | 35.3 | 37.8 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,397 | 23.7 | 0.27 | 10.6 | 13.2 | 15.2 | 18.0 | 23.5 | 29.5 | 32.3 | 34.2 | 36.6 |
| 20–39 years | 501 | 23.0 | 0.39 | 10.5 | 12.3 | 14.0 | 17.3 | 22.7 | 28.9 | 31.8 | 34.4 | 36.7 |
| 40–59 years | 458 | 25.1 | 0.47 | 12.9 | 15.4 | 17.1 | 19.8 | 25.2 | 30.8 | 32.9 | 34.5 | 36.7 |
| 60 years and over | 438 | 22.4 | 0.40 | 8.9 | 11.5 | 13.8 | 16.8 | 22.3 | 27.9 | 31.0 | 32.9 | 35.9 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 841 | 23.9 | 0.34 | 10.7 | 13.7 | 15.5 | 18.3 | 23.8 | 29.8 | 32.4 | 34.1 | 36.6 |
| 20–39 years | 307 | 23.7 | 0.48 | 10.9 | 13.5 | 15.3 | 17.9 | 23.3 | 29.2 | 32.3 | 34.6 | 36.9 |
| 40–59 years | 276 | 25.2 | 0.60 | 12.7 | 15.3 | 16.8 | 20.1 | 25.3 | 30.9 | 32.8 | 33.6 | 36.2 |
| 60 years and over | 258 | 21.6 | 0.59 | 8.2 | 10.5 | 12.8 | 16.3 | 21.3 | 26.9 | 30.4 | 32.6 | 35.4 |

¹Persons of other races and ethnicities are included.

²Mexican-American persons are included in the Hispanic group.

NOTE: Pregnant females were excluded.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 29. Subscapular skinfold thickness in millimeters for males aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|--------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Millimeters | | | | | | | | |
| 20 years and over | 4,645 | 20.2 | 0.21 | 8.9 | 10.3 | 11.5 | 14.2 | 19.6 | 25.2 | 28.6 | 30.5 | 33.3 |
| 20–29 years | 792 | 17.8 | 0.40 | 7.6 | 8.8 | 9.5 | 11.0 | 16.5 | 23.2 | 27.0 | 28.9 | 31.4 |
| 30–39 years | 758 | 20.5 | 0.42 | 8.9 | 10.6 | 11.4 | 14.7 | 20.0 | 25.8 | 29.0 | 31.1 | 33.8 |
| 40–49 years | 764 | 21.0 | 0.37 | 9.6 | 11.0 | 12.6 | 15.3 | 20.4 | 26.1 | 28.9 | 30.9 | 33.8 |
| 50–59 years | 755 | 21.2 | 0.32 | 10.2 | 11.9 | 13.4 | 15.5 | 20.5 | 26.1 | 29.0 | 31.2 | 34.0 |
| 60–69 years | 752 | 21.5 | 0.35 | 9.6 | 11.3 | 13.1 | 15.8 | 21.2 | 26.3 | 29.9 | 31.4 | 35.0 |
| 70–79 years | 522 | 20.6 | 0.33 | 9.8 | 11.8 | 13.0 | 15.0 | 20.1 | 25.4 | 27.8 | 29.9 | 33.8 |
| 80 years and over | 302 | 17.9 | 0.41 | 9.4 | 10.3 | 11.1 | 13.0 | 17.0 | 21.9 | 24.3 | 26.3 | 29.7 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,302 | 20.0 | 0.26 | 8.8 | 10.2 | 11.3 | 14.0 | 19.4 | 25.0 | 28.3 | 30.1 | 33.0 |
| 20–39 years | 695 | 18.6 | 0.46 | 7.8 | 9.0 | 9.8 | 11.8 | 17.9 | 24.3 | 27.9 | 29.0 | 32.4 |
| 40–59 years | 690 | 20.9 | 0.30 | 10.1 | 11.4 | 13.0 | 15.2 | 20.1 | 25.8 | 28.8 | 30.9 | 33.7 |
| 60 years and over | 917 | 20.6 | 0.26 | 9.5 | 11.0 | 12.4 | 14.9 | 20.1 | 25.3 | 28.5 | 30.3 | 33.8 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 832 | 20.2 | 0.38 | 7.9 | 9.6 | 10.6 | 13.1 | 19.1 | 26.4 | 29.6 | 31.7 | 35.8 |
| 20–39 years | 274 | 18.7 | 0.52 | 7.4 | 9.1 | 9.9 | 11.3 | 17.0 | 24.4 | 28.9 | 30.7 | 34.5 |
| 40–59 years | 282 | 21.2 | 0.55 | 7.9 | 9.7 | 11.3 | 14.3 | 20.9 | 27.0 | 30.6 | 32.6 | 36.3 |
| 60 years and over | 276 | 22.0 | 0.52 | 9.3 | 11.0 | 13.0 | 15.6 | 22.0 | 27.5 | 30.2 | 32.3 | 36.3 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,283 | 21.0 | 0.31 | 9.6 | 11.3 | 13.1 | 15.4 | 20.5 | 26.0 | 28.7 | 30.6 | 33.5 |
| 20–39 years | 481 | 20.1 | 0.39 | 8.9 | 10.5 | 11.8 | 14.2 | 19.7 | 25.1 | 28.0 | 29.7 | 33.2 |
| 40–59 years | 482 | 22.4 | 0.48 | 11.0 | 13.2 | 15.0 | 17.1 | 21.9 | 27.2 | 30.0 | 31.8 | 34.9 |
| 60 years and over | 320 | 20.8 | 0.35 | 11.0 | 12.8 | 14.1 | 15.4 | 20.1 | 25.6 | 27.2 | 29.4 | 32.1 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 825 | 21.0 | 0.37 | 9.8 | 11.5 | 13.1 | 15.6 | 20.5 | 25.9 | 28.6 | 30.6 | 33.5 |
| 20–39 years | 316 | 20.6 | 0.46 | 9.1 | 10.6 | 12.2 | 14.9 | 20.1 | 25.7 | 28.6 | 30.8 | 33.6 |
| 40–59 years | 316 | 21.7 | 0.50 | 10.6 | 12.7 | 14.5 | 16.5 | 21.6 | 26.0 | 28.8 | 30.7 | 33.7 |
| 60 years and over | 193 | 20.4 | 0.49 | 11.0 | 12.8 | 14.0 | 15.4 | 19.8 | 24.9 | 26.9 | 28.5 | 31.0 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 30. Triceps skinfold thickness in millimeters for children and adolescents aged 2 months to 19 years and number of examined persons, mean, standard error of the mean, and selected percentiles, by sex and age: United States, 2007–2010

| Sex and age ¹ | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|--------------------------|----------------------------|------|----------------------------|-------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| Male | | | | Millimeters | | | | | | | | |
| 2–5 months | 122 | 10.4 | 0.27 | 6.8 | 7.7 | 8.0 | 8.9 | 10.1 | 11.9 | 13.3 | 13.7 | 14.6 |
| 6–8 months | 97 | 10.1 | 0.24 | 6.3 | 7.7 | 8.2 | 8.8 | 9.7 | 11.1 | 11.7 | 12.4 | 13.2 |
| 9–11 months | 106 | 9.6 | 0.37 | 6.4 | 6.9 | 7.4 | 7.8 | 8.9 | 10.8 | 11.4 | 12.4 | 14.1 |
| 1 year | 304 | 9.4 | 0.16 | 6.2 | 6.9 | 7.1 | 7.8 | 8.9 | 10.4 | 11.8 | 12.8 | 13.4 |
| 2 years | 295 | 9.3 | 0.18 | 6.2 | 6.8 | 7.1 | 7.8 | 9.0 | 10.6 | 11.3 | 12.0 | 13.1 |
| 3 years | 182 | 9.5 | 0.25 | 6.1 | 6.8 | 7.2 | 7.8 | 8.9 | 10.3 | 11.2 | 13.1 | 14.9 |
| 4 years | 228 | 9.2 | 0.24 | 5.6 | 6.2 | 6.6 | 7.2 | 8.4 | 10.4 | 12.0 | 12.7 | 14.6 |
| 5 years | 194 | 9.3 | 0.23 | 5.5 | 6.2 | 6.7 | 7.3 | 8.5 | 10.4 | 11.8 | 12.6 | 15.3 |
| 6 years | 189 | 9.9 | 0.41 | 5.7 | 5.9 | 6.2 | 6.9 | 8.2 | 11.4 | 14.6 | 17.0 | 21.1 |
| 7 years | 209 | 10.3 | 0.39 | 5.6 | 5.9 | 6.1 | 6.9 | 8.6 | 12.1 | 16.3 | 17.1 | 19.1 |
| 8 years | 205 | 11.9 | 0.43 | 5.6 | 6.0 | 6.7 | 7.6 | 10.1 | 15.1 | 18.2 | 19.6 | 22.3 |
| 9 years | 182 | 12.9 | 0.57 | 5.6 | 6.3 | 6.8 | 7.7 | 10.3 | 17.0 | 20.6 | 23.0 | 25.8 |
| 10 years | 194 | 14.7 | 0.63 | 6.6 | 7.3 | 7.7 | 8.8 | 12.9 | 20.0 | 22.6 | 24.3 | 27.1 |
| 11 years | 205 | 14.8 | 0.45 | 6.3 | 7.1 | 7.5 | 9.1 | 12.9 | 20.6 | 23.2 | 25.5 | 28.1 |
| 12 years | 154 | 15.7 | 0.76 | 6.4 | 7.0 | 7.4 | 8.8 | 14.0 | 21.1 | 24.1 | 27.5 | 29.7 |
| 13 years | 142 | 13.7 | 0.80 | 5.6 | 6.4 | 7.1 | 8.1 | 11.1 | 17.8 | 21.8 | 25.2 | 29.2 |
| 14 years | 173 | 12.9 | 0.83 | 5.3 | 5.9 | 6.2 | 7.2 | 9.9 | 15.7 | 20.5 | 25.5 | 29.0 |
| 15 years | 155 | 12.6 | 0.69 | 4.9 | 5.9 | 6.5 | 7.3 | 10.2 | 16.9 | 20.1 | 22.9 | 27.3 |
| 16 years | 168 | 12.7 | 0.60 | 5.9 | 6.6 | 6.9 | 7.8 | 10.5 | 14.8 | 18.3 | 21.7 | 29.8 |
| 17 years | 180 | 13.2 | 0.91 | 4.8 | 5.8 | 6.3 | 7.6 | 9.9 | 16.0 | 22.9 | 25.3 | 31.8 |
| 18 years | 135 | 14.0 | 0.71 | 6.3 | 6.9 | 7.4 | 8.3 | 12.4 | 17.9 | 20.4 | 22.9 | 28.4 |
| 19 years | 174 | 12.6 | 0.70 | 5.2 | 6.1 | 6.5 | 7.4 | 10.5 | 14.1 | 21.6 | 23.0 | 27.0 |
| Female | | | | | | | | | | | | |
| 2–5 months | 111 | 10.2 | 0.16 | 7.3 | 7.5 | 7.9 | 8.5 | 9.9 | 11.6 | 12.1 | 12.8 | 13.6 |
| 6–8 months | 103 | 10.3 | 0.22 | 6.7 | 7.5 | 8.1 | 8.6 | 10.1 | 11.8 | 12.8 | 13.6 | † |
| 9–11 months | 118 | 10.2 | 0.31 | 6.8 | 7.7 | 8.1 | 8.5 | 10.0 | 11.6 | 11.9 | 12.6 | † |
| 1 year | 284 | 9.6 | 0.19 | 6.1 | 6.9 | 7.4 | 8.0 | 9.2 | 10.8 | 11.9 | 12.9 | 13.8 |
| 2 years | 254 | 10.0 | 0.26 | 6.5 | 7.0 | 7.4 | 8.3 | 9.6 | 11.1 | 11.9 | 12.6 | 15.0 |
| 3 years | 182 | 9.9 | 0.24 | 6.2 | 6.8 | 7.2 | 8.0 | 9.6 | 11.3 | 12.1 | 13.0 | 13.6 |
| 4 years | 190 | 10.5 | 0.18 | 6.2 | 7.8 | 8.1 | 8.7 | 10.0 | 11.8 | 13.0 | 13.8 | 15.0 |
| 5 years | 169 | 11.1 | 0.32 | 7.0 | 7.5 | 7.9 | 8.6 | 10.2 | 12.4 | 14.3 | 15.8 | 18.2 |
| 6 years | 173 | 10.9 | 0.40 | 6.3 | 6.9 | 7.3 | 8.0 | 10.0 | 12.2 | 13.8 | 15.5 | 18.0 |
| 7 years | 201 | 12.2 | 0.42 | 6.1 | 6.9 | 7.6 | 8.5 | 10.7 | 13.9 | 16.9 | 19.5 | 23.7 |
| 8 years | 199 | 14.3 | 0.58 | 7.1 | 7.8 | 8.5 | 9.5 | 13.1 | 18.5 | 20.5 | 23.2 | 23.9 |
| 9 years | 200 | 15.0 | 0.73 | 6.9 | 7.7 | 8.9 | 9.8 | 13.6 | 17.9 | 23.2 | 25.3 | 28.7 |
| 10 years | 175 | 15.4 | 0.49 | 7.2 | 7.9 | 9.0 | 10.1 | 14.9 | 19.4 | 22.6 | 24.0 | 26.2 |
| 11 years | 210 | 15.9 | 0.71 | 8.3 | 9.0 | 9.2 | 10.3 | 13.6 | 20.5 | 24.8 | 26.4 | 29.1 |
| 12 years | 162 | 16.2 | 0.62 | 7.6 | 8.9 | 9.2 | 10.6 | 15.0 | 20.2 | 23.3 | 24.9 | 27.6 |
| 13 years | 130 | 17.8 | 0.71 | 8.2 | 9.5 | 9.8 | 11.5 | 16.8 | 21.5 | 25.9 | 29.0 | 30.4 |
| 14 years | 163 | 19.3 | 0.58 | 9.2 | 11.0 | 11.7 | 14.1 | 18.2 | 23.9 | 27.1 | 28.2 | 30.7 |
| 15 years | 132 | 19.1 | 0.78 | 8.9 | 10.8 | 11.7 | 13.2 | 17.0 | 24.2 | 27.5 | 29.9 | 31.8 |
| 16 years | 150 | 19.4 | 0.53 | 10.4 | 11.7 | 12.9 | 14.6 | 18.2 | 23.0 | 26.0 | 26.9 | 33.0 |
| 17 years | 137 | 19.7 | 0.87 | 10.1 | 11.5 | 12.6 | 14.4 | 18.3 | 23.0 | 27.2 | 29.3 | 33.2 |
| 18 years | 124 | 18.4 | 0.71 | 10.1 | 11.1 | 11.9 | 13.6 | 16.6 | 22.5 | 26.6 | 28.0 | 28.7 |
| 19 years | 113 | 20.6 | 0.90 | 9.1 | 10.5 | 11.5 | 14.3 | 20.7 | 24.2 | 30.5 | 31.7 | 33.4 |

† Standard error not calculated by SUDAAN.

¹Refers to age at time of examination.

NOTE: Pregnant females were excluded.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 31. Triceps skinfold thickness in millimeters for females aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|--------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Millimeters | | | | | | | | |
| 20 years and over | 5,198 | 23.7 | 0.17 | 11.9 | 14.0 | 15.8 | 18.0 | 23.5 | 29.0 | 31.9 | 33.7 | 35.9 |
| 20–29 years | 815 | 22.2 | 0.44 | 11.0 | 13.2 | 14.0 | 16.5 | 21.3 | 27.7 | 31.1 | 32.6 | 35.1 |
| 30–39 years | 858 | 24.2 | 0.40 | 12.1 | 14.7 | 16.2 | 18.6 | 24.1 | 30.0 | 32.2 | 33.8 | 36.0 |
| 40–49 years | 943 | 24.2 | 0.26 | 11.5 | 14.1 | 15.9 | 18.7 | 24.7 | 29.5 | 32.1 | 33.9 | 35.8 |
| 50–59 years | 769 | 24.6 | 0.30 | 12.9 | 15.6 | 16.8 | 19.2 | 24.5 | 29.8 | 32.2 | 34.0 | 36.3 |
| 60–69 years | 845 | 24.7 | 0.34 | 13.0 | 15.8 | 17.2 | 20.2 | 24.9 | 29.4 | 31.9 | 33.8 | 35.9 |
| 70–79 years | 613 | 23.4 | 0.33 | 11.5 | 14.3 | 16.3 | 18.9 | 22.9 | 28.0 | 31.0 | 32.8 | 35.2 |
| 80 years and over | 355 | 19.4 | 0.34 | 9.4 | 11.2 | 12.4 | 14.7 | 19.0 | 23.2 | 25.9 | 27.8 | 31.7 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,470 | 23.4 | 0.24 | 11.7 | 13.9 | 15.6 | 17.9 | 23.0 | 28.7 | 31.3 | 33.0 | 35.4 |
| 20–39 years | 711 | 22.8 | 0.41 | 11.6 | 13.4 | 14.4 | 17.0 | 22.1 | 28.6 | 31.4 | 32.7 | 35.0 |
| 40–59 years | 780 | 24.0 | 0.30 | 12.0 | 14.2 | 16.2 | 18.5 | 24.3 | 29.2 | 31.8 | 33.8 | 35.8 |
| 60 years and over | 979 | 23.1 | 0.22 | 11.4 | 13.9 | 15.8 | 18.1 | 22.5 | 27.9 | 30.9 | 32.5 | 34.9 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 934 | 25.7 | 0.34 | 11.1 | 14.7 | 16.7 | 20.4 | 26.2 | 31.9 | 34.2 | 35.2 | 37.5 |
| 20–39 years | 307 | 25.6 | 0.50 | 11.0 | 13.8 | 15.7 | 20.0 | 25.9 | 32.0 | 34.2 | 35.2 | 37.2 |
| 40–59 years | 313 | 26.5 | 0.39 | 12.8 | 15.2 | 18.0 | 21.7 | 27.5 | 31.9 | 34.2 | 35.2 | 37.9 |
| 60 years and over | 314 | 24.6 | 0.70 | 10.9 | 14.7 | 16.1 | 19.7 | 24.9 | 30.0 | 33.1 | 35.0 | 37.1 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,546 | 24.4 | 0.22 | 13.4 | 15.7 | 16.9 | 19.2 | 24.3 | 29.1 | 31.9 | 33.8 | 35.8 |
| 20–39 years | 561 | 23.7 | 0.35 | 13.3 | 15.1 | 16.4 | 18.7 | 23.5 | 28.0 | 31.0 | 33.0 | 35.7 |
| 40–59 years | 526 | 25.8 | 0.36 | 15.0 | 17.0 | 18.3 | 21.0 | 25.7 | 30.8 | 33.1 | 34.4 | 36.1 |
| 60 years and over | 459 | 23.4 | 0.24 | 12.1 | 13.9 | 15.6 | 18.0 | 23.1 | 28.5 | 31.0 | 32.9 | 35.1 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 948 | 24.6 | 0.30 | 13.4 | 15.8 | 17.1 | 19.4 | 24.7 | 29.4 | 32.2 | 33.9 | 36.0 |
| 20–39 years | 353 | 24.1 | 0.43 | 13.5 | 15.5 | 16.6 | 19.0 | 24.0 | 28.5 | 31.8 | 33.4 | 36.0 |
| 40–59 years | 320 | 26.1 | 0.55 | 15.0 | 17.2 | 19.1 | 21.8 | 25.9 | 30.9 | 33.3 | 34.9 | 36.5 |
| 60 years and over | 275 | 23.0 | 0.26 | 11.3 | 13.1 | 15.3 | 17.9 | 23.0 | 28.1 | 30.7 | 31.9 | 34.2 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

NOTE: Pregnant females were excluded.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 32. Triceps skinfold thickness in millimeters for males aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|--------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Millimeters | | | | | | | | |
| 20 years and over | 5,307 | 14.9 | 0.17 | 6.2 | 7.5 | 8.4 | 9.9 | 13.4 | 18.6 | 22.0 | 24.3 | 27.8 |
| 20–29 years | 846 | 14.0 | 0.28 | 5.5 | 6.6 | 7.2 | 8.5 | 12.5 | 17.9 | 21.9 | 23.3 | 26.4 |
| 30–39 years | 875 | 15.1 | 0.26 | 5.9 | 7.7 | 8.5 | 9.9 | 13.9 | 18.8 | 22.2 | 24.8 | 28.3 |
| 40–49 years | 885 | 14.7 | 0.33 | 6.3 | 7.9 | 8.4 | 9.5 | 12.9 | 18.2 | 22.0 | 24.5 | 28.0 |
| 50–59 years | 880 | 15.1 | 0.37 | 7.0 | 8.2 | 9.0 | 10.5 | 13.3 | 18.8 | 21.8 | 24.2 | 28.4 |
| 60–69 years | 880 | 15.9 | 0.31 | 7.2 | 8.4 | 9.3 | 10.8 | 14.9 | 19.8 | 23.2 | 24.9 | 27.9 |
| 70–79 years | 606 | 15.7 | 0.41 | 7.6 | 8.6 | 9.4 | 10.9 | 14.6 | 19.2 | 22.1 | 24.9 | 27.7 |
| 80 years and over | 335 | 14.4 | 0.25 | 7.0 | 8.5 | 8.9 | 9.9 | 13.2 | 16.9 | 20.2 | 22.0 | 25.4 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,588 | 15.1 | 0.22 | 6.5 | 7.8 | 8.7 | 10.1 | 13.4 | 19.0 | 22.1 | 24.4 | 27.6 |
| 20–39 years | 747 | 14.5 | 0.28 | 5.7 | 7.0 | 7.6 | 9.3 | 13.1 | 18.6 | 21.9 | 23.8 | 26.5 |
| 40–59 years | 792 | 15.1 | 0.31 | 7.0 | 8.3 | 8.8 | 10.2 | 13.2 | 18.8 | 22.2 | 24.6 | 28.0 |
| 60 years and over | 1,049 | 15.8 | 0.28 | 7.4 | 8.7 | 9.5 | 11.0 | 14.8 | 19.5 | 22.6 | 24.8 | 27.4 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 984 | 14.5 | 0.26 | 4.9 | 6.0 | 7.0 | 8.4 | 12.6 | 18.8 | 23.1 | 25.4 | 30.1 |
| 20–39 years | 316 | 14.2 | 0.39 | 4.5 | 5.6 | 6.6 | 7.8 | 12.0 | 18.3 | 23.5 | 25.9 | 31.5 |
| 40–59 years | 335 | 14.5 | 0.46 | 4.6 | 6.3 | 7.1 | 9.0 | 12.6 | 18.9 | 22.7 | 24.7 | 29.7 |
| 60 years and over | 333 | 15.4 | 0.37 | 5.6 | 6.8 | 7.8 | 9.5 | 14.4 | 19.3 | 23.7 | 25.8 | 29.2 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,475 | 14.4 | 0.27 | 6.7 | 7.8 | 8.6 | 9.9 | 13.3 | 17.1 | 20.1 | 22.6 | 27.7 |
| 20–39 years | 547 | 14.5 | 0.32 | 6.1 | 7.5 | 8.5 | 9.9 | 13.6 | 17.1 | 20.3 | 22.9 | 28.1 |
| 40–59 years | 559 | 14.2 | 0.34 | 7.0 | 7.9 | 8.4 | 9.8 | 12.9 | 16.9 | 19.5 | 21.8 | 26.8 |
| 60 years and over | 369 | 14.6 | 0.33 | 7.0 | 8.3 | 9.1 | 10.0 | 13.1 | 17.5 | 20.8 | 22.8 | 27.9 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 949 | 14.4 | 0.30 | 6.8 | 7.9 | 8.7 | 10.0 | 13.3 | 17.0 | 20.0 | 21.9 | 27.0 |
| 20–39 years | 366 | 14.7 | 0.37 | 6.2 | 7.8 | 8.7 | 10.1 | 13.8 | 17.2 | 20.3 | 22.8 | 28.1 |
| 40–59 years | 364 | 13.8 | 0.36 | 6.9 | 7.8 | 8.4 | 9.6 | 12.4 | 16.4 | 19.3 | 21.2 | 25.0 |
| 60 years and over | 219 | 14.4 | 0.42 | 7.4 | 8.3 | 9.1 | 10.0 | 12.9 | 17.4 | 19.7 | 21.8 | 27.3 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 33. Upper leg length in centimeters for children and adolescents aged 8–19 years and number of examined persons, mean, standard error of the mean, and selected percentiles, by sex and age: United States, 2007–2010

| Sex and age ¹ | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|--------------------------|----------------------------|------|----------------------------|-------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| Male | | | | Centimeters | | | | | | | | |
| 8 years | 191 | 30.4 | 0.28 | 26.1 | 27.1 | 27.5 | 28.2 | 30.6 | 32.0 | 32.6 | 33.7 | 35.2 |
| 9 years | 182 | 32.1 | 0.37 | 27.0 | 28.2 | 29.0 | 30.2 | 31.9 | 33.8 | 35.1 | 35.9 | 36.9 |
| 10 years | 194 | 33.4 | 0.26 | 29.5 | 30.0 | 30.8 | 31.8 | 33.5 | 35.1 | 35.8 | 36.4 | 37.0 |
| 11 years | 205 | 35.5 | 0.16 | 31.8 | 32.2 | 32.6 | 33.4 | 35.3 | 37.0 | 38.3 | 39.0 | 39.6 |
| 12 years | 156 | 37.2 | 0.20 | 32.3 | 33.3 | 34.0 | 35.3 | 37.1 | 39.1 | 40.4 | 41.2 | 42.0 |
| 13 years | 142 | 39.8 | 0.27 | 35.0 | 35.9 | 36.5 | 38.1 | 39.5 | 41.5 | 42.5 | 43.0 | 43.6 |
| 14 years | 172 | 40.5 | 0.28 | 35.1 | 36.5 | 37.5 | 38.4 | 40.6 | 42.5 | 43.9 | 44.6 | 45.3 |
| 15 years | 155 | 42.0 | 0.29 | 37.0 | 38.2 | 38.9 | 40.1 | 41.9 | 43.6 | 44.9 | 45.7 | 47.1 |
| 16 years | 168 | 42.2 | 0.24 | 38.6 | 38.9 | 39.4 | 40.4 | 42.1 | 43.7 | 44.6 | 45.0 | 45.9 |
| 17 years | 184 | 42.4 | 0.31 | 38.1 | 38.9 | 39.4 | 40.2 | 41.9 | 44.4 | 45.5 | 46.1 | 47.1 |
| 18 years | 136 | 42.3 | 0.22 | 38.3 | 38.6 | 39.4 | 40.1 | 42.2 | 44.0 | 44.9 | 45.2 | 47.2 |
| 19 years | 176 | 42.5 | 0.25 | 38.5 | 39.5 | 40.0 | 40.8 | 42.4 | 44.0 | 44.9 | 45.4 | 46.4 |
| Female | | | | | | | | | | | | |
| 8 years | 188 | 30.1 | 0.27 | 30.1 | 27.2 | 27.5 | 28.2 | 29.7 | 32.0 | 32.4 | 33.1 | 34.1 |
| 9 years | 199 | 31.8 | 0.18 | 31.8 | 29.0 | 29.5 | 30.0 | 31.5 | 33.0 | 34.3 | 34.9 | 35.8 |
| 10 years | 174 | 33.8 | 0.16 | 33.8 | 30.3 | 31.0 | 32.3 | 33.7 | 35.1 | 36.4 | 37.2 | 37.5 |
| 11 years | 210 | 35.6 | 0.20 | 35.6 | 32.1 | 32.9 | 33.7 | 35.8 | 37.6 | 38.2 | 38.7 | 39.8 |
| 12 years | 161 | 37.1 | 0.27 | 37.1 | 33.2 | 33.8 | 35.3 | 36.9 | 38.9 | 39.6 | 40.1 | 41.3 |
| 13 years | 132 | 38.0 | 0.23 | 38.0 | 35.0 | 35.3 | 36.3 | 37.9 | 39.7 | 40.4 | 41.4 | 42.5 |
| 14 years | 164 | 38.4 | 0.23 | 38.4 | 35.3 | 35.9 | 36.7 | 38.6 | 40.0 | 41.0 | 41.1 | 42.0 |
| 15 years | 135 | 38.7 | 0.25 | 38.7 | 35.8 | 36.3 | 37.2 | 38.3 | 40.2 | 41.4 | 42.1 | 42.9 |
| 16 years | 154 | 38.6 | 0.34 | 38.6 | 35.1 | 35.4 | 36.3 | 38.6 | 40.4 | 41.4 | 42.5 | 43.1 |
| 17 years | 140 | 38.6 | 0.24 | 38.6 | 34.5 | 35.9 | 37.1 | 38.7 | 40.4 | 40.7 | 41.4 | 43.0 |
| 18 years | 132 | 38.5 | 0.26 | 38.5 | 35.3 | 36.1 | 36.9 | 38.1 | 40.0 | 41.1 | 41.5 | 42.1 |
| 19 years | 115 | 38.6 | 0.43 | 38.6 | 34.7 | 35.4 | 36.4 | 38.1 | 40.1 | 41.5 | 42.6 | † |

† Standard error not calculated by SUDAAN.

¹Refers to age at time of examination.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 34. Upper leg length in centimeters for females aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|--------------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups¹ | | | | Centimeters | | | | | | | | |
| 20 years and over | 5,676 | 36.7 | 0.10 | 31.2 | 32.5 | 33.4 | 34.7 | 36.9 | 38.9 | 40.0 | 40.7 | 41.8 |
| 20–29 years | 943 | 38.1 | 0.13 | 33.3 | 34.7 | 35.3 | 36.2 | 38.2 | 39.9 | 40.8 | 41.5 | 42.5 |
| 30–39 years | 986 | 37.6 | 0.13 | 32.6 | 33.9 | 34.7 | 35.6 | 37.5 | 39.5 | 40.8 | 41.6 | 42.5 |
| 40–49 years | 1,032 | 37.0 | 0.12 | 32.0 | 33.1 | 33.9 | 35.2 | 37.0 | 38.9 | 40.0 | 40.7 | 41.9 |
| 50–59 years | 834 | 36.2 | 0.17 | 30.1 | 32.0 | 32.8 | 34.2 | 36.5 | 38.4 | 39.5 | 40.1 | 41.0 |
| 60–69 years | 906 | 35.7 | 0.13 | 30.3 | 31.6 | 32.3 | 33.6 | 36.0 | 37.9 | 38.8 | 39.6 | 40.5 |
| 70–79 years | 627 | 35.0 | 0.20 | 29.1 | 30.9 | 31.7 | 32.9 | 35.0 | 37.3 | 38.3 | 39.0 | 39.9 |
| 80 years and over | 348 | 34.2 | 0.25 | 29.0 | 30.3 | 30.9 | 32.3 | 34.2 | 36.0 | 37.1 | 38.1 | 39.9 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,635 | 36.8 | 0.11 | 31.5 | 32.8 | 33.7 | 35.0 | 37.0 | 38.9 | 39.9 | 40.6 | 41.6 |
| 20–39 years | 796 | 38.1 | 0.12 | 33.9 | 35.0 | 35.4 | 36.3 | 38.1 | 39.9 | 40.8 | 41.5 | 42.2 |
| 40–59 years | 832 | 36.8 | 0.13 | 31.6 | 33.0 | 33.9 | 35.2 | 37.0 | 38.7 | 39.8 | 40.5 | 41.4 |
| 60 years and over | 1,007 | 35.4 | 0.16 | 30.1 | 31.4 | 32.2 | 33.4 | 35.3 | 37.4 | 38.4 | 39.1 | 40.2 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,075 | 38.4 | 0.21 | 32.4 | 33.8 | 34.9 | 36.3 | 38.5 | 40.6 | 41.9 | 42.5 | 43.4 |
| 20–39 years | 373 | 39.7 | 0.24 | 34.1 | 36.0 | 37.0 | 37.9 | 39.7 | 41.8 | 42.5 | 43.2 | 44.6 |
| 40–59 years | 364 | 38.0 | 0.23 | 32.4 | 33.7 | 34.8 | 36.0 | 38.2 | 40.1 | 41.1 | 41.9 | 42.8 |
| 60 years and over | 338 | 36.3 | 0.24 | 30.3 | 31.7 | 32.8 | 34.0 | 36.5 | 38.7 | 39.9 | 40.6 | 41.6 |
| Hispanic² | | | | | | | | | | | | |
| 20 years and over | 1,692 | 35.1 | 0.12 | 29.5 | 30.9 | 31.9 | 33.0 | 35.1 | 37.2 | 38.3 | 39.1 | 40.0 |
| 20–39 years | 650 | 36.0 | 0.18 | 30.9 | 32.3 | 33.0 | 34.0 | 36.0 | 38.1 | 39.1 | 39.7 | 40.7 |
| 40–59 years | 567 | 34.7 | 0.19 | 29.2 | 30.7 | 31.5 | 32.8 | 34.9 | 36.6 | 37.6 | 38.4 | 39.4 |
| 60 years and over | 475 | 32.8 | 0.26 | 27.3 | 28.7 | 29.4 | 30.6 | 33.0 | 35.0 | 36.1 | 36.9 | 37.7 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 1,037 | 34.8 | 0.12 | 29.1 | 30.6 | 31.5 | 32.8 | 34.9 | 36.9 | 38.1 | 38.8 | 39.7 |
| 20–39 years | 412 | 35.7 | 0.22 | 30.5 | 32.0 | 32.8 | 33.7 | 35.6 | 37.9 | 38.7 | 39.3 | 40.5 |
| 40–59 years | 343 | 34.4 | 0.21 | 28.7 | 30.6 | 31.4 | 32.5 | 34.4 | 36.3 | 37.3 | 38.1 | 39.5 |
| 60 years and over | 282 | 32.3 | 0.21 | 25.8 | 28.4 | 29.1 | 30.2 | 32.6 | 34.5 | 35.5 | 36.1 | 37.6 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Table 35. Upper leg length in centimeters for males aged 20 and over and number of examined persons, mean, standard error of the mean, and selected percentiles, by race and ethnicity and age: United States, 2007–2010

| Race and ethnicity and age | Number of examined persons | Mean | Standard error of the mean | Percentile | | | | | | | | |
|---|----------------------------|------|----------------------------|-------------|------|------|------|------|------|------|------|------|
| | | | | 5th | 10th | 15th | 25th | 50th | 75th | 85th | 90th | 95th |
| All racial and ethnic groups ¹ | | | | Centimeters | | | | | | | | |
| 20 years and over | 5,405 | 40.8 | 0.12 | 35.6 | 36.7 | 37.5 | 38.6 | 40.8 | 42.9 | 44.0 | 44.7 | 45.9 |
| 20–29 years | 861 | 41.9 | 0.16 | 37.4 | 38.3 | 38.9 | 39.9 | 41.7 | 43.7 | 44.6 | 45.3 | 46.5 |
| 30–39 years | 903 | 41.5 | 0.15 | 36.4 | 37.4 | 38.1 | 39.4 | 41.3 | 43.6 | 44.8 | 45.6 | 46.9 |
| 40–49 years | 903 | 41.0 | 0.19 | 36.1 | 37.2 | 38.0 | 39.0 | 41.0 | 42.9 | 44.0 | 44.5 | 45.6 |
| 50–59 years | 901 | 40.5 | 0.17 | 35.3 | 36.5 | 37.3 | 38.2 | 40.4 | 42.5 | 43.7 | 44.3 | 45.5 |
| 60–69 years | 892 | 39.6 | 0.19 | 34.0 | 35.5 | 36.2 | 37.4 | 39.7 | 41.8 | 42.9 | 43.7 | 44.6 |
| 70–79 years | 615 | 39.0 | 0.16 | 33.7 | 34.9 | 35.8 | 36.7 | 39.0 | 41.2 | 42.2 | 43.0 | 43.9 |
| 80 years and over | 330 | 38.5 | 0.24 | 33.3 | 34.2 | 35.3 | 36.3 | 38.2 | 40.5 | 41.8 | 42.6 | 43.9 |
| Non-Hispanic white | | | | | | | | | | | | |
| 20 years and over | 2,619 | 41.0 | 0.12 | 36.0 | 37.0 | 37.9 | 39.0 | 41.0 | 43.0 | 44.0 | 44.7 | 45.9 |
| 20–39 years | 762 | 42.1 | 0.17 | 37.6 | 38.6 | 39.3 | 40.3 | 41.9 | 43.9 | 44.8 | 45.8 | 46.9 |
| 40–59 years | 806 | 41.1 | 0.16 | 36.5 | 37.5 | 38.1 | 39.1 | 41.1 | 42.9 | 44.0 | 44.4 | 45.5 |
| 60 years and over | 1,051 | 39.4 | 0.13 | 34.0 | 35.4 | 36.2 | 37.3 | 39.5 | 41.5 | 42.6 | 43.4 | 44.4 |
| Non-Hispanic black | | | | | | | | | | | | |
| 20 years and over | 1,030 | 42.3 | 0.16 | 37.1 | 38.2 | 39.1 | 40.3 | 42.3 | 44.2 | 45.3 | 46.0 | 47.0 |
| 20–39 years | 335 | 43.0 | 0.11 | 38.4 | 39.4 | 40.2 | 41.2 | 42.9 | 44.6 | 45.8 | 46.3 | 47.7 |
| 40–59 years | 349 | 42.1 | 0.28 | 37.0 | 37.8 | 38.8 | 39.9 | 42.0 | 44.2 | 45.2 | 46.0 | 47.0 |
| 60 years and over | 346 | 40.9 | 0.25 | 35.5 | 36.4 | 37.5 | 38.8 | 41.0 | 42.8 | 44.1 | 45.0 | 46.1 |
| Hispanic ² | | | | | | | | | | | | |
| 20 years and over | 1,490 | 39.2 | 0.16 | 34.2 | 35.4 | 36.2 | 37.2 | 39.1 | 41.0 | 42.3 | 43.3 | 44.7 |
| 20–39 years | 556 | 40.0 | 0.19 | 35.3 | 36.4 | 37.1 | 37.9 | 39.7 | 41.7 | 43.0 | 44.0 | 45.1 |
| 40–59 years | 566 | 38.7 | 0.20 | 33.9 | 35.1 | 35.8 | 36.8 | 38.6 | 40.3 | 41.5 | 42.1 | 43.9 |
| 60 years and over | 368 | 37.2 | 0.25 | 31.8 | 33.2 | 34.0 | 35.1 | 37.0 | 39.2 | 40.1 | 41.1 | 42.4 |
| Mexican American | | | | | | | | | | | | |
| 20 years and over | 957 | 38.9 | 0.13 | 34.1 | 35.3 | 36.1 | 37.1 | 38.8 | 40.6 | 41.8 | 42.8 | 43.9 |
| 20–39 years | 372 | 39.7 | 0.19 | 35.1 | 36.5 | 37.1 | 37.8 | 39.4 | 41.4 | 42.6 | 43.5 | 44.6 |
| 40–59 years | 365 | 38.3 | 0.13 | 33.9 | 35.1 | 35.7 | 36.5 | 38.2 | 39.9 | 40.9 | 41.4 | 42.9 |
| 60 years and over | 220 | 36.9 | 0.21 | 31.4 | 33.0 | 33.9 | 34.7 | 36.8 | 38.9 | 39.9 | 40.7 | 41.6 |

¹Persons of other races and ethnicities are included.²Mexican-American persons are included in the Hispanic group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Appendix

Appendix table. Historical summary of published anthropometry reference data

| Measurement | Survey years | | | | | | | | |
|---|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------|
| | 1960–1962 ¹ | 1963–1965 ² | 1966–1970 ³ | 1971–1974 ⁴ | 1976–1980 ⁵ | 1988–1994 ⁶ | 1999–2002 ⁷ | 2003–2006 ⁸ | 2007–2010 |
| Weight, height, and length | | | | | | | | | |
| Weight | x | x | x | x | x | x | x | x | x |
| Standing height | x | x | x | x | x | x | x | x | x |
| Recumbent length | | | | | x | x | x | x | x |
| Sitting height | x | x | | x | x | | | | |
| Knee height | x | x | | | | x | | | |
| Elbow rest height | x | | | | | | | | |
| Popliteal height | x | x | | | | | | | |
| Thigh clearance height | x | x | | | | | | | |
| Buttock-knee length | x | x | | | | | | | |
| Buttock-popliteal length | x | x | | | | | | | |
| Elbow-wrist length | | x | | | | | | | |
| Hand length | | x | | | | | | | |
| Upper arm length | | x | | | | x | x | x | x |
| Upper leg length | | | | | | x | x | x | x |
| Foot length | | x | | | | | | | |
| Crow-rump length | | | | | x | | | | |
| Indices | | | | | | | | | |
| Body mass index ⁹ | | | | | x | x | x | x | x |
| Skinfolds | | | | | | | | | |
| Subscapular skinfold | x | x | x | x | x | x | x | x | x |
| Triceps skinfold | x | x | x | x | x | x | x | x | x |
| Thigh skinfold | | | | | | x | | | |
| Suprailiac skinfold thickness | | | | | | x | | | |
| Circumferences and breadths | | | | | | | | | |
| Head circumference | | | | | x | x | x | x | x |
| Chest circumference | x | x | | x | x | | | | |
| Waist circumference | x | x | | | | x | x | x | x |
| Midarm circumference | x | x | x | x | x | x | x | x | x |
| Mid-thigh circumference | | | | | | x | x | x | |
| Buttocks circumference | | x | | | | x | | | |
| Maximal calf circumference | | | | | | | x | x | |
| Chest breadth | | x | | | | | | | |
| Hand breadth | | x | | | | | | | |
| Wrist breadth | | | | | | x | | | |
| Biacromial breadth | x | | | | | x | | | |
| Biiliac breadth | | | | | | x | | | |
| Bitrochanteric breadth | | | | x | x | | | | |
| Elbow breadth | | | | x | x | x | | | |
| Elbow-elbow breadth | x | x | | | | | | | |
| Seat breadth | x | x | | | | | | | |
| Foot breadth | | x | | | | | | | |

¹See references 9,10, and 11 in this report.

²See references 12 and 15 in this report.

³See references 13 and 15 in this report.

⁴See references 14 and 15 in this report.

⁵See reference 16 in this report.

⁶See reference 18 in this report.

⁷See reference 20 in this report.

⁸See reference 21 in this report.

⁹Body mass index (BMI) is calculated as follows: BMI = weight(kilograms) / height(meters²).

NOTE: Terminology for a particular measure may have changed across survey years.

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