# United States Life Tables, 1999

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## Abstract

The life tables in this report are current life tables for the United States based on age-specific death rates in 1999. Data used to prepare these life tables are 1999 final mortality statistics; July 1, 1999, population estimates; and data from the Medicare program. Presented are complete life tables by age, race, and sex. In 1999 the overall expectation of life at birth was 76.7 years, unchanged from 1998. Life expectancy increased from 1998 to 1999 for males, but decreased for females. Life expectancy increased for black males by 0.2 year (from 67.6 to 67.8) and for white males by 0.1 year (from 74.5 to 74.6). For black females, life expectancy decreased from 74.8 to 74.7 years. For white females the decrease was from 80.0 to 79.9.

## Introduction

Death rates for a specific period may be summarized by the life table method to obtain measures of comparative longevity. There are two types of life tables—the generation or cohort life table and the current life table.

The generation life table provides a longitudinal perspective in that it follows the mortality experience of a particular cohort, all persons born in the year 1900, for example, from the moment of birth through consecutive ages in successive calendar years. Based on age-specific death rates observed through consecutive calendar years, the generation life table reflects the mortality experience of an actual cohort from birth until no lives remain in the group. To prepare just a single complete generation life table requires data over many years. It is not feasible to construct generation life tables entirely on the basis of actual data for cohorts (1). It is necessary to project data for the incomplete period for cohorts whose life spans are not yet complete (2).

The better-known current life table may, in contrast, be characterized as cross-sectional. Unlike the generation life table, the current life table does not represent the mortality experience of an actual cohort. Rather, the current life table considers a hypothetical cohort and assumes that it is subject to the age-specific death rates observed for an actual population during a particular period. Thus, for example, a current life table for 1999 assumes a hypothetical cohort subject throughout its lifetime to the age-specific death rates prevailing for the actual population in 1999. The current life table may thus be characterized as rendering a "snapshot" of current mortality experience, and shows the long-range implications of a set of age-specific death rates that prevailed in a given year. In this report the term "life table" refers only to the current life table and not to the generation life table.

## Data and methods

The data used to prepare the U.S. life tables for 1999 are final mortality statistics for 1999; July 1, 1999, population estimates prepared by the U.S. Bureau of the Census; and data from the Medicare program prepared by the Health Care Financing Administration. Data from the Medicare program are used to calculate probabilities of dying for ages over 85 years (see Technical notes).

Life tables can be classified in two ways according to the length of the age interval in which data are presented. A complete life table contains data for every single year of age. An abridged life table typically contains data by 5- or 10-year age intervals. A complete life table, of course, can be easily aggregated into 5- or 10-year age groups (see Technical notes for instructions on how to do this). Other than the decennial life tables, U.S. life tables based on data prior to 1997 are abridged life tables constructed by reference to a "standard" table (3). The 1999 U.S. life tables are complete life tables calculated using a method implemented with the 1997 life tables and are similar to the U.S. Decennial Life Tables (4, 5). See Technical notes for more information on the method used to construct the life tables in this report.

*Expectation of life*—The most frequently used life table statistic is life expectancy ($e_x$), which is the average number of years of life remaining for persons who have attained a given age ($x$). Life expectancy and other life table values for each age in 1999 are shown

for the total population and by race and sex in tables 1–9. Life expectancy is summarized by age, race, and sex in table A.

Life expectancy at birth $e_o$ for 1999 for the total population was 76.7 years. This represents the average number of years that the members of the synthetic life table cohort may expect to live at the time of birth (table A).

*Survivors to specified ages*—Another way of assessing the longevity of the life table cohort is by determining the proportion who survive to specified ages. The $l_x$ column of the life table provides the data for computing the proportion. Table B summarizes the number of survivors by age, race, and sex. To illustrate, 82,020 persons out of the original 1999 life table cohort of 100,000 (or 82.0 percent) were alive at exact age 65. In other words, the probability that a person will survive from birth to age 65, given 1999 age-specific mortality, is 82 percent. Probabilities of survival can be calculated at any age by simply dividing the number of survivors at the terminal age by the number at the beginning age. For example, to calculate the probability of surviving from age 20 to age 85, one would divide the number of survivors at age 85 (34,467) by the number of survivors at age 20 (98,621), which results in a 34.9 percent probability of survival.

## Explanation of the columns of the life table

*Column 1—Age (x to x + 1)*—This column shows the age interval between the two exact ages indicated. For instance, "20–21" means the 1-year interval between the 20th and 21st birthdays.

*Column 2—Proportion dying ($q_x$)*—This column shows the proportion of the cohort who are alive at the beginning of an indicated age interval and who will die before reaching the end of that age interval. For example, for males in the age interval 20–21 years, the proportion dying is 0.00127 (table 2). Out of every 100,000 males alive who are exactly 20 years of age at the beginning of the period, 127 will die before reaching their 21st birthday. The "proportion dying" column forms the basis of the life table; all subsequent columns are derived from it.

*Column 3—Number surviving ($l_x$)*—This column shows the number of persons from an original cohort of 100,000 live births, who survive to the beginning of each age interval. The $l_x$ values are computed from the $q_x$ values, which are successively applied to the remainder of the original 100,000 persons still alive at the beginning of each age interval. Thus out of 100,000 female babies born alive, 99,364 will complete the first year of life and enter the second; 99,165 will reach age 10; 98,876 will reach age 20; and 41,923 will live to age 85 (table 3).

*Column 4—Number dying ($d_x$)*—This column shows the number dying in each successive age interval out of 100,000 live births. Out of 100,000 males born alive, 772 will die in the first year of life; 125 between ages 20 and 21; and 770 will die after reaching age 100 (table 2). Each figure in column 4 is the difference between two successive figures in column 3.

*Columns 5 and 6—Stationary population ($L_x$ and $T_x$)*—Suppose that a group of 100,000 individuals is born every year and that the proportion dying in each age interval are as shown in column 2. If there were no migration and if the births were evenly distributed over the calendar year, the survivors would make up what is called a stationary population—stationary because in such a population the number of persons living in any given age group would never change. When individuals left the group, either by death or by growing older and entering the next higher age group, their places would immediately be taken by persons entering from the next lower age group. Thus, a census taken at any time in a stationary community would always have the same total population and the same distribution of that population among the age groups. In such a stationary population supported by 100,000 annual births, column 3 shows the number of persons who, each year, reach the birthday that marks the beginning of the age interval indicated in column 1, and column 4 shows the number of persons who die each year in that same age interval.

Column 5 shows the number of persons in the stationary population in the indicated age interval. For example, the figure given for females in the age interval 20–21 years is 98,853 (table 3). This means

## Table A. Expectation of life by age, race, and sex: United States, 1999

| Age | All races | | | White | | | Black | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| 0. . . . . . . . . . . . . . . . . . . . . . | 76.7 | 73.9 | 79.4 | 77.3 | 74.6 | 79.9 | 71.4 | 67.8 | 74.7 |
| 1. . . . . . . . . . . . . . . . . . . . . . | 76.3 | 73.5 | 78.9 | 76.8 | 74.1 | 79.3 | 71.5 | 67.9 | 74.7 |
| 5. . . . . . . . . . . . . . . . . . . . . . | 72.4 | 69.6 | 75.0 | 72.9 | 70.2 | 75.4 | 67.6 | 64.1 | 70.9 |
| 10. . . . . . . . . . . . . . . . . . . . . . | 67.4 | 64.7 | 70.1 | 67.9 | 65.3 | 70.5 | 62.7 | 59.2 | 66.0 |
| 15. . . . . . . . . . . . . . . . . . . . . . | 62.5 | 59.8 | 65.1 | 63.0 | 60.3 | 65.5 | 57.8 | 54.3 | 61.0 |
| 20. . . . . . . . . . . . . . . . . . . . . . | 57.7 | 55.0 | 60.2 | 58.2 | 55.6 | 60.7 | 53.1 | 49.6 | 56.2 |
| 25. . . . . . . . . . . . . . . . . . . . . . | 53.0 | 50.4 | 55.4 | 53.4 | 50.9 | 55.8 | 48.5 | 45.2 | 51.4 |
| 30. . . . . . . . . . . . . . . . . . . . . . | 48.2 | 45.7 | 50.5 | 48.6 | 46.2 | 50.9 | 43.9 | 40.7 | 46.6 |
| 35. . . . . . . . . . . . . . . . . . . . . . | 43.5 | 41.1 | 45.7 | 43.9 | 41.5 | 46.1 | 39.3 | 36.3 | 41.9 |
| 40. . . . . . . . . . . . . . . . . . . . . . | 38.8 | 36.5 | 41.0 | 39.2 | 36.9 | 41.3 | 34.8 | 31.9 | 37.4 |
| 45. . . . . . . . . . . . . . . . . . . . . . | 34.3 | 32.0 | 36.3 | 34.6 | 32.4 | 36.6 | 30.6 | 27.8 | 33.0 |
| 50. . . . . . . . . . . . . . . . . . . . . . | 29.8 | 27.7 | 31.7 | 30.1 | 28.0 | 32.0 | 26.6 | 24.0 | 28.7 |
| 55. . . . . . . . . . . . . . . . . . . . . . | 25.5 | 23.5 | 27.3 | 25.7 | 23.8 | 27.5 | 22.8 | 20.4 | 24.7 |
| 60. . . . . . . . . . . . . . . . . . . . . . | 21.5 | 19.6 | 23.1 | 21.6 | 19.8 | 23.2 | 19.3 | 17.2 | 20.9 |
| 65. . . . . . . . . . . . . . . . . . . . . . | 17.7 | 16.1 | 19.1 | 17.8 | 16.1 | 19.2 | 16.0 | 14.3 | 17.3 |
| 70. . . . . . . . . . . . . . . . . . . . . . | 14.3 | 12.8 | 15.4 | 14.4 | 12.9 | 15.5 | 13.0 | 11.6 | 14.0 |
| 75. . . . . . . . . . . . . . . . . . . . . . | 11.2 | 10.0 | 12.1 | 11.2 | 10.0 | 12.1 | 10.4 | 9.2 | 11.1 |
| 80. . . . . . . . . . . . . . . . . . . . . . | 8.5 | 7.5 | 9.1 | 8.5 | 7.5 | 9.1 | 8.2 | 7.3 | 8.6 |
| 85. . . . . . . . . . . . . . . . . . . . . . | 6.3 | 5.5 | 6.6 | 6.2 | 5.5 | 6.6 | 6.2 | 5.6 | 6.5 |
| 90. . . . . . . . . . . . . . . . . . . . . . | 4.6 | 4.1 | 4.8 | 4.5 | 4.0 | 4.7 | 4.8 | 4.4 | 4.8 |
| 95. . . . . . . . . . . . . . . . . . . . . . | 3.4 | 3.0 | 3.5 | 3.2 | 2.9 | 3.3 | 3.6 | 3.5 | 3.6 |
| 100 . . . . . . . . . . . . . . . . . . . . . | 2.6 | 2.4 | 2.7 | 2.3 | 2.2 | 2.4 | 2.8 | 2.8 | 2.7 |

**Table B. Number of survivors by age, out of 100,000 born alive, by age, race, and sex: United States, 1999**

| Age | All races | | | White | | | Black | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| 0. . . . . . . . . . . . . . . . . . . . . . . | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 1. . . . . . . . . . . . . . . . . . . . . . . | 99,294 | 99,228 | 99,364 | 99,423 | 99,365 | 99,485 | 98,544 | 98,408 | 98,684 |
| 5. . . . . . . . . . . . . . . . . . . . . . . | 99,157 | 99,075 | 99,242 | 99,301 | 99,230 | 99,376 | 98,314 | 98,150 | 98,483 |
| 10. . . . . . . . . . . . . . . . . . . . . . | 99,070 | 98,980 | 99,165 | 99,224 | 99,146 | 99,306 | 98,176 | 97,991 | 98,368 |
| 15. . . . . . . . . . . . . . . . . . . . . . | 98,966 | 98,855 | 99,082 | 99,126 | 99,029 | 99,227 | 98,031 | 97,810 | 98,260 |
| 20. . . . . . . . . . . . . . . . . . . . . . | 98,621 | 98,379 | 98,876 | 98,798 | 98,587 | 99,022 | 97,572 | 97,127 | 98,032 |
| 25. . . . . . . . . . . . . . . . . . . . . . | 98,160 | 97,704 | 98,639 | 98,386 | 97,987 | 98,809 | 96,810 | 95,968 | 97,663 |
| 30. . . . . . . . . . . . . . . . . . . . . . | 97,684 | 97,030 | 98,361 | 97,961 | 97,383 | 98,566 | 95,989 | 94,794 | 97,173 |
| 35. . . . . . . . . . . . . . . . . . . . . . | 97,109 | 96,253 | 97,987 | 97,446 | 96,684 | 98,240 | 94,979 | 93,429 | 96,486 |
| 40. . . . . . . . . . . . . . . . . . . . . . | 96,321 | 95,244 | 97,422 | 96,739 | 95,766 | 97,749 | 93,573 | 91,676 | 95,397 |
| 45. . . . . . . . . . . . . . . . . . . . . . | 95,190 | 93,808 | 96,599 | 95,730 | 94,469 | 97,035 | 91,481 | 89,068 | 93,779 |
| 50. . . . . . . . . . . . . . . . . . . . . . | 93,521 | 91,683 | 95,384 | 94,231 | 92,555 | 95,959 | 88,383 | 85,045 | 91,507 |
| 55. . . . . . . . . . . . . . . . . . . . . . | 91,123 | 88,710 | 93,554 | 92,024 | 89,821 | 94,282 | 84,144 | 79,614 | 88,317 |
| 60. . . . . . . . . . . . . . . . . . . . . . | 87,453 | 84,232 | 90,677 | 88,574 | 85,612 | 91,588 | 78,320 | 72,321 | 83,773 |
| 65. . . . . . . . . . . . . . . . . . . . . . | 82,020 | 77,730 | 86,283 | 83,338 | 79,344 | 87,372 | 70,839 | 63,255 | 77,684 |
| 70. . . . . . . . . . . . . . . . . . . . . . | 74,284 | 68,632 | 79,843 | 75,692 | 70,303 | 81,066 | 61,781 | 53,148 | 69,664 |
| 75. . . . . . . . . . . . . . . . . . . . . . | 63,799 | 56,651 | 70,741 | 65,240 | 58,258 | 72,091 | 50,176 | 41,042 | 58,620 |
| 80. . . . . . . . . . . . . . . . . . . . . . | 50,526 | 42,406 | 58,317 | 51,840 | 43,769 | 59,632 | 37,229 | 28,360 | 45,506 |
| 85. . . . . . . . . . . . . . . . . . . . . . | 34,467 | 26,487 | 41,923 | 35,398 | 27,328 | 42,957 | 24,071 | 16,692 | 30,925 |
| 90. . . . . . . . . . . . . . . . . . . . . . | 18,445 | 12,453 | 23,749 | 18,875 | 12,751 | 24,292 | 12,539 | 7,737 | 16,864 |
| 95. . . . . . . . . . . . . . . . . . . . . . | 7,021 | 3,963 | 9,553 | 7,004 | 3,924 | 9,541 | 4,926 | 2,691 | 6,802 |
| 100 . . . . . . . . . . . . . . . . . . . . | 1,695 | 770 | 2,433 | 1,543 | 689 | 2,206 | 1,322 | 662 | 1,811 |

that in a stationary population of females supported by 100,000 annual births and with proportions dying in each age group always in accordance with column 2, a census taken on any date would show 98,853 women between exact ages 20 and 21 years. This figure also represents the average number of person-years of exposure to the risk of dying during the age interval 20–21 years.

Column 6 shows the total number of persons in the stationary population (column 5) in the indicated age interval and all subsequent age intervals. For example, in the stationary population of females referred to in the last illustration, column 6 shows that there would be at any given moment a total of 5,956,405 persons who have passed their 20th birthday (table 3). The female population at all ages 0 and above (the total female population of the stationary community) would be 7,939,597.

*Column 7—Average remaining lifetime ($e_x$)*—The average remaining lifetime (also called life expectancy) at any given age is the average number of years remaining to be lived by those surviving to that age on the basis of a given set of age-specific rates of dying. To arrive at this value, it is first necessary to observe that the figures in column 5 of the life table can also be interpreted in terms of a single life table cohort without introducing the concept of the stationary population. From this point of view, each figure in column 5 represents the total time (in years) lived between two indicated birthdays by all those reaching the earlier birthday. Thus, the figure 98,317 (column 5) for males in the age interval 20–21 is the total number of years lived between the 20th and 21st birthdays by the 98,379 (column 3) males who reached their 20th birthday out of 100,000 males born alive (table 2). The corresponding figure 5,414,916 in column 6 is the total number of years lived after attaining age 20 by the 98,379 reaching that age. The former figure divided by the latter (5,414,916 divided by 98,379) gives 55.0 years as the average remaining lifetime of males at age 20.

# Results

## Life expectancy in the United States

Tables 1–9 show complete life tables by race (white and black) and sex for 1999. Tables A and B summarize life expectancy and survival by age, race, and sex. Life expectancy at birth for 1999 represents the average number of years that a group of infants would live if the infants were to experience throughout life the age-specific death rates prevailing in 1999. In 1999 life expectancy at birth was 76.7 years, unchanged from the previous year. Despite no increase in life expectancy between 1998 and 1999, the general trend in life expectancy for the United States has been upward throughout the 20th century (6).

Life expectancy was 73.9 years for males, a 0.1-year increase from 1998 to 1999. In contrast, life expectancy for females in 1999 was 79.4 years, a decrease of 0.1 year from 1998. The decrease in life expectancy for females was primarily the result of increases between 1998 and 1999 in mortality due to chronic lower respiratory diseases, diabetes, septicemia, and hypertension despite decreased mortality due to stroke, cancer, suicide, and homicide. For males, life expectancy increased due to decreases in heart disease, stroke, cancer, suicide, and homicide, which were partly offset by increases due to chronic lower respiratory diseases, diabetes, and septicemia.

The difference in life expectancy between the sexes was 5.5 years in 1999, a slight narrowing from the difference (5.7) in the previous year. From 1900 to 1975, the difference in life expectancy between the sexes increased from 2.0 years to 7.8 years. The increasing gap during these years is attributed to increases in male mortality due to ischemic heart disease and lung cancer, both of which increased largely as the result of men's early and widespread adoption of cigarette smoking (6, 7). Since 1979, the difference in life expectancy between the sexes has

narrowed from 7.8 years to 5.5 years, reflecting proportionately greater increases in lung cancer mortality for women than for men and proportionately larger decreases in heart disease mortality among men (6, 7).

Between 1998 and 1999, life expectancy for the black population rose 0.1 year to 71.4 years. For the white population, life expectancy was unchanged at 77.3 years. The difference in life expectancy between the white and black populations was 5.9 years in 1999, a slight narrowing of the gap from 1998 (6.0 years). Although the white-black difference in life expectancy narrowed from 14.6 years in 1900 to 5.7 years in 1982, it increased to 7.1 years in 1993 before declining from 1994 (7.0 years) to 1999 (5.9 years). The increase in the gap from 1983 to 1993 was largely the result of increases in mortality among the black male population due to HIV infection and homicide (6, 8).

Among the four race-sex groups (figure 1), white females continued to have the highest life expectancy at birth (79.9 years), followed by black females (74.7 years), white males (74.6 years), and black males (67.8 years). Between 1998 and 1999, life expectancy increased 0.2 year for black males (from 67.6 in 1998 to 67.8 in 1999). Black males experienced an unprecedented decline in life expectancy every year for 1984–89 (8), but annual increases in 1990–92 and 1994–99. From 1998 to 1999, life expectancy for black females declined from 74.8 years to 74.7 years, a decrease of 0.1 year. Life expectancy for white males rose 0.1 year, from 74.5 years in 1998 to 74.6 years in 1999. White female life expectancy decreased during the same period by 0.1 year from 80.0 years to 79.9 years. Overall, the largest gains in life expectancy between 1980 and 1999 were for black males (4.0 years), white males (3.9 years), black females (2.2 years), and white females (1.8 years) (table 12).

The 1999 life table may be used to compare life expectancies at any age from birth onward. On the basis of mortality experienced in 1999, a person aged 65 years could expect to live an average of 17.7

more years for a total of 82.7 years, and a person aged 100 years could expect to live an additional 2.6 years on average (table A). Life expectancy at 100 years of age, particularly for the black population, should be interpreted with caution as these figures may be affected somewhat by age misreporting (4, 9, 10).

## Survivorship in the United States

Table B summarizes the number of survivors out of 100,000 persons born alive ($l_x$) by age, race, and sex. Table 10 shows trends in survivorship from 1900 to 1999. In 1999, 99.3 percent of all infants born in the United States survived the first year of life. In contrast, only 87.6 percent of infants born in 1900 survived the first year. About one-half of the 1999 cohort survived to age 80, the median age at death, and about 1.7 percent survived to age 100. In 1900 the median age at death was 58 and only 0.03 percent survived to age 100.

Among the four race-sex groups (figure 2, table B), white females have the highest median age at death with 50 percent surviving to age 83. Of the original hypothetical cohort of 100,000 infant white females, 99.0 percent survive to age 20, 87.4 percent survive to age 65, and 43.0 percent survive to age 85. For white males and black females, the pattern of survival by age is similar. These groups have approximately the same median age at death of 78 years. However, white males have slightly higher survival rates than black females at the younger ages with 98.6 percent surviving to age 20 and 79.3 percent surviving to age 65 compared with 98.0 percent and 77.7 percent, respectively, for black females. At the older ages, in contrast, black female survival surpasses white male survival. At age 85, white male survival is 27.3 percent compared with 30.9 percent for black females. This crossover, which occurs at about age 72, is clearly shown in figure 2. The median age at death for black males is 71 years, 12 years less than that for white females; 97.1 percent of black males survive to age 20, 63.3 percent to age 65, and 16.7 percent to age 85. By age 100, there is very little difference between the white and black populations in terms of survival. Somewhat less than 1 percent of white and black males and about 2 percent of white and black females survive to age 100.

Plotting the percent surviving by age for the periods 1900–1902, 1949–51, and 1999 shows an increasingly "rectangular" survival curve (figure 3). That is, the survival curve has become increasingly flat in response to progressively lower mortality, particularly at the younger ages, and increasingly vertical at the older ages. The survival curve for 1900–1902 shows a rapid decline in survival in the first few years of life and a relatively steady decline thereafter. In contrast, the survival curve for 1999 is nearly flat until about age 50 after which the decline in survival becomes more rapid. Improvements in survival between 1900–1902 and 1949–51 occurred at all ages, although the largest improvements were among the younger population. Between 1949–51 and 1999, improvements occurred primarily for the older population.
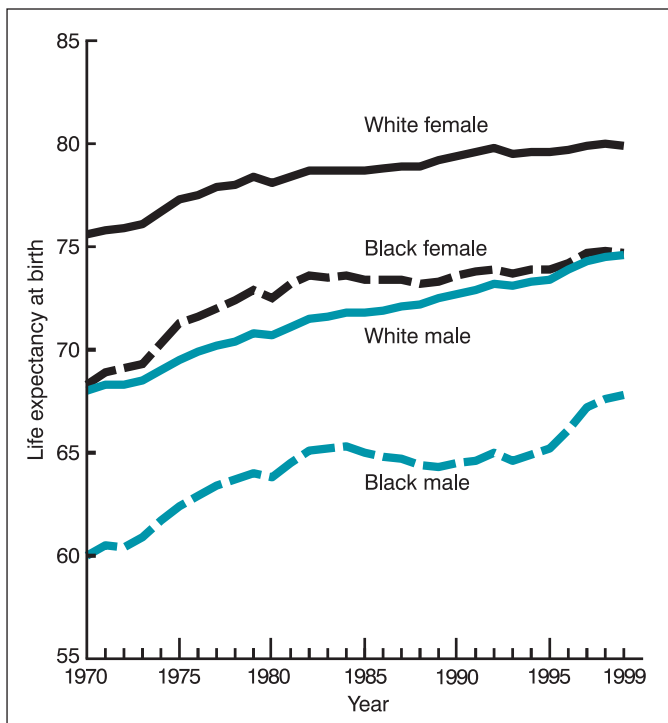


**Figure 1. Life expectancy at birth by race and sex: 1970–99**
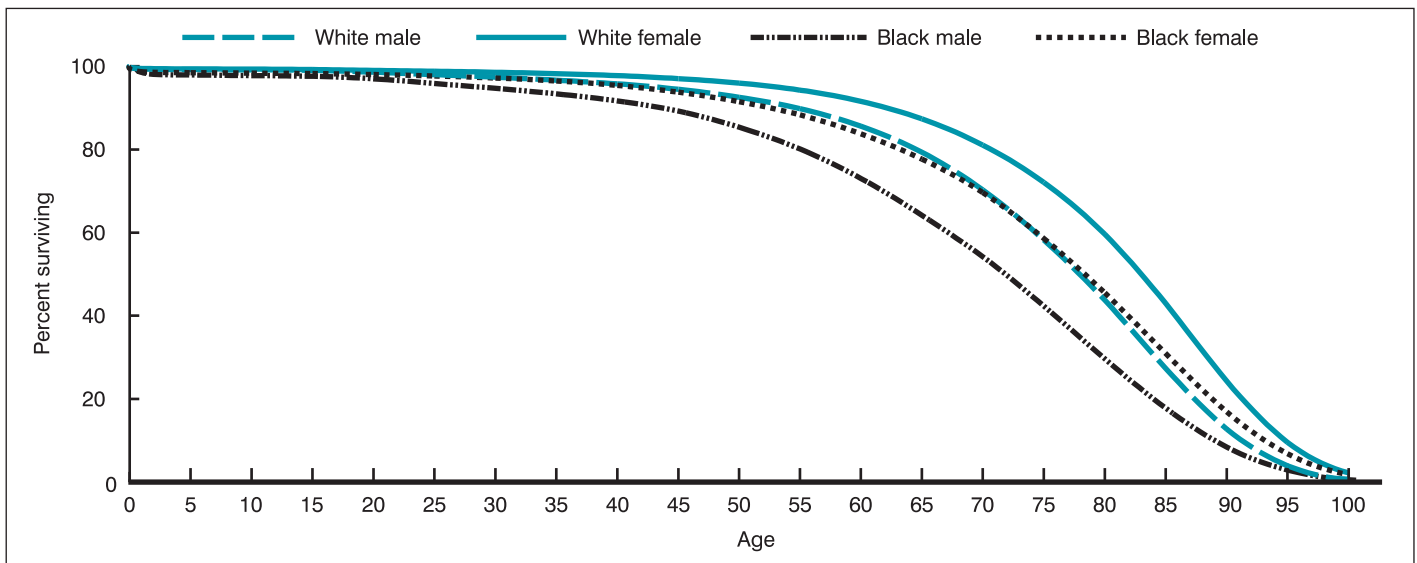
**Figure 2. Percent surviving by age, race, and sex: United States, 1999**
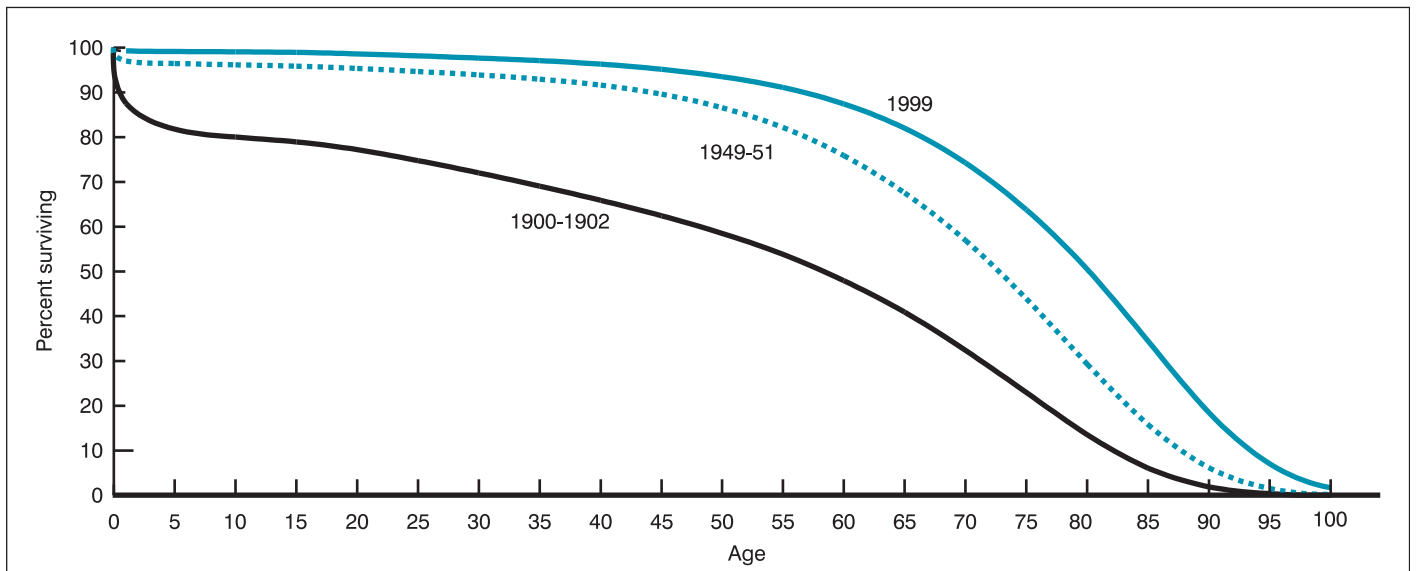


**Figure 3. Percent surviving by age: Death-registration States, 1900–1902, and United States, 1949–51 and 1999**

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# List of detailed tables

## Table 1. Life table for the total population: United States, 1999

| Age | Proportion dying during age interval $q_x$ | Number living at beginning of age interval $l_x$ | Number dying during age interval $d_x$ | Stationary population in the age interval $L_x$ | Stationary population in this and all subsequent age intervals $T_x$ | Life expectancy at beginning of age interval $e_x$ |
|---|---|---|---|---|---|---|
| 0–1 . . . . . . . . . . . . . . . . . . . . . . | 0.00706 | 100,000 | 706 | 99,383 | 7,672,728 | 76.7 |
| 1–2 . . . . . . . . . . . . . . . . . . . . . . | 0.00053 | 99,294 | 53 | 99,268 | 7,573,344 | 76.3 |
| 2–3 . . . . . . . . . . . . . . . . . . . . . . | 0.00036 | 99,241 | 36 | 99,223 | 7,474,077 | 75.3 |
| 3–4 . . . . . . . . . . . . . . . . . . . . . . | 0.00027 | 99,205 | 27 | 99,192 | 7,374,853 | 74.3 |
| 4–5 . . . . . . . . . . . . . . . . . . . . . . | 0.00022 | 99,178 | 21 | 99,167 | 7,275,662 | 73.4 |
| 5–6 . . . . . . . . . . . . . . . . . . . . . . | 0.00020 | 99,157 | 20 | 99,147 | 7,176,494 | 72.4 |
| 6–7 . . . . . . . . . . . . . . . . . . . . . . | 0.00019 | 99,137 | 19 | 99,127 | 7,077,347 | 71.4 |
| 7–8 . . . . . . . . . . . . . . . . . . . . . . | 0.00018 | 99,118 | 18 | 99,109 | 6,978,220 | 70.4 |
| 8–9 . . . . . . . . . . . . . . . . . . . . . . | 0.00016 | 99,101 | 16 | 99,093 | 6,879,111 | 69.4 |
| 9–10 . . . . . . . . . . . . . . . . . . . . . . | 0.00014 | 99,084 | 14 | 99,077 | 6,780,018 | 68.4 |
| 10–11. . . . . . . . . . . . . . . . . . . . . . | 0.00013 | 99,070 | 12 | 99,064 | 6,680,941 | 67.4 |
| 11–12. . . . . . . . . . . . . . . . . . . . . . | 0.00013 | 99,058 | 13 | 99,052 | 6,581,876 | 66.4 |
| 12–13 . . . . . . . . . . . . . . . . . . . . . . | 0.00017 | 99,045 | 17 | 99,037 | 6,482,824 | 65.5 |
| 13–14 . . . . . . . . . . . . . . . . . . . . . . | 0.00026 | 99,029 | 25 | 99,016 | 6,383,787 | 64.5 |
| 14–15 . . . . . . . . . . . . . . . . . . . . . . | 0.00038 | 99,003 | 37 | 98,985 | 6,284,771 | 63.5 |
| 15–16 . . . . . . . . . . . . . . . . . . . . . . | 0.00051 | 98,966 | 50 | 98,941 | 6,185,787 | 62.5 |
| 16–17 . . . . . . . . . . . . . . . . . . . . . . | 0.00063 | 98,916 | 62 | 98,885 | 6,086,846 | 61.5 |
| 17–18 . . . . . . . . . . . . . . . . . . . . . . | 0.00073 | 98,854 | 72 | 98,818 | 5,987,961 | 60.6 |
| 18–19 . . . . . . . . . . . . . . . . . . . . . . | 0.00079 | 98,782 | 78 | 98,742 | 5,889,143 | 59.6 |
| 19–20 . . . . . . . . . . . . . . . . . . . . . . | 0.00084 | 98,703 | 82 | 98,662 | 5,790,401 | 58.7 |
| 20–21 . . . . . . . . . . . . . . . . . . . . . . | 0.00088 | 98,621 | 87 | 98,578 | 5,691,739 | 57.7 |
| 21–22 . . . . . . . . . . . . . . . . . . . . . . | 0.00092 | 98,534 | 91 | 98,489 | 5,593,161 | 56.8 |
| 22–23 . . . . . . . . . . . . . . . . . . . . . . | 0.00096 | 98,443 | 94 | 98,396 | 5,494,672 | 55.8 |
| 23–24 . . . . . . . . . . . . . . . . . . . . . . | 0.00097 | 98,349 | 95 | 98,302 | 5,396,276 | 54.9 |
| 24–25 . . . . . . . . . . . . . . . . . . . . . . | 0.00096 | 98,254 | 94 | 98,207 | 5,297,974 | 53.9 |
| 25–26 . . . . . . . . . . . . . . . . . . . . . . | 0.00095 | 98,160 | 94 | 98,113 | 5,199,767 | 53.0 |
| 26–27 . . . . . . . . . . . . . . . . . . . . . . | 0.00095 | 98,066 | 93 | 98,020 | 5,101,654 | 52.0 |
| 27–28 . . . . . . . . . . . . . . . . . . . . . . | 0.00096 | 97,973 | 94 | 97,926 | 5,003,635 | 51.1 |
| 28–29 . . . . . . . . . . . . . . . . . . . . . . | 0.00098 | 97,879 | 96 | 97,831 | 4,905,708 | 50.1 |
| 29–30 . . . . . . . . . . . . . . . . . . . . . . | 0.00102 | 97,783 | 99 | 97,734 | 4,807,877 | 49.2 |
| 30–31 . . . . . . . . . . . . . . . . . . . . . . | 0.00106 | 97,684 | 103 | 97,632 | 4,710,143 | 48.2 |
| 31–32 . . . . . . . . . . . . . . . . . . . . . . | 0.00111 | 97,581 | 108 | 97,527 | 4,612,511 | 47.3 |
| 32–33 . . . . . . . . . . . . . . . . . . . . . . | 0.00117 | 97,473 | 114 | 97,416 | 4,514,985 | 46.3 |
| 33–34 . . . . . . . . . . . . . . . . . . . . . . | 0.00124 | 97,359 | 121 | 97,298 | 4,417,569 | 45.4 |
| 34–35 . . . . . . . . . . . . . . . . . . . . . . | 0.00133 | 97,238 | 129 | 97,173 | 4,320,270 | 44.4 |
| 35–36 . . . . . . . . . . . . . . . . . . . . . . | 0.00142 | 97,109 | 138 | 97,040 | 4,223,097 | 43.5 |
| 36–37 . . . . . . . . . . . . . . . . . . . . . . | 0.00151 | 96,971 | 146 | 96,898 | 4,126,057 | 42.6 |
| 37–38 . . . . . . . . . . . . . . . . . . . . . . | 0.00161 | 96,825 | 156 | 96,747 | 4,029,159 | 41.6 |
| 38–39 . . . . . . . . . . . . . . . . . . . . . . | 0.00173 | 96,669 | 167 | 96,585 | 3,932,412 | 40.7 |
| 39–40 . . . . . . . . . . . . . . . . . . . . . . | 0.00187 | 96,501 | 180 | 96,411 | 3,835,827 | 39.8 |
| 40–41 . . . . . . . . . . . . . . . . . . . . . . | 0.00201 | 96,321 | 194 | 96,224 | 3,739,416 | 38.8 |
| 41–42 . . . . . . . . . . . . . . . . . . . . . . | 0.00217 | 96,127 | 208 | 96,023 | 3,643,193 | 37.9 |
| 42–43 . . . . . . . . . . . . . . . . . . . . . . | 0.00234 | 95,918 | 224 | 95,806 | 3,547,170 | 37.0 |
| 43–44 . . . . . . . . . . . . . . . . . . . . . . | 0.00253 | 95,694 | 242 | 95,573 | 3,451,364 | 36.1 |
| 44–45 . . . . . . . . . . . . . . . . . . . . . . | 0.00274 | 95,452 | 262 | 95,321 | 3,355,791 | 35.2 |
| 45–46 . . . . . . . . . . . . . . . . . . . . . . | 0.00299 | 95,190 | 284 | 95,048 | 3,260,470 | 34.3 |
| 46–47 . . . . . . . . . . . . . . . . . . . . . . | 0.00325 | 94,906 | 309 | 94,752 | 3,165,422 | 33.4 |
| 47–48 . . . . . . . . . . . . . . . . . . . . . . | 0.00353 | 94,597 | 334 | 94,430 | 3,070,671 | 32.5 |
| 48–49 . . . . . . . . . . . . . . . . . . . . . . | 0.00381 | 94,263 | 359 | 94,084 | 2,976,240 | 31.6 |
| 49–50 . . . . . . . . . . . . . . . . . . . . . . | 0.00409 | 93,905 | 384 | 93,713 | 2,882,156 | 30.7 |
| 50–51 . . . . . . . . . . . . . . . . . . . . . . | 0.00439 | 93,521 | 410 | 93,316 | 2,788,443 | 29.8 |
| 51–52 . . . . . . . . . . . . . . . . . . . . . . | 0.00473 | 93,111 | 440 | 92,891 | 2,695,127 | 29.0 |
| 52–53 . . . . . . . . . . . . . . . . . . . . . . | 0.00512 | 92,670 | 474 | 92,433 | 2,602,237 | 28.1 |
| 53–54 . . . . . . . . . . . . . . . . . . . . . . | 0.00557 | 92,196 | 514 | 91,939 | 2,509,804 | 27.2 |
| 54–55 . . . . . . . . . . . . . . . . . . . . . . | 0.00610 | 91,682 | 560 | 91,403 | 2,417,864 | 26.4 |
| 55–56 . . . . . . . . . . . . . . . . . . . . . . | 0.00673 | 91,123 | 613 | 90,816 | 2,326,462 | 25.5 |
| 56–57 . . . . . . . . . . . . . . . . . . . . . . | 0.00742 | 90,510 | 672 | 90,174 | 2,235,645 | 24.7 |
| 57–58 . . . . . . . . . . . . . . . . . . . . . . | 0.00816 | 89,839 | 733 | 89,472 | 2,145,471 | 23.9 |
| 58–59 . . . . . . . . . . . . . . . . . . . . . . | 0.00892 | 89,105 | 795 | 88,708 | 2,055,999 | 23.1 |
| 59–60 . . . . . . . . . . . . . . . . . . . . . . | 0.00971 | 88,311 | 857 | 87,882 | 1,967,291 | 22.3 |
| 60–61 . . . . . . . . . . . . . . . . . . . . . . | 0.01058 | 87,453 | 925 | 86,991 | 1,879,409 | 21.5 |
| 61–62 . . . . . . . . . . . . . . . . . . . . . . | 0.01157 | 86,528 | 1,001 | 86,028 | 1,792,418 | 20.7 |
| 62–63 . . . . . . . . . . . . . . . . . . . . . . | 0.01265 | 85,527 | 1,082 | 84,986 | 1,706,390 | 20.0 |
| 63–64 . . . . . . . . . . . . . . . . . . . . . . | 0.01383 | 84,445 | 1,168 | 83,861 | 1,621,404 | 19.2 |
| 64–65 . . . . . . . . . . . . . . . . . . . . . . | 0.01509 | 83,277 | 1,257 | 82,649 | 1,537,543 | 18.5 |
| 65–66 . . . . . . . . . . . . . . . . . . . . . . | 0.01641 | 82,020 | 1,346 | 81,348 | 1,454,894 | 17.7 |
| 66–67 . . . . . . . . . . . . . . . . . . . . . . | 0.01782 | 80,675 | 1,437 | 79,956 | 1,373,546 | 17.0 |

## Table 1. Life table for the total population: United States, 1999—Con.

| Age | Proportion dying during age interval $q_x$ | Number living at beginning of age interval $l_x$ | Number dying during age interval $d_x$ | Stationary population in the age interval $L_x$ | Stationary population in this and all subsequent age intervals $T_x$ | Life expectancy at beginning of age interval $e_x$ |
|---|---|---|---|---|---|---|
| 67–68 . . . . . . . . . . . . . . . . . . . . . | 0.01941 | 79,238 | 1,538 | 78,469 | 1,293,590 | 16.3 |
| 68–69 . . . . . . . . . . . . . . . . . . . . . | 0.02123 | 77,699 | 1,649 | 76,875 | 1,215,121 | 15.6 |
| 69–70 . . . . . . . . . . . . . . . . . . . . . | 0.02323 | 76,050 | 1,766 | 75,167 | 1,138,246 | 15.0 |
| 70–71 . . . . . . . . . . . . . . . . . . . . . | 0.02528 | 74,284 | 1,878 | 73,345 | 1,063,079 | 14.3 |
| 71–72 . . . . . . . . . . . . . . . . . . . . . | 0.02739 | 72,406 | 1,983 | 71,414 | 989,735 | 13.7 |
| 72–73 . . . . . . . . . . . . . . . . . . . . . | 0.02970 | 70,423 | 2,091 | 69,377 | 918,320 | 13.0 |
| 73–74 . . . . . . . . . . . . . . . . . . . . . | 0.03229 | 68,332 | 2,207 | 67,228 | 848,943 | 12.4 |
| 74–75 . . . . . . . . . . . . . . . . . . . . . | 0.03518 | 66,125 | 2,326 | 64,962 | 781,715 | 11.8 |
| 75–76 . . . . . . . . . . . . . . . . . . . . . | 0.03824 | 63,799 | 2,440 | 62,579 | 716,753 | 11.2 |
| 76–77 . . . . . . . . . . . . . . . . . . . . . | 0.04145 | 61,359 | 2,543 | 60,087 | 654,174 | 10.7 |
| 77–78 . . . . . . . . . . . . . . . . . . . . . | 0.04502 | 58,816 | 2,648 | 57,492 | 594,086 | 10.1 |
| 78–79 . . . . . . . . . . . . . . . . . . . . . | 0.04914 | 56,168 | 2,760 | 54,788 | 536,595 | 9.6 |
| 79–80 . . . . . . . . . . . . . . . . . . . . . | 0.05395 | 53,408 | 2,881 | 51,967 | 481,807 | 9.0 |
| 80–81 . . . . . . . . . . . . . . . . . . . . . | 0.05950 | 50,526 | 3,006 | 49,023 | 429,840 | 8.5 |
| 81–82 . . . . . . . . . . . . . . . . . . . . . | 0.06578 | 47,520 | 3,126 | 45,957 | 380,816 | 8.0 |
| 82–83 . . . . . . . . . . . . . . . . . . . . . | 0.07287 | 44,394 | 3,235 | 42,777 | 334,859 | 7.5 |
| 83–84 . . . . . . . . . . . . . . . . . . . . . | 0.08066 | 41,159 | 3,320 | 39,499 | 292,082 | 7.1 |
| 84–85 . . . . . . . . . . . . . . . . . . . . . | 0.08913 | 37,839 | 3,373 | 36,153 | 252,583 | 6.7 |
| 85–86 . . . . . . . . . . . . . . . . . . . . . | 0.09777 | 34,467 | 3,370 | 32,782 | 216,430 | 6.3 |
| 86–87 . . . . . . . . . . . . . . . . . . . . . | 0.10700 | 31,097 | 3,327 | 29,433 | 183,648 | 5.9 |
| 87–88 . . . . . . . . . . . . . . . . . . . . . | 0.11683 | 27,769 | 3,244 | 26,147 | 154,215 | 5.6 |
| 88–89 . . . . . . . . . . . . . . . . . . . . . | 0.12725 | 24,525 | 3,121 | 22,965 | 128,067 | 5.2 |
| 89–90 . . . . . . . . . . . . . . . . . . . . . | 0.13827 | 21,404 | 2,960 | 19,925 | 105,103 | 4.9 |
| 90–91 . . . . . . . . . . . . . . . . . . . . . | 0.14989 | 18,445 | 2,765 | 17,062 | 85,178 | 4.6 |
| 91–92 . . . . . . . . . . . . . . . . . . . . . | 0.16210 | 15,680 | 2,542 | 14,409 | 68,115 | 4.3 |
| 92–93 . . . . . . . . . . . . . . . . . . . . . | 0.17489 | 13,138 | 2,298 | 11,989 | 53,706 | 4.1 |
| 93–94 . . . . . . . . . . . . . . . . . . . . . | 0.18824 | 10,841 | 2,041 | 9,820 | 41,717 | 3.9 |
| 94–95 . . . . . . . . . . . . . . . . . . . . . | 0.20212 | 8,800 | 1,779 | 7,911 | 31,896 | 3.6 |
| 95–96 . . . . . . . . . . . . . . . . . . . . . | 0.21651 | 7,021 | 1,520 | 6,261 | 23,986 | 3.4 |
| 96–97 . . . . . . . . . . . . . . . . . . . . . | 0.23138 | 5,501 | 1,273 | 4,865 | 17,724 | 3.2 |
| 97–98 . . . . . . . . . . . . . . . . . . . . . | 0.24668 | 4,228 | 1,043 | 3,707 | 12,860 | 3.0 |
| 98–99 . . . . . . . . . . . . . . . . . . . . . | 0.26237 | 3,185 | 836 | 2,767 | 9,153 | 2.9 |
| 99–100 . . . . . . . . . . . . . . . . . . . . | 0.27839 | 2,350 | 654 | 2,022 | 6,386 | 2.7 |
| 100+ . . . . . . . . . . . . . . . . . . . . . | 1.00000 | 1,695 | 1,695 | 4,363 | 4,363 | 2.6 |

## Table 2. Life table for males: United States, 1999

| Age | Proportion dying during age interval $q_x$ | Number living at beginning of age interval $l_x$ | Number dying during age interval $d_x$ | Stationary population in the age interval $L_x$ | Stationary population in this and all subsequent age intervals $T_x$ | Life expectancy at beginning of age interval $e_x$ |
|---|---|---|---|---|---|---|
| 0–1 . . . . . . . . . . . . . . . . . . . . . | 0.00772 | 100,000 | 772 | 99,328 | 7,393,807 | 73.9 |
| 1–2 . . . . . . . . . . . . . . . . . . . . . | 0.00058 | 99,228 | 57 | 99,199 | 7,294,479 | 73.5 |
| 2–3 . . . . . . . . . . . . . . . . . . . . . | 0.00041 | 99,170 | 41 | 99,150 | 7,195,280 | 72.6 |
| 3–4 . . . . . . . . . . . . . . . . . . . . . | 0.00031 | 99,129 | 30 | 99,114 | 7,096,130 | 71.6 |
| 4–5 . . . . . . . . . . . . . . . . . . . . . | 0.00024 | 99,099 | 24 | 99,087 | 6,997,016 | 70.6 |
| 5–6 . . . . . . . . . . . . . . . . . . . . . | 0.00022 | 99,075 | 22 | 99,064 | 6,897,928 | 69.6 |
| 6–7 . . . . . . . . . . . . . . . . . . . . . | 0.00021 | 99,053 | 21 | 99,043 | 6,798,864 | 68.6 |
| 7–8 . . . . . . . . . . . . . . . . . . . . . | 0.00020 | 99,033 | 20 | 99,023 | 6,699,821 | 67.7 |
| 8–9 . . . . . . . . . . . . . . . . . . . . . | 0.00018 | 99,013 | 18 | 99,004 | 6,600,798 | 66.7 |
| 9–10 . . . . . . . . . . . . . . . . . . . . | 0.00015 | 98,995 | 15 | 98,988 | 6,501,794 | 65.7 |
| 10–11. . . . . . . . . . . . . . . . . . . . | 0.00013 | 98,980 | 13 | 98,974 | 6,402,806 | 64.7 |
| 11–12. . . . . . . . . . . . . . . . . . . . | 0.00013 | 98,967 | 13 | 98,961 | 6,303,833 | 63.7 |
| 12–13 . . . . . . . . . . . . . . . . . . . . | 0.00019 | 98,954 | 19 | 98,945 | 6,204,872 | 62.7 |
| 13–14 . . . . . . . . . . . . . . . . . . . . | 0.00032 | 98,936 | 32 | 98,920 | 6,105,927 | 61.7 |
| 14–15 . . . . . . . . . . . . . . . . . . . . | 0.00049 | 98,904 | 49 | 98,880 | 6,007,007 | 60.7 |
| 15–16 . . . . . . . . . . . . . . . . . . . . | 0.00068 | 98,855 | 67 | 98,822 | 5,908,127 | 59.8 |
| 16–17 . . . . . . . . . . . . . . . . . . . . | 0.00085 | 98,788 | 84 | 98,746 | 5,809,305 | 58.8 |
| 17–18 . . . . . . . . . . . . . . . . . . . . | 0.00100 | 98,704 | 99 | 98,655 | 5,710,559 | 57.9 |
| 18–19 . . . . . . . . . . . . . . . . . . . . | 0.00111 | 98,605 | 109 | 98,551 | 5,611,905 | 56.9 |
| 19–20 . . . . . . . . . . . . . . . . . . . . | 0.00119 | 98,496 | 117 | 98,438 | 5,513,354 | 56.0 |
| 20–21 . . . . . . . . . . . . . . . . . . . . | 0.00127 | 98,379 | 125 | 98,317 | 5,414,916 | 55.0 |
| 21–22 . . . . . . . . . . . . . . . . . . . . | 0.00136 | 98,254 | 133 | 98,188 | 5,316,600 | 54.1 |
| 22–23 . . . . . . . . . . . . . . . . . . . . | 0.00141 | 98,121 | 139 | 98,052 | 5,218,412 | 53.2 |
| 23–24 . . . . . . . . . . . . . . . . . . . . | 0.00143 | 97,982 | 140 | 97,912 | 5,120,360 | 52.3 |
| 24–25 . . . . . . . . . . . . . . . . . . . . | 0.00141 | 97,842 | 138 | 97,773 | 5,022,448 | 51.3 |
| 25–26 . . . . . . . . . . . . . . . . . . . . | 0.00139 | 97,704 | 135 | 97,636 | 4,924,675 | 50.4 |
| 26–27 . . . . . . . . . . . . . . . . . . . . | 0.00137 | 97,569 | 133 | 97,502 | 4,827,039 | 49.5 |
| 27–28 . . . . . . . . . . . . . . . . . . . . | 0.00136 | 97,435 | 133 | 97,369 | 4,729,537 | 48.5 |
| 28–29 . . . . . . . . . . . . . . . . . . . . | 0.00138 | 97,303 | 135 | 97,235 | 4,632,168 | 47.6 |
| 29–30 . . . . . . . . . . . . . . . . . . . . | 0.00142 | 97,168 | 138 | 97,099 | 4,534,933 | 46.7 |
| 30–31 . . . . . . . . . . . . . . . . . . . . | 0.00147 | 97,030 | 143 | 96,958 | 4,437,834 | 45.7 |
| 31–32 . . . . . . . . . . . . . . . . . . . . | 0.00153 | 96,887 | 148 | 96,813 | 4,340,876 | 44.8 |
| 32–33 . . . . . . . . . . . . . . . . . . . . | 0.00159 | 96,739 | 154 | 96,662 | 4,244,063 | 43.9 |
| 33–34 . . . . . . . . . . . . . . . . . . . . | 0.00167 | 96,585 | 162 | 96,504 | 4,147,401 | 42.9 |
| 34–35 . . . . . . . . . . . . . . . . . . . . | 0.00176 | 96,423 | 170 | 96,338 | 4,050,897 | 42.0 |
| 35–36 . . . . . . . . . . . . . . . . . . . . | 0.00186 | 96,253 | 179 | 96,164 | 3,954,558 | 41.1 |
| 36–37 . . . . . . . . . . . . . . . . . . . . | 0.00196 | 96,074 | 188 | 95,980 | 3,858,394 | 40.2 |
| 37–38 . . . . . . . . . . . . . . . . . . . . | 0.00208 | 95,886 | 200 | 95,786 | 3,762,414 | 39.2 |
| 38–39 . . . . . . . . . . . . . . . . . . . . | 0.00223 | 95,686 | 213 | 95,580 | 3,666,628 | 38.3 |
| 39–40 . . . . . . . . . . . . . . . . . . . . | 0.00240 | 95,473 | 229 | 95,359 | 3,571,048 | 37.4 |
| 40–41 . . . . . . . . . . . . . . . . . . . . | 0.00259 | 95,244 | 246 | 95,121 | 3,475,690 | 36.5 |
| 41–42 . . . . . . . . . . . . . . . . . . . . | 0.00278 | 94,998 | 264 | 94,866 | 3,380,569 | 35.6 |
| 42–43 . . . . . . . . . . . . . . . . . . . . | 0.00300 | 94,733 | 285 | 94,591 | 3,285,703 | 34.7 |
| 43–44 . . . . . . . . . . . . . . . . . . . . | 0.00326 | 94,449 | 308 | 94,295 | 3,191,112 | 33.8 |
| 44–45 . . . . . . . . . . . . . . . . . . . . | 0.00354 | 94,141 | 333 | 93,975 | 3,096,817 | 32.9 |
| 45–46 . . . . . . . . . . . . . . . . . . . . | 0.00387 | 93,808 | 363 | 93,626 | 3,002,842 | 32.0 |
| 46–47 . . . . . . . . . . . . . . . . . . . . | 0.00422 | 93,445 | 395 | 93,248 | 2,909,216 | 31.1 |
| 47–48 . . . . . . . . . . . . . . . . . . . . | 0.00458 | 93,050 | 427 | 92,837 | 2,815,968 | 30.3 |
| 48–49 . . . . . . . . . . . . . . . . . . . . | 0.00493 | 92,624 | 456 | 92,396 | 2,723,131 | 29.4 |
| 49–50 . . . . . . . . . . . . . . . . . . . . | 0.00526 | 92,168 | 485 | 91,925 | 2,630,735 | 28.5 |
| 50–51 . . . . . . . . . . . . . . . . . . . . | 0.00561 | 91,683 | 514 | 91,426 | 2,538,810 | 27.7 |
| 51–52 . . . . . . . . . . . . . . . . . . . . | 0.00601 | 91,168 | 548 | 90,894 | 2,447,384 | 26.8 |
| 52–53 . . . . . . . . . . . . . . . . . . . . | 0.00648 | 90,620 | 587 | 90,327 | 2,356,490 | 26.0 |
| 53–54 . . . . . . . . . . . . . . . . . . . . | 0.00704 | 90,033 | 634 | 89,716 | 2,266,164 | 25.2 |
| 54–55 . . . . . . . . . . . . . . . . . . . . | 0.00771 | 89,399 | 689 | 89,054 | 2,176,448 | 24.4 |
| 55–56 . . . . . . . . . . . . . . . . . . . . | 0.00849 | 88,710 | 753 | 88,333 | 2,087,393 | 23.5 |
| 56–57 . . . . . . . . . . . . . . . . . . . . | 0.00936 | 87,957 | 823 | 87,546 | 1,999,060 | 22.7 |
| 57–58 . . . . . . . . . . . . . . . . . . . . | 0.01028 | 87,134 | 896 | 86,686 | 1,911,514 | 21.9 |
| 58–59 . . . . . . . . . . . . . . . . . . . . | 0.01122 | 86,239 | 968 | 85,755 | 1,824,828 | 21.2 |
| 59–60 . . . . . . . . . . . . . . . . . . . . | 0.01219 | 85,271 | 1,039 | 84,751 | 1,739,073 | 20.4 |
| 60–61 . . . . . . . . . . . . . . . . . . . . | 0.01325 | 84,232 | 1,116 | 83,673 | 1,654,322 | 19.6 |
| 61–62 . . . . . . . . . . . . . . . . . . . . | 0.01446 | 83,115 | 1,202 | 82,514 | 1,570,648 | 18.9 |
| 62–63 . . . . . . . . . . . . . . . . . . . . | 0.01580 | 81,913 | 1,294 | 81,266 | 1,488,134 | 18.2 |
| 63–64 . . . . . . . . . . . . . . . . . . . . | 0.01728 | 80,619 | 1,393 | 79,922 | 1,406,868 | 17.5 |
| 64–65 . . . . . . . . . . . . . . . . . . . . | 0.01888 | 79,226 | 1,496 | 78,478 | 1,326,945 | 16.8 |
| 65–66 . . . . . . . . . . . . . . . . . . . . | 0.02053 | 77,730 | 1,596 | 76,933 | 1,248,467 | 16.1 |
| 66–67 . . . . . . . . . . . . . . . . . . . . | 0.02230 | 76,135 | 1,698 | 75,286 | 1,171,534 | 15.4 |

## Table 2. Life table for males: United States, 1999—Con.

| Age | Proportion dying during age interval | Number living at beginning of age interval | Number dying during age interval | Stationary population in the age interval | Stationary population in this and all subsequent age intervals | Life expectancy at beginning of age interval |
|---|---|---|---|---|---|---|
| | $q_x$ | $l_x$ | $d_x$ | $L_x$ | $T_x$ | $e_x$ |
| 67–68 . . . . . . . . . . . . . . . . . . . . . | 0.02431 | 74,437 | 1,809 | 73,532 | 1,096,249 | 14.7 |
| 68–69 . . . . . . . . . . . . . . . . . . . . . | 0.02662 | 72,628 | 1,933 | 71,661 | 1,022,716 | 14.1 |
| 69–70 . . . . . . . . . . . . . . . . . . . . . | 0.02918 | 70,695 | 2,063 | 69,663 | 951,055 | 13.5 |
| 70–71 . . . . . . . . . . . . . . . . . . . . . | 0.03182 | 68,632 | 2,184 | 67,540 | 881,392 | 12.8 |
| 71–72 . . . . . . . . . . . . . . . . . . . . . | 0.03449 | 66,448 | 2,292 | 65,302 | 813,851 | 12.3 |
| 72–73 . . . . . . . . . . . . . . . . . . . . . | 0.03737 | 64,157 | 2,397 | 62,958 | 748,549 | 11.7 |
| 73–74 . . . . . . . . . . . . . . . . . . . . . | 0.04052 | 61,759 | 2,503 | 60,508 | 685,591 | 11.1 |
| 74–75 . . . . . . . . . . . . . . . . . . . . . | 0.04397 | 59,256 | 2,606 | 57,954 | 625,083 | 10.6 |
| 75–76 . . . . . . . . . . . . . . . . . . . . . | 0.04761 | 56,651 | 2,697 | 55,302 | 567,130 | 10.0 |
| 76–77 . . . . . . . . . . . . . . . . . . . . . | 0.05142 | 53,954 | 2,774 | 52,567 | 511,828 | 9.5 |
| 77–78 . . . . . . . . . . . . . . . . . . . . . | 0.05562 | 51,180 | 2,847 | 49,756 | 459,261 | 9.0 |
| 78–79 . . . . . . . . . . . . . . . . . . . . . | 0.06047 | 48,333 | 2,923 | 46,872 | 409,505 | 8.5 |
| 79–80 . . . . . . . . . . . . . . . . . . . . . | 0.06616 | 45,410 | 3,005 | 43,908 | 362,633 | 8.0 |
| 80–81 . . . . . . . . . . . . . . . . . . . . . | 0.07296 | 42,406 | 3,094 | 40,859 | 318,725 | 7.5 |
| 81–82 . . . . . . . . . . . . . . . . . . . . . | 0.08079 | 39,312 | 3,176 | 37,724 | 277,866 | 7.1 |
| 82–83 . . . . . . . . . . . . . . . . . . . . . | 0.08940 | 36,136 | 3,230 | 34,521 | 240,143 | 6.7 |
| 83–84 . . . . . . . . . . . . . . . . . . . . . | 0.09827 | 32,905 | 3,234 | 31,289 | 205,622 | 6.3 |
| 84–85 . . . . . . . . . . . . . . . . . . . . . | 0.10734 | 29,672 | 3,185 | 28,079 | 174,333 | 5.9 |
| 85–86 . . . . . . . . . . . . . . . . . . . . . | 0.11742 | 26,487 | 3,110 | 24,932 | 146,254 | 5.5 |
| 86–87 . . . . . . . . . . . . . . . . . . . . . | 0.12810 | 23,377 | 2,994 | 21,879 | 121,323 | 5.2 |
| 87–88 . . . . . . . . . . . . . . . . . . . . . | 0.13936 | 20,382 | 2,841 | 18,962 | 99,443 | 4.9 |
| 88–89 . . . . . . . . . . . . . . . . . . . . . | 0.15121 | 17,542 | 2,652 | 16,215 | 80,482 | 4.6 |
| 89–90 . . . . . . . . . . . . . . . . . . . . . | 0.16362 | 14,889 | 2,436 | 13,671 | 64,266 | 4.3 |
| 90–91 . . . . . . . . . . . . . . . . . . . . . | 0.17658 | 12,453 | 2,199 | 11,353 | 50,595 | 4.1 |
| 91–92 . . . . . . . . . . . . . . . . . . . . . | 0.19004 | 10,254 | 1,949 | 9,280 | 39,242 | 3.8 |
| 92–93 . . . . . . . . . . . . . . . . . . . . . | 0.20397 | 8,305 | 1,694 | 7,458 | 29,962 | 3.6 |
| 93–94 . . . . . . . . . . . . . . . . . . . . . | 0.21833 | 6,611 | 1,443 | 5,890 | 22,504 | 3.4 |
| 94–95 . . . . . . . . . . . . . . . . . . . . . | 0.23308 | 5,168 | 1,204 | 4,566 | 16,614 | 3.2 |
| 95–96 . . . . . . . . . . . . . . . . . . . . . | 0.24814 | 3,963 | 983 | 3,472 | 12,048 | 3.0 |
| 96–97 . . . . . . . . . . . . . . . . . . . . . | 0.26346 | 2,980 | 785 | 2,587 | 8,577 | 2.9 |
| 97–98 . . . . . . . . . . . . . . . . . . . . . | 0.27897 | 2,195 | 612 | 1,889 | 5,989 | 2.7 |
| 98–99 . . . . . . . . . . . . . . . . . . . . . | 0.29460 | 1,583 | 466 | 1,349 | 4,101 | 2.6 |
| 99–100 . . . . . . . . . . . . . . . . . . . . | 0.31026 | 1,116 | 346 | 943 | 2,751 | 2.5 |
| 100+ . . . . . . . . . . . . . . . . . . . . . | 1.00000 | 770 | 770 | 1,808 | 1,808 | 2.4 |

## Table 3. Life table for females: United States, 1999

| Age | Proportion dying during age interval | Number living at beginning of age interval | Number dying during age interval | Stationary population in the age interval | Stationary population in this and all subsequent age intervals | Life expectancy at beginning of age interval |
|---|---|---|---|---|---|---|
| | $q_x$ | $l_x$ | $d_x$ | $L_x$ | $T_x$ | $e_x$ |
| 0–1 . . . . . . . . . . . . . . . . . . . . . | 0.00636 | 100,000 | 636 | 99,441 | 7,939,597 | 79.4 |
| 1–2 . . . . . . . . . . . . . . . . . . . . . | 0.00049 | 99,364 | 48 | 99,340 | 7,840,157 | 78.9 |
| 2–3 . . . . . . . . . . . . . . . . . . . . . | 0.00031 | 99,316 | 31 | 99,300 | 7,740,817 | 77.9 |
| 3–4 . . . . . . . . . . . . . . . . . . . . . | 0.00024 | 99,285 | 24 | 99,273 | 7,641,517 | 77.0 |
| 4–5 . . . . . . . . . . . . . . . . . . . . . | 0.00019 | 99,261 | 19 | 99,252 | 7,542,244 | 76.0 |
| 5–6 . . . . . . . . . . . . . . . . . . . . . | 0.00018 | 99,242 | 18 | 99,233 | 7,442,992 | 75.0 |
| 6–7 . . . . . . . . . . . . . . . . . . . . . | 0.00017 | 99,224 | 16 | 99,216 | 7,343,759 | 74.0 |
| 7–8 . . . . . . . . . . . . . . . . . . . . . | 0.00016 | 99,208 | 15 | 99,200 | 7,244,543 | 73.0 |
| 8–9 . . . . . . . . . . . . . . . . . . . . . | 0.00014 | 99,192 | 14 | 99,185 | 7,145,343 | 72.0 |
| 9–10 . . . . . . . . . . . . . . . . . . . . | 0.00013 | 99,178 | 13 | 99,172 | 7,046,158 | 71.1 |
| 10–11. . . . . . . . . . . . . . . . . . . . | 0.00012 | 99,165 | 12 | 99,159 | 6,946,986 | 70.1 |
| 11–12. . . . . . . . . . . . . . . . . . . . | 0.00012 | 99,153 | 12 | 99,147 | 6,847,827 | 69.1 |
| 12–13 . . . . . . . . . . . . . . . . . . . . | 0.00015 | 99,141 | 14 | 99,134 | 6,748,680 | 68.1 |
| 13–14 . . . . . . . . . . . . . . . . . . . . | 0.00019 | 99,127 | 19 | 99,117 | 6,649,547 | 67.1 |
| 14–15 . . . . . . . . . . . . . . . . . . . . | 0.00026 | 99,108 | 25 | 99,095 | 6,550,430 | 66.1 |
| 15–16 . . . . . . . . . . . . . . . . . . . . | 0.00033 | 99,082 | 32 | 99,066 | 6,451,335 | 65.1 |
| 16–17 . . . . . . . . . . . . . . . . . . . . | 0.00039 | 99,050 | 39 | 99,031 | 6,352,268 | 64.1 |
| 17–18 . . . . . . . . . . . . . . . . . . . . | 0.00044 | 99,011 | 44 | 98,989 | 6,253,238 | 63.2 |
| 18–19 . . . . . . . . . . . . . . . . . . . . | 0.00046 | 98,968 | 46 | 98,945 | 6,154,249 | 62.2 |
| 19–20 . . . . . . . . . . . . . . . . . . . . | 0.00047 | 98,922 | 46 | 98,899 | 6,055,304 | 61.2 |
| 20–21 . . . . . . . . . . . . . . . . . . . . | 0.00046 | 98,876 | 46 | 98,853 | 5,956,405 | 60.2 |
| 21–22 . . . . . . . . . . . . . . . . . . . . | 0.00047 | 98,830 | 46 | 98,807 | 5,857,552 | 59.3 |
| 22–23 . . . . . . . . . . . . . . . . . . . . | 0.00048 | 98,784 | 47 | 98,760 | 5,758,745 | 58.3 |
| 23–24 . . . . . . . . . . . . . . . . . . . . | 0.00049 | 98,736 | 48 | 98,712 | 5,659,985 | 57.3 |
| 24–25 . . . . . . . . . . . . . . . . . . . . | 0.00050 | 98,688 | 49 | 98,664 | 5,561,273 | 56.4 |
| 25–26 . . . . . . . . . . . . . . . . . . . . | 0.00052 | 98,639 | 51 | 98,613 | 5,462,609 | 55.4 |
| 26–27 . . . . . . . . . . . . . . . . . . . . | 0.00054 | 98,588 | 53 | 98,561 | 5,363,996 | 54.4 |
| 27–28 . . . . . . . . . . . . . . . . . . . . | 0.00056 | 98,535 | 55 | 98,507 | 5,265,435 | 53.4 |
| 28–29 . . . . . . . . . . . . . . . . . . . . | 0.00059 | 98,480 | 58 | 98,451 | 5,166,927 | 52.5 |
| 29–30 . . . . . . . . . . . . . . . . . . . . | 0.00062 | 98,422 | 61 | 98,392 | 5,068,476 | 51.5 |
| 30–31 . . . . . . . . . . . . . . . . . . . . | 0.00065 | 98,361 | 64 | 98,329 | 4,970,084 | 50.5 |
| 31–32 . . . . . . . . . . . . . . . . . . . . | 0.00069 | 98,297 | 68 | 98,263 | 4,871,755 | 49.6 |
| 32–33 . . . . . . . . . . . . . . . . . . . . | 0.00075 | 98,229 | 74 | 98,192 | 4,773,492 | 48.6 |
| 33–34 . . . . . . . . . . . . . . . . . . . . | 0.00082 | 98,156 | 80 | 98,115 | 4,675,299 | 47.6 |
| 34–35 . . . . . . . . . . . . . . . . . . . . | 0.00090 | 98,075 | 88 | 98,031 | 4,577,184 | 46.7 |
| 35–36 . . . . . . . . . . . . . . . . . . . . | 0.00098 | 97,987 | 96 | 97,939 | 4,479,153 | 45.7 |
| 36–37 . . . . . . . . . . . . . . . . . . . . | 0.00106 | 97,891 | 104 | 97,839 | 4,381,214 | 44.8 |
| 37–38 . . . . . . . . . . . . . . . . . . . . | 0.00115 | 97,787 | 112 | 97,730 | 4,283,376 | 43.8 |
| 38–39 . . . . . . . . . . . . . . . . . . . . | 0.00124 | 97,674 | 121 | 97,614 | 4,185,645 | 42.9 |
| 39–40 . . . . . . . . . . . . . . . . . . . . | 0.00134 | 97,553 | 131 | 97,488 | 4,088,032 | 41.9 |
| 40–41 . . . . . . . . . . . . . . . . . . . . | 0.00145 | 97,422 | 141 | 97,352 | 3,990,544 | 41.0 |
| 41–42 . . . . . . . . . . . . . . . . . . . . | 0.00156 | 97,281 | 152 | 97,205 | 3,893,192 | 40.0 |
| 42–43 . . . . . . . . . . . . . . . . . . . . | 0.00169 | 97,129 | 164 | 97,047 | 3,795,987 | 39.1 |
| 43–44 . . . . . . . . . . . . . . . . . . . . | 0.00182 | 96,965 | 176 | 96,877 | 3,698,940 | 38.2 |
| 44–45 . . . . . . . . . . . . . . . . . . . . | 0.00196 | 96,789 | 190 | 96,694 | 3,602,063 | 37.2 |
| 45–46 . . . . . . . . . . . . . . . . . . . . | 0.00213 | 96,599 | 205 | 96,496 | 3,505,369 | 36.3 |
| 46–47 . . . . . . . . . . . . . . . . . . . . | 0.00231 | 96,393 | 223 | 96,282 | 3,408,873 | 35.4 |
| 47–48 . . . . . . . . . . . . . . . . . . . . | 0.00251 | 96,171 | 241 | 96,050 | 3,312,591 | 34.4 |
| 48–49 . . . . . . . . . . . . . . . . . . . . | 0.00273 | 95,929 | 262 | 95,799 | 3,216,541 | 33.5 |
| 49–50 . . . . . . . . . . . . . . . . . . . . | 0.00296 | 95,668 | 284 | 95,526 | 3,120,742 | 32.6 |
| 50–51 . . . . . . . . . . . . . . . . . . . . | 0.00322 | 95,384 | 307 | 95,231 | 3,025,216 | 31.7 |
| 51–52 . . . . . . . . . . . . . . . . . . . . | 0.00351 | 95,077 | 333 | 94,910 | 2,929,986 | 30.8 |
| 52–53 . . . . . . . . . . . . . . . . . . . . | 0.00382 | 94,744 | 362 | 94,562 | 2,835,076 | 29.9 |
| 53–54 . . . . . . . . . . . . . . . . . . . . | 0.00418 | 94,381 | 395 | 94,184 | 2,740,513 | 29.0 |
| 54–55 . . . . . . . . . . . . . . . . . . . . | 0.00460 | 93,986 | 432 | 93,770 | 2,646,329 | 28.2 |
| 55–56 . . . . . . . . . . . . . . . . . . . . | 0.00508 | 93,554 | 475 | 93,317 | 2,552,559 | 27.3 |
| 56–57 . . . . . . . . . . . . . . . . . . . . | 0.00562 | 93,079 | 523 | 92,818 | 2,459,242 | 26.4 |
| 57–58 . . . . . . . . . . . . . . . . . . . . | 0.00620 | 92,556 | 574 | 92,269 | 2,366,424 | 25.6 |
| 58–59 . . . . . . . . . . . . . . . . . . . . | 0.00680 | 91,982 | 626 | 91,669 | 2,274,155 | 24.7 |
| 59–60 . . . . . . . . . . . . . . . . . . . . | 0.00744 | 91,356 | 679 | 91,017 | 2,182,486 | 23.9 |
| 60–61 . . . . . . . . . . . . . . . . . . . . | 0.00814 | 90,677 | 738 | 90,308 | 2,091,469 | 23.1 |
| 61–62 . . . . . . . . . . . . . . . . . . . . | 0.00895 | 89,939 | 805 | 89,537 | 2,001,161 | 22.3 |
| 62–63 . . . . . . . . . . . . . . . . . . . . | 0.00982 | 89,134 | 875 | 88,697 | 1,911,624 | 21.5 |
| 63–64 . . . . . . . . . . . . . . . . . . . . | 0.01076 | 88,259 | 949 | 87,784 | 1,822,928 | 20.7 |
| 64–65 . . . . . . . . . . . . . . . . . . . . | 0.01175 | 87,310 | 1,026 | 86,797 | 1,735,144 | 19.9 |
| 65–66 . . . . . . . . . . . . . . . . . . . . | 0.01280 | 86,283 | 1,105 | 85,731 | 1,648,347 | 19.1 |
| 66–67 . . . . . . . . . . . . . . . . . . . . | 0.01395 | 85,179 | 1,188 | 84,585 | 1,562,616 | 18.4 |

## Table 3. Life table for females: United States, 1999—Con.

| Age | Proportion dying during age interval $q_x$ | Number living at beginning of age interval $l_x$ | Number dying during age interval $d_x$ | Stationary population in the age interval $L_x$ | Stationary population in this and all subsequent age intervals $T_x$ | Life expectancy at beginning of age interval $e_x$ |
|---|---|---|---|---|---|---|
| 67–68 . . . . . . . . . . . . . . . . . . . . | 0.01524 | 83,991 | 1,280 | 83,351 | 1,478,031 | 17.6 |
| 68–69 . . . . . . . . . . . . . . . . . . . . | 0.01669 | 82,711 | 1,380 | 82,021 | 1,394,680 | 16.9 |
| 69–70 . . . . . . . . . . . . . . . . . . . . | 0.01829 | 81,331 | 1,488 | 80,587 | 1,312,659 | 16.1 |
| 70–71 . . . . . . . . . . . . . . . . . . . . | 0.01994 | 79,843 | 1,592 | 79,047 | 1,232,072 | 15.4 |
| 71–72 . . . . . . . . . . . . . . . . . . . . | 0.02167 | 78,251 | 1,696 | 77,403 | 1,153,025 | 14.7 |
| 72–73 . . . . . . . . . . . . . . . . . . . . | 0.02362 | 76,555 | 1,808 | 75,651 | 1,075,622 | 14.1 |
| 73–74 . . . . . . . . . . . . . . . . . . . . | 0.02588 | 74,747 | 1,934 | 73,780 | 999,971 | 13.4 |
| 74–75 . . . . . . . . . . . . . . . . . . . . | 0.02845 | 72,813 | 2,071 | 71,777 | 926,191 | 12.7 |
| 75–76 . . . . . . . . . . . . . . . . . . . . | 0.03119 | 70,741 | 2,206 | 69,638 | 854,414 | 12.1 |
| 76–77 . . . . . . . . . . . . . . . . . . . . | 0.03409 | 68,535 | 2,336 | 67,367 | 784,776 | 11.5 |
| 77–78 . . . . . . . . . . . . . . . . . . . . | 0.03735 | 66,199 | 2,473 | 64,963 | 717,409 | 10.8 |
| 78–79 . . . . . . . . . . . . . . . . . . . . | 0.04116 | 63,726 | 2,623 | 62,415 | 652,446 | 10.2 |
| 79–80 . . . . . . . . . . . . . . . . . . . . | 0.04560 | 61,104 | 2,786 | 59,710 | 590,031 | 9.7 |
| 80–81 . . . . . . . . . . . . . . . . . . . . | 0.05063 | 58,317 | 2,952 | 56,841 | 530,321 | 9.1 |
| 81–82 . . . . . . . . . . . . . . . . . . . . | 0.05628 | 55,365 | 3,116 | 53,807 | 473,480 | 8.6 |
| 82–83 . . . . . . . . . . . . . . . . . . . . | 0.06285 | 52,249 | 3,284 | 50,607 | 419,673 | 8.0 |
| 83–84 . . . . . . . . . . . . . . . . . . . . | 0.07041 | 48,965 | 3,448 | 47,241 | 369,066 | 7.5 |
| 84–85 . . . . . . . . . . . . . . . . . . . . | 0.07896 | 45,518 | 3,594 | 43,720 | 321,824 | 7.1 |
| 85–86 . . . . . . . . . . . . . . . . . . . . | 0.08755 | 41,923 | 3,671 | 40,088 | 278,104 | 6.6 |
| 86–87 . . . . . . . . . . . . . . . . . . . . | 0.09679 | 38,253 | 3,702 | 36,402 | 238,016 | 6.2 |
| 87–88 . . . . . . . . . . . . . . . . . . . . | 0.10667 | 34,551 | 3,685 | 32,708 | 201,614 | 5.8 |
| 88–89 . . . . . . . . . . . . . . . . . . . . | 0.11720 | 30,865 | 3,617 | 29,056 | 168,906 | 5.5 |
| 89–90 . . . . . . . . . . . . . . . . . . . . | 0.12839 | 27,248 | 3,498 | 25,499 | 139,850 | 5.1 |
| 90–91 . . . . . . . . . . . . . . . . . . . . | 0.14022 | 23,749 | 3,330 | 22,084 | 114,351 | 4.8 |
| 91–92 . . . . . . . . . . . . . . . . . . . . | 0.15267 | 20,419 | 3,117 | 18,861 | 92,267 | 4.5 |
| 92–93 . . . . . . . . . . . . . . . . . . . . | 0.16573 | 17,302 | 2,867 | 15,868 | 73,406 | 4.2 |
| 93–94 . . . . . . . . . . . . . . . . . . . . | 0.17936 | 14,434 | 2,589 | 13,140 | 57,538 | 4.0 |
| 94–95 . . . . . . . . . . . . . . . . . . . . | 0.19353 | 11,845 | 2,292 | 10,699 | 44,398 | 3.8 |
| 95–96 . . . . . . . . . . . . . . . . . . . . | 0.20818 | 9,553 | 1,989 | 8,559 | 33,699 | 3.5 |
| 96–97 . . . . . . . . . . . . . . . . . . . . | 0.22326 | 7,564 | 1,689 | 6,720 | 25,140 | 3.3 |
| 97–98 . . . . . . . . . . . . . . . . . . . . | 0.23872 | 5,875 | 1,403 | 5,174 | 18,421 | 3.1 |
| 98–99 . . . . . . . . . . . . . . . . . . . . | 0.25447 | 4,473 | 1,138 | 3,904 | 13,246 | 3.0 |
| 99–100 . . . . . . . . . . . . . . . . . . . . | 0.27043 | 3,335 | 902 | 2,884 | 9,343 | 2.8 |
| 100+ . . . . . . . . . . . . . . . . . . . . | 1.00000 | 2,433 | 2,433 | 6,459 | 6,459 | 2.7 |

## Table 4. Life table for the white population: United States, 1999

| Age | Proportion dying during age interval | Number living at beginning of age interval | Number dying during age interval | Stationary population in the age interval | Stationary population in this and all subsequent age intervals | Life expectancy at beginning of age interval |
|---|---|---|---|---|---|---|
| | $q_x$ | $l_x$ | $d_x$ | $L_x$ | $T_x$ | $e_x$ |
| 0–1 . . . . . . . . . . . . . . . . . . . . . . | 0.00577 | 100,000 | 577 | 99,496 | 7,731,826 | 77.3 |
| 1–2 . . . . . . . . . . . . . . . . . . . . . . | 0.00046 | 99,423 | 46 | 99,400 | 7,632,330 | 76.8 |
| 2–3 . . . . . . . . . . . . . . . . . . . . . . | 0.00032 | 99,377 | 32 | 99,361 | 7,532,930 | 75.8 |
| 3–4 . . . . . . . . . . . . . . . . . . . . . . | 0.00026 | 99,345 | 25 | 99,332 | 7,433,569 | 74.8 |
| 4–5 . . . . . . . . . . . . . . . . . . . . . . | 0.00019 | 99,320 | 18 | 99,310 | 7,334,236 | 73.8 |
| 5–6 . . . . . . . . . . . . . . . . . . . . . . | 0.00018 | 99,301 | 18 | 99,292 | 7,234,926 | 72.9 |
| 6–7 . . . . . . . . . . . . . . . . . . . . . . | 0.00017 | 99,283 | 17 | 99,275 | 7,135,634 | 71.9 |
| 7–8 . . . . . . . . . . . . . . . . . . . . . . | 0.00016 | 99,267 | 16 | 99,259 | 7,036,358 | 70.9 |
| 8–9 . . . . . . . . . . . . . . . . . . . . . . | 0.00015 | 99,251 | 15 | 99,244 | 6,937,100 | 69.9 |
| 9–10 . . . . . . . . . . . . . . . . . . . . . . | 0.00013 | 99,236 | 13 | 99,230 | 6,837,856 | 68.9 |
| 10–11. . . . . . . . . . . . . . . . . . . . . | 0.00011 | 99,224 | 11 | 99,218 | 6,738,626 | 67.9 |
| 11–12. . . . . . . . . . . . . . . . . . . . . | 0.00012 | 99,213 | 12 | 99,207 | 6,639,408 | 66.9 |
| 12–13 . . . . . . . . . . . . . . . . . . . . . | 0.00016 | 99,201 | 16 | 99,193 | 6,540,201 | 65.9 |
| 13–14 . . . . . . . . . . . . . . . . . . . . . | 0.00024 | 99,186 | 24 | 99,174 | 6,441,008 | 64.9 |
| 14–15 . . . . . . . . . . . . . . . . . . . . . | 0.00036 | 99,161 | 36 | 99,144 | 6,341,834 | 64.0 |
| 15–16 . . . . . . . . . . . . . . . . . . . . . | 0.00049 | 99,126 | 48 | 99,102 | 6,242,690 | 63.0 |
| 16–17 . . . . . . . . . . . . . . . . . . . . . | 0.00061 | 99,077 | 60 | 99,047 | 6,143,589 | 62.0 |
| 17–18 . . . . . . . . . . . . . . . . . . . . . | 0.00070 | 99,017 | 69 | 98,983 | 6,044,541 | 61.1 |
| 18–19 . . . . . . . . . . . . . . . . . . . . . | 0.00075 | 98,949 | 74 | 98,912 | 5,945,558 | 60.1 |
| 19–20 . . . . . . . . . . . . . . . . . . . . . | 0.00078 | 98,875 | 77 | 98,836 | 5,846,647 | 59.1 |
| 20–21 . . . . . . . . . . . . . . . . . . . . . | 0.00080 | 98,798 | 79 | 98,758 | 5,747,811 | 58.2 |
| 21–22 . . . . . . . . . . . . . . . . . . . . . | 0.00083 | 98,719 | 82 | 98,678 | 5,649,052 | 57.2 |
| 22–23 . . . . . . . . . . . . . . . . . . . . . | 0.00085 | 98,637 | 83 | 98,596 | 5,550,374 | 56.3 |
| 23–24 . . . . . . . . . . . . . . . . . . . . . | 0.00085 | 98,554 | 84 | 98,512 | 5,451,778 | 55.3 |
| 24–25 . . . . . . . . . . . . . . . . . . . . . | 0.00085 | 98,470 | 84 | 98,428 | 5,353,267 | 54.4 |
| 25–26 . . . . . . . . . . . . . . . . . . . . . | 0.00085 | 98,386 | 83 | 98,344 | 5,254,839 | 53.4 |
| 26–27 . . . . . . . . . . . . . . . . . . . . . | 0.00085 | 98,303 | 83 | 98,261 | 5,156,494 | 52.5 |
| 27–28 . . . . . . . . . . . . . . . . . . . . . | 0.00086 | 98,219 | 84 | 98,177 | 5,058,233 | 51.5 |
| 28–29 . . . . . . . . . . . . . . . . . . . . . | 0.00088 | 98,136 | 86 | 98,093 | 4,960,056 | 50.5 |
| 29–30 . . . . . . . . . . . . . . . . . . . . . | 0.00091 | 98,050 | 89 | 98,005 | 4,861,963 | 49.6 |
| 30–31 . . . . . . . . . . . . . . . . . . . . . | 0.00094 | 97,961 | 92 | 97,915 | 4,763,958 | 48.6 |
| 31–32 . . . . . . . . . . . . . . . . . . . . . | 0.00098 | 97,868 | 96 | 97,820 | 4,666,043 | 47.7 |
| 32–33 . . . . . . . . . . . . . . . . . . . . . | 0.00104 | 97,772 | 102 | 97,721 | 4,568,223 | 46.7 |
| 33–34 . . . . . . . . . . . . . . . . . . . . . | 0.00111 | 97,670 | 108 | 97,616 | 4,470,502 | 45.8 |
| 34–35 . . . . . . . . . . . . . . . . . . . . . | 0.00119 | 97,562 | 116 | 97,504 | 4,372,885 | 44.8 |
| 35–36 . . . . . . . . . . . . . . . . . . . . . | 0.00127 | 97,446 | 124 | 97,384 | 4,275,381 | 43.9 |
| 36–37 . . . . . . . . . . . . . . . . . . . . . | 0.00135 | 97,323 | 132 | 97,257 | 4,177,997 | 42.9 |
| 37–38 . . . . . . . . . . . . . . . . . . . . . | 0.00145 | 97,191 | 140 | 97,121 | 4,080,740 | 42.0 |
| 38–39 . . . . . . . . . . . . . . . . . . . . . | 0.00155 | 97,050 | 150 | 96,975 | 3,983,619 | 41.1 |
| 39–40 . . . . . . . . . . . . . . . . . . . . . | 0.00167 | 96,900 | 161 | 96,819 | 3,886,644 | 40.1 |
| 40–41 . . . . . . . . . . . . . . . . . . . . . | 0.00179 | 96,739 | 173 | 96,652 | 3,789,825 | 39.2 |
| 41–42 . . . . . . . . . . . . . . . . . . . . . | 0.00193 | 96,565 | 186 | 96,472 | 3,693,173 | 38.3 |
| 42–43 . . . . . . . . . . . . . . . . . . . . . | 0.00208 | 96,379 | 200 | 96,279 | 3,596,700 | 37.3 |
| 43–44 . . . . . . . . . . . . . . . . . . . . . | 0.00225 | 96,179 | 216 | 96,071 | 3,500,421 | 36.4 |
| 44–45 . . . . . . . . . . . . . . . . . . . . . | 0.00243 | 95,963 | 234 | 95,846 | 3,404,350 | 35.5 |
| 45–46 . . . . . . . . . . . . . . . . . . . . . | 0.00265 | 95,730 | 254 | 95,603 | 3,308,503 | 34.6 |
| 46–47 . . . . . . . . . . . . . . . . . . . . . | 0.00289 | 95,476 | 276 | 95,338 | 3,212,901 | 33.7 |
| 47–48 . . . . . . . . . . . . . . . . . . . . . | 0.00314 | 95,201 | 299 | 95,051 | 3,117,562 | 32.8 |
| 48–49 . . . . . . . . . . . . . . . . . . . . . | 0.00340 | 94,902 | 323 | 94,740 | 3,022,511 | 31.9 |
| 49–50 . . . . . . . . . . . . . . . . . . . . . | 0.00368 | 94,579 | 348 | 94,405 | 2,927,771 | 31.0 |
| 50–51 . . . . . . . . . . . . . . . . . . . . . | 0.00397 | 94,231 | 374 | 94,044 | 2,833,366 | 30.1 |
| 51–52 . . . . . . . . . . . . . . . . . . . . . | 0.00430 | 93,857 | 403 | 93,655 | 2,739,322 | 29.2 |
| 52–53 . . . . . . . . . . . . . . . . . . . . . | 0.00467 | 93,454 | 436 | 93,236 | 2,645,667 | 28.3 |
| 53–54 . . . . . . . . . . . . . . . . . . . . . | 0.00510 | 93,018 | 475 | 92,780 | 2,552,431 | 27.4 |
| 54–55 . . . . . . . . . . . . . . . . . . . . . | 0.00561 | 92,543 | 519 | 92,284 | 2,459,651 | 26.6 |
| 55–56 . . . . . . . . . . . . . . . . . . . . . | 0.00620 | 92,024 | 571 | 91,739 | 2,367,367 | 25.7 |
| 56–57 . . . . . . . . . . . . . . . . . . . . . | 0.00687 | 91,453 | 628 | 91,139 | 2,275,628 | 24.9 |
| 57–58 . . . . . . . . . . . . . . . . . . . . . | 0.00759 | 90,825 | 689 | 90,481 | 2,184,489 | 24.1 |
| 58–59 . . . . . . . . . . . . . . . . . . . . . | 0.00832 | 90,136 | 750 | 89,761 | 2,094,008 | 23.2 |
| 59–60 . . . . . . . . . . . . . . . . . . . . . | 0.00909 | 89,386 | 812 | 88,980 | 2,004,247 | 22.4 |
| 60–61 . . . . . . . . . . . . . . . . . . . . . | 0.00994 | 88,574 | 881 | 88,133 | 1,915,267 | 21.6 |
| 61–62 . . . . . . . . . . . . . . . . . . . . . | 0.01093 | 87,693 | 958 | 87,214 | 1,827,134 | 20.8 |
| 62–63 . . . . . . . . . . . . . . . . . . . . . | 0.01201 | 86,735 | 1,042 | 86,214 | 1,739,920 | 20.1 |
| 63–64 . . . . . . . . . . . . . . . . . . . . . | 0.01320 | 85,693 | 1,131 | 85,128 | 1,653,705 | 19.3 |
| 64–65 . . . . . . . . . . . . . . . . . . . . . | 0.01448 | 84,562 | 1,224 | 83,950 | 1,568,578 | 18.6 |
| 65–66 . . . . . . . . . . . . . . . . . . . . . | 0.01582 | 83,338 | 1,318 | 82,679 | 1,484,627 | 17.8 |
| 66–67 . . . . . . . . . . . . . . . . . . . . . | 0.01726 | 82,020 | 1,416 | 81,312 | 1,401,948 | 17.1 |

## Table 4. Life table for the white population: United States, 1999—Con.

| Age | Proportion dying during age interval $q_x$ | Number living at beginning of age interval $l_x$ | Number dying during age interval $d_x$ | Stationary population in the age interval $L_x$ | Stationary population in this and all subsequent age intervals $T_x$ | Life expectancy at beginning of age interval $e_x$ |
|---|---|---|---|---|---|---|
| 67–68 . . . . . . . . . . . . . . . . . . . . . | 0.01888 | 80,604 | 1,521 | 79,843 | 1,320,636 | 16.4 |
| 68–69 . . . . . . . . . . . . . . . . . . . . . | 0.02069 | 79,083 | 1,636 | 78,265 | 1,240,793 | 15.7 |
| 69–70 . . . . . . . . . . . . . . . . . . . . . | 0.02266 | 77,447 | 1,755 | 76,569 | 1,162,528 | 15.0 |
| 70–71 . . . . . . . . . . . . . . . . . . . . . | 0.02466 | 75,692 | 1,866 | 74,759 | 1,085,959 | 14.4 |
| 71–72 . . . . . . . . . . . . . . . . . . . . . | 0.02671 | 73,825 | 1,972 | 72,840 | 1,011,200 | 13.7 |
| 72–73 . . . . . . . . . . . . . . . . . . . . . | 0.02898 | 71,854 | 2,082 | 70,812 | 938,361 | 13.1 |
| 73–74 . . . . . . . . . . . . . . . . . . . . . | 0.03156 | 69,771 | 2,202 | 68,670 | 867,548 | 12.4 |
| 74–75 . . . . . . . . . . . . . . . . . . . . . | 0.03446 | 67,569 | 2,329 | 66,405 | 798,878 | 11.8 |
| 75–76 . . . . . . . . . . . . . . . . . . . . . | 0.03753 | 65,240 | 2,449 | 64,016 | 732,473 | 11.2 |
| 76–77 . . . . . . . . . . . . . . . . . . . . . | 0.04075 | 62,792 | 2,559 | 61,512 | 668,457 | 10.7 |
| 77–78 . . . . . . . . . . . . . . . . . . . . . | 0.04435 | 60,233 | 2,671 | 58,897 | 606,945 | 10.1 |
| 78–79 . . . . . . . . . . . . . . . . . . . . . | 0.04854 | 57,562 | 2,794 | 56,164 | 548,048 | 9.5 |
| 79–80 . . . . . . . . . . . . . . . . . . . . . | 0.05346 | 54,767 | 2,928 | 53,303 | 491,883 | 9.0 |
| 80–81 . . . . . . . . . . . . . . . . . . . . . | 0.05913 | 51,840 | 3,065 | 50,307 | 438,580 | 8.5 |
| 81–82 . . . . . . . . . . . . . . . . . . . . . | 0.06552 | 48,775 | 3,196 | 47,177 | 388,273 | 8.0 |
| 82–83 . . . . . . . . . . . . . . . . . . . . . | 0.07270 | 45,579 | 3,314 | 43,922 | 341,096 | 7.5 |
| 83–84 . . . . . . . . . . . . . . . . . . . . . | 0.08056 | 42,265 | 3,405 | 40,563 | 297,174 | 7.0 |
| 84–85 . . . . . . . . . . . . . . . . . . . . . | 0.08909 | 38,861 | 3,462 | 37,130 | 256,611 | 6.6 |
| 85–86 . . . . . . . . . . . . . . . . . . . . . | 0.09785 | 35,398 | 3,464 | 33,667 | 219,481 | 6.2 |
| 86–87 . . . . . . . . . . . . . . . . . . . . . | 0.10726 | 31,935 | 3,425 | 30,222 | 185,814 | 5.8 |
| 87–88 . . . . . . . . . . . . . . . . . . . . . | 0.11735 | 28,510 | 3,346 | 26,837 | 155,592 | 5.5 |
| 88–89 . . . . . . . . . . . . . . . . . . . . . | 0.12815 | 25,164 | 3,225 | 23,552 | 128,755 | 5.1 |
| 89–90 . . . . . . . . . . . . . . . . . . . . . | 0.13968 | 21,939 | 3,064 | 20,407 | 105,204 | 4.8 |
| 90–91 . . . . . . . . . . . . . . . . . . . . . | 0.15196 | 18,875 | 2,868 | 17,441 | 84,797 | 4.5 |
| 91–92 . . . . . . . . . . . . . . . . . . . . . | 0.16500 | 16,007 | 2,641 | 14,686 | 67,356 | 4.2 |
| 92–93 . . . . . . . . . . . . . . . . . . . . . | 0.17882 | 13,365 | 2,390 | 12,170 | 52,670 | 3.9 |
| 93–94 . . . . . . . . . . . . . . . . . . . . . | 0.19343 | 10,975 | 2,123 | 9,914 | 40,500 | 3.7 |
| 94–95 . . . . . . . . . . . . . . . . . . . . . | 0.20884 | 8,852 | 1,849 | 7,928 | 30,586 | 3.5 |
| 95–96 . . . . . . . . . . . . . . . . . . . . . | 0.22505 | 7,004 | 1,576 | 6,216 | 22,658 | 3.2 |
| 96–97 . . . . . . . . . . . . . . . . . . . . . | 0.24205 | 5,428 | 1,314 | 4,771 | 16,442 | 3.0 |
| 97–98 . . . . . . . . . . . . . . . . . . . . . | 0.25985 | 4,114 | 1,069 | 3,579 | 11,671 | 2.8 |
| 98–99 . . . . . . . . . . . . . . . . . . . . . | 0.27842 | 3,045 | 848 | 2,621 | 8,092 | 2.7 |
| 99–100 . . . . . . . . . . . . . . . . . . . . | 0.29776 | 2,197 | 654 | 1,870 | 5,471 | 2.5 |
| 100+ . . . . . . . . . . . . . . . . . . . . . | 1.00000 | 1,543 | 1,543 | 3,601 | 3,601 | 2.3 |

## Table 5. Life table for white males: United States, 1999

| Age | Proportion dying during age interval $q_x$ | Number living at beginning of age interval $l_x$ | Number dying during age interval $d_x$ | Stationary population in the age interval $L_x$ | Stationary population in this and all subsequent age intervals $T_x$ | Life expectancy at beginning of age interval $e_x$ |
|---|---|---|---|---|---|---|
| 0–1 . . . . . . . . . . . . . . . . . . . . . . | 0.00635 | 100,000 | 635 | 99,449 | 7,461,939 | 74.6 |
| 1–2 . . . . . . . . . . . . . . . . . . . . . . | 0.00049 | 99,365 | 48 | 99,340 | 7,362,491 | 74.1 |
| 2–3 . . . . . . . . . . . . . . . . . . . . . . | 0.00037 | 99,316 | 37 | 99,298 | 7,263,150 | 73.1 |
| 3–4 . . . . . . . . . . . . . . . . . . . . . . | 0.00029 | 99,280 | 29 | 99,265 | 7,163,852 | 72.2 |
| 4–5 . . . . . . . . . . . . . . . . . . . . . . | 0.00020 | 99,251 | 20 | 99,240 | 7,064,587 | 71.2 |
| 5–6 . . . . . . . . . . . . . . . . . . . . . . | 0.00020 | 99,230 | 20 | 99,221 | 6,965,347 | 70.2 |
| 6–7 . . . . . . . . . . . . . . . . . . . . . . | 0.00019 | 99,211 | 18 | 99,202 | 6,866,126 | 69.2 |
| 7–8 . . . . . . . . . . . . . . . . . . . . . . | 0.00018 | 99,192 | 18 | 99,184 | 6,766,925 | 68.2 |
| 8–9 . . . . . . . . . . . . . . . . . . . . . . | 0.00016 | 99,175 | 16 | 99,167 | 6,667,741 | 67.2 |
| 9–10 . . . . . . . . . . . . . . . . . . . . . . | 0.00014 | 99,159 | 13 | 99,152 | 6,568,574 | 66.2 |
| 10–11. . . . . . . . . . . . . . . . . . . . . | 0.00012 | 99,146 | 11 | 99,140 | 6,469,422 | 65.3 |
| 11–12. . . . . . . . . . . . . . . . . . . . . | 0.00012 | 99,134 | 12 | 99,128 | 6,370,282 | 64.3 |
| 12–13 . . . . . . . . . . . . . . . . . . . . . | 0.00018 | 99,122 | 17 | 99,114 | 6,271,154 | 63.3 |
| 13–14 . . . . . . . . . . . . . . . . . . . . . | 0.00030 | 99,105 | 30 | 99,090 | 6,172,040 | 62.3 |
| 14–15 . . . . . . . . . . . . . . . . . . . . . | 0.00046 | 99,075 | 46 | 99,052 | 6,072,950 | 61.3 |
| 15–16 . . . . . . . . . . . . . . . . . . . . . | 0.00064 | 99,029 | 63 | 98,998 | 5,973,898 | 60.3 |
| 16–17 . . . . . . . . . . . . . . . . . . . . . | 0.00080 | 98,966 | 79 | 98,926 | 5,874,900 | 59.4 |
| 17–18 . . . . . . . . . . . . . . . . . . . . . | 0.00093 | 98,887 | 92 | 98,841 | 5,775,974 | 58.4 |
| 18–19 . . . . . . . . . . . . . . . . . . . . . | 0.00102 | 98,794 | 101 | 98,744 | 5,677,133 | 57.5 |
| 19–20 . . . . . . . . . . . . . . . . . . . . . | 0.00108 | 98,693 | 107 | 98,640 | 5,578,389 | 56.5 |
| 20–21 . . . . . . . . . . . . . . . . . . . . . | 0.00114 | 98,587 | 112 | 98,530 | 5,479,749 | 55.6 |
| 21–22 . . . . . . . . . . . . . . . . . . . . . | 0.00120 | 98,474 | 119 | 98,415 | 5,381,219 | 54.7 |
| 22–23 . . . . . . . . . . . . . . . . . . . . . | 0.00125 | 98,356 | 122 | 98,294 | 5,282,804 | 53.7 |
| 23–24 . . . . . . . . . . . . . . . . . . . . . | 0.00126 | 98,233 | 123 | 98,171 | 5,184,510 | 52.8 |
| 24–25 . . . . . . . . . . . . . . . . . . . . . | 0.00125 | 98,110 | 122 | 98,049 | 5,086,338 | 51.8 |
| 25–26 . . . . . . . . . . . . . . . . . . . . . | 0.00123 | 97,987 | 121 | 97,927 | 4,988,290 | 50.9 |
| 26–27 . . . . . . . . . . . . . . . . . . . . . | 0.00122 | 97,867 | 119 | 97,807 | 4,890,363 | 50.0 |
| 27–28 . . . . . . . . . . . . . . . . . . . . . | 0.00122 | 97,748 | 119 | 97,688 | 4,792,556 | 49.0 |
| 28–29 . . . . . . . . . . . . . . . . . . . . . | 0.00124 | 97,628 | 121 | 97,568 | 4,694,868 | 48.1 |
| 29–30 . . . . . . . . . . . . . . . . . . . . . | 0.00127 | 97,507 | 124 | 97,445 | 4,597,300 | 47.2 |
| 30–31 . . . . . . . . . . . . . . . . . . . . . | 0.00132 | 97,383 | 128 | 97,319 | 4,499,854 | 46.2 |
| 31–32 . . . . . . . . . . . . . . . . . . . . . | 0.00136 | 97,255 | 133 | 97,189 | 4,402,535 | 45.3 |
| 32–33 . . . . . . . . . . . . . . . . . . . . . | 0.00143 | 97,123 | 138 | 97,053 | 4,305,346 | 44.3 |
| 33–34 . . . . . . . . . . . . . . . . . . . . . | 0.00150 | 96,984 | 146 | 96,911 | 4,208,293 | 43.4 |
| 34–35 . . . . . . . . . . . . . . . . . . . . . | 0.00159 | 96,838 | 154 | 96,761 | 4,111,382 | 42.5 |
| 35–36 . . . . . . . . . . . . . . . . . . . . . | 0.00168 | 96,684 | 163 | 96,603 | 4,014,621 | 41.5 |
| 36–37 . . . . . . . . . . . . . . . . . . . . . | 0.00178 | 96,522 | 172 | 96,436 | 3,918,018 | 40.6 |
| 37–38 . . . . . . . . . . . . . . . . . . . . . | 0.00189 | 96,350 | 182 | 96,259 | 3,821,582 | 39.7 |
| 38–39 . . . . . . . . . . . . . . . . . . . . . | 0.00202 | 96,168 | 194 | 96,071 | 3,725,323 | 38.7 |
| 39–40 . . . . . . . . . . . . . . . . . . . . . | 0.00217 | 95,974 | 208 | 95,870 | 3,629,252 | 37.8 |
| 40–41 . . . . . . . . . . . . . . . . . . . . . | 0.00233 | 95,766 | 223 | 95,654 | 3,533,382 | 36.9 |
| 41–42 . . . . . . . . . . . . . . . . . . . . . | 0.00250 | 95,543 | 239 | 95,423 | 3,437,728 | 36.0 |
| 42–43 . . . . . . . . . . . . . . . . . . . . . | 0.00270 | 95,303 | 257 | 95,175 | 3,342,305 | 35.1 |
| 43–44 . . . . . . . . . . . . . . . . . . . . . | 0.00292 | 95,046 | 277 | 94,908 | 3,247,131 | 34.2 |
| 44–45 . . . . . . . . . . . . . . . . . . . . . | 0.00317 | 94,769 | 300 | 94,619 | 3,152,223 | 33.3 |
| 45–46 . . . . . . . . . . . . . . . . . . . . . | 0.00345 | 94,469 | 326 | 94,306 | 3,057,604 | 32.4 |
| 46–47 . . . . . . . . . . . . . . . . . . . . . | 0.00376 | 94,143 | 354 | 93,966 | 2,963,298 | 31.5 |
| 47–48 . . . . . . . . . . . . . . . . . . . . . | 0.00409 | 93,789 | 383 | 93,597 | 2,869,332 | 30.6 |
| 48–49 . . . . . . . . . . . . . . . . . . . . . | 0.00440 | 93,406 | 411 | 93,200 | 2,775,735 | 29.7 |
| 49–50 . . . . . . . . . . . . . . . . . . . . . | 0.00472 | 92,994 | 439 | 92,775 | 2,682,535 | 28.9 |
| 50–51 . . . . . . . . . . . . . . . . . . . . . | 0.00506 | 92,555 | 469 | 92,321 | 2,589,761 | 28.0 |
| 51–52 . . . . . . . . . . . . . . . . . . . . . | 0.00545 | 92,086 | 502 | 91,835 | 2,497,440 | 27.1 |
| 52–53 . . . . . . . . . . . . . . . . . . . . . | 0.00589 | 91,584 | 540 | 91,315 | 2,405,605 | 26.3 |
| 53–54 . . . . . . . . . . . . . . . . . . . . . | 0.00643 | 91,045 | 585 | 90,752 | 2,314,290 | 25.4 |
| 54–55 . . . . . . . . . . . . . . . . . . . . . | 0.00706 | 90,460 | 638 | 90,140 | 2,223,538 | 24.6 |
| 55–56 . . . . . . . . . . . . . . . . . . . . . | 0.00780 | 89,821 | 701 | 89,471 | 2,133,398 | 23.8 |
| 56–57 . . . . . . . . . . . . . . . . . . . . . | 0.00864 | 89,120 | 770 | 88,736 | 2,043,927 | 22.9 |
| 57–58 . . . . . . . . . . . . . . . . . . . . . | 0.00953 | 88,351 | 842 | 87,930 | 1,955,191 | 22.1 |
| 58–59 . . . . . . . . . . . . . . . . . . . . . | 0.01043 | 87,509 | 913 | 87,053 | 1,867,261 | 21.3 |
| 59–60 . . . . . . . . . . . . . . . . . . . . . | 0.01137 | 86,596 | 985 | 86,104 | 1,780,208 | 20.6 |
| 60–61 . . . . . . . . . . . . . . . . . . . . . | 0.01241 | 85,612 | 1,062 | 85,081 | 1,694,104 | 19.8 |
| 61–62 . . . . . . . . . . . . . . . . . . . . . | 0.01360 | 84,549 | 1,150 | 83,974 | 1,609,024 | 19.0 |
| 62–63 . . . . . . . . . . . . . . . . . . . . . | 0.01494 | 83,400 | 1,246 | 82,777 | 1,525,049 | 18.3 |
| 63–64 . . . . . . . . . . . . . . . . . . . . . | 0.01643 | 82,154 | 1,350 | 81,479 | 1,442,273 | 17.6 |
| 64–65 . . . . . . . . . . . . . . . . . . . . . | 0.01806 | 80,804 | 1,460 | 80,074 | 1,360,794 | 16.8 |
| 65–66 . . . . . . . . . . . . . . . . . . . . . | 0.01977 | 79,344 | 1,568 | 78,560 | 1,280,720 | 16.1 |
| 66–67 . . . . . . . . . . . . . . . . . . . . . | 0.02159 | 77,776 | 1,679 | 76,936 | 1,202,160 | 15.5 |

## Table 5. Life table for white males: United States, 1999—Con.

| Age | Proportion dying during age interval | Number living at beginning of age interval | Number dying during age interval | Stationary population in the age interval | Stationary population in this and all subsequent age intervals | Life expectancy at beginning of age interval |
|---|---|---|---|---|---|---|
| | $q_x$ | $l_x$ | $d_x$ | $L_x$ | $T_x$ | $e_x$ |
| 67–68 . . . . . . . . . . . . . . . . . . . . . | 0.02364 | 76,097 | 1,799 | 75,197 | 1,125,224 | 14.8 |
| 68–69 . . . . . . . . . . . . . . . . . . . . . | 0.02598 | 74,298 | 1,930 | 73,333 | 1,050,027 | 14.1 |
| 69–70 . . . . . . . . . . . . . . . . . . . . . | 0.02852 | 72,368 | 2,064 | 71,336 | 976,694 | 13.5 |
| 70–71 . . . . . . . . . . . . . . . . . . . . . | 0.03112 | 70,303 | 2,188 | 69,209 | 905,359 | 12.9 |
| 71–72 . . . . . . . . . . . . . . . . . . . . . | 0.03376 | 68,115 | 2,299 | 66,966 | 836,149 | 12.3 |
| 72–73 . . . . . . . . . . . . . . . . . . . . . | 0.03660 | 65,816 | 2,409 | 64,612 | 769,184 | 11.7 |
| 73–74 . . . . . . . . . . . . . . . . . . . . . | 0.03973 | 63,407 | 2,519 | 62,148 | 704,572 | 11.1 |
| 74–75 . . . . . . . . . . . . . . . . . . . . . | 0.04319 | 60,888 | 2,630 | 59,573 | 642,424 | 10.6 |
| 75–76 . . . . . . . . . . . . . . . . . . . . . | 0.04682 | 58,258 | 2,728 | 56,895 | 582,851 | 10.0 |
| 76–77 . . . . . . . . . . . . . . . . . . . . . | 0.05062 | 55,531 | 2,811 | 54,125 | 525,957 | 9.5 |
| 77–78 . . . . . . . . . . . . . . . . . . . . . | 0.05486 | 52,720 | 2,892 | 51,273 | 471,832 | 9.0 |
| 78–79 . . . . . . . . . . . . . . . . . . . . . | 0.05982 | 49,827 | 2,981 | 48,337 | 420,558 | 8.4 |
| 79–80 . . . . . . . . . . . . . . . . . . . . . | 0.06568 | 46,846 | 3,077 | 45,308 | 372,221 | 8.0 |
| 80–81 . . . . . . . . . . . . . . . . . . . . . | 0.07270 | 43,769 | 3,182 | 42,178 | 326,913 | 7.5 |
| 81–82 . . . . . . . . . . . . . . . . . . . . . | 0.08075 | 40,587 | 3,277 | 38,949 | 284,735 | 7.0 |
| 82–83 . . . . . . . . . . . . . . . . . . . . . | 0.08953 | 37,310 | 3,340 | 35,640 | 245,786 | 6.6 |
| 83–84 . . . . . . . . . . . . . . . . . . . . . | 0.09850 | 33,970 | 3,346 | 32,297 | 210,146 | 6.2 |
| 84–85 . . . . . . . . . . . . . . . . . . . . . | 0.10763 | 30,624 | 3,296 | 28,976 | 177,850 | 5.8 |
| 85–86 . . . . . . . . . . . . . . . . . . . . . | 0.11793 | 27,328 | 3,223 | 25,716 | 148,874 | 5.5 |
| 86–87 . . . . . . . . . . . . . . . . . . . . . | 0.12890 | 24,105 | 3,107 | 22,551 | 123,158 | 5.1 |
| 87–88 . . . . . . . . . . . . . . . . . . . . . | 0.14056 | 20,998 | 2,951 | 19,522 | 100,606 | 4.8 |
| 88–89 . . . . . . . . . . . . . . . . . . . . . | 0.15290 | 18,047 | 2,759 | 16,667 | 81,084 | 4.5 |
| 89–90 . . . . . . . . . . . . . . . . . . . . . | 0.16594 | 15,287 | 2,537 | 14,019 | 64,417 | 4.2 |
| 90–91 . . . . . . . . . . . . . . . . . . . . . | 0.17965 | 12,751 | 2,291 | 11,605 | 50,398 | 4.0 |
| 91–92 . . . . . . . . . . . . . . . . . . . . . | 0.19403 | 10,460 | 2,030 | 9,445 | 38,793 | 3.7 |
| 92–93 . . . . . . . . . . . . . . . . . . . . . | 0.20907 | 8,430 | 1,763 | 7,549 | 29,348 | 3.5 |
| 93–94 . . . . . . . . . . . . . . . . . . . . . | 0.22473 | 6,668 | 1,498 | 5,919 | 21,799 | 3.3 |
| 94–95 . . . . . . . . . . . . . . . . . . . . . | 0.24099 | 5,169 | 1,246 | 4,547 | 15,880 | 3.1 |
| 95–96 . . . . . . . . . . . . . . . . . . . . . | 0.25781 | 3,924 | 1,012 | 3,418 | 11,334 | 2.9 |
| 96–97 . . . . . . . . . . . . . . . . . . . . . | 0.27514 | 2,912 | 801 | 2,511 | 7,916 | 2.7 |
| 97–98 . . . . . . . . . . . . . . . . . . . . . | 0.29294 | 2,111 | 618 | 1,802 | 5,404 | 2.6 |
| 98–99 . . . . . . . . . . . . . . . . . . . . . | 0.31114 | 1,493 | 464 | 1,260 | 3,603 | 2.4 |
| 99–100 . . . . . . . . . . . . . . . . . . . . | 0.32969 | 1,028 | 339 | 859 | 2,342 | 2.3 |
| 100+ . . . . . . . . . . . . . . . . . . . . . | 1.00000 | 689 | 689 | 1,484 | 1,484 | 2.2 |

## Table 6. Life table for white females: United States, 1999

| Age | Proportion dying during age interval $q_x$ | Number living at beginning of age interval $l_x$ | Number dying during age interval $d_x$ | Stationary population in the age interval $L_x$ | Stationary population in this and all subsequent age intervals $T_x$ | Life expectancy at beginning of age interval $e_x$ |
|---|---|---|---|---|---|---|
| 0–1 . . . . . . . . . . . . . . . . . . . . . | 0.00516 | 100,000 | 515 | 99,546 | 7,991,652 | 79.9 |
| 1–2 . . . . . . . . . . . . . . . . . . . . . | 0.00044 | 99,485 | 44 | 99,463 | 7,892,106 | 79.3 |
| 2–3 . . . . . . . . . . . . . . . . . . . . . | 0.00028 | 99,441 | 27 | 99,427 | 7,792,643 | 78.4 |
| 3–4 . . . . . . . . . . . . . . . . . . . . . | 0.00022 | 99,414 | 21 | 99,403 | 7,693,215 | 77.4 |
| 4–5 . . . . . . . . . . . . . . . . . . . . . | 0.00017 | 99,392 | 17 | 99,384 | 7,593,813 | 76.4 |
| 5–6 . . . . . . . . . . . . . . . . . . . . . | 0.00016 | 99,376 | 16 | 99,368 | 7,494,429 | 75.4 |
| 6–7 . . . . . . . . . . . . . . . . . . . . . | 0.00015 | 99,360 | 15 | 99,352 | 7,395,061 | 74.4 |
| 7–8 . . . . . . . . . . . . . . . . . . . . . | 0.00014 | 99,345 | 14 | 99,338 | 7,295,708 | 73.4 |
| 8–9 . . . . . . . . . . . . . . . . . . . . . | 0.00013 | 99,331 | 13 | 99,324 | 7,196,370 | 72.5 |
| 9–10 . . . . . . . . . . . . . . . . . . . . | 0.00012 | 99,318 | 12 | 99,312 | 7,097,046 | 71.5 |
| 10–11. . . . . . . . . . . . . . . . . . . . | 0.00011 | 99,306 | 11 | 99,301 | 6,997,734 | 70.5 |
| 11–12. . . . . . . . . . . . . . . . . . . . | 0.00011 | 99,295 | 11 | 99,289 | 6,898,434 | 69.5 |
| 12–13 . . . . . . . . . . . . . . . . . . . . | 0.00014 | 99,284 | 13 | 99,277 | 6,799,144 | 68.5 |
| 13–14 . . . . . . . . . . . . . . . . . . . . | 0.00019 | 99,270 | 18 | 99,261 | 6,699,867 | 67.5 |
| 14–15 . . . . . . . . . . . . . . . . . . . . | 0.00025 | 99,252 | 25 | 99,240 | 6,600,606 | 66.5 |
| 15–16 . . . . . . . . . . . . . . . . . . . . | 0.00033 | 99,227 | 32 | 99,211 | 6,501,366 | 65.5 |
| 16–17 . . . . . . . . . . . . . . . . . . . . | 0.00040 | 99,195 | 39 | 99,175 | 6,402,155 | 64.5 |
| 17–18 . . . . . . . . . . . . . . . . . . . . | 0.00044 | 99,155 | 44 | 99,134 | 6,302,980 | 63.6 |
| 18–19 . . . . . . . . . . . . . . . . . . . . | 0.00046 | 99,112 | 45 | 99,089 | 6,203,846 | 62.6 |
| 19–20 . . . . . . . . . . . . . . . . . . . . | 0.00045 | 99,067 | 44 | 99,044 | 6,104,757 | 61.6 |
| 20–21 . . . . . . . . . . . . . . . . . . . . | 0.00044 | 99,022 | 43 | 99,001 | 6,005,713 | 60.7 |
| 21–22 . . . . . . . . . . . . . . . . . . . . | 0.00043 | 98,979 | 42 | 98,958 | 5,906,712 | 59.7 |
| 22–23 . . . . . . . . . . . . . . . . . . . . | 0.00042 | 98,937 | 42 | 98,916 | 5,807,755 | 58.7 |
| 23–24 . . . . . . . . . . . . . . . . . . . . | 0.00043 | 98,895 | 42 | 98,874 | 5,708,839 | 57.7 |
| 24–25 . . . . . . . . . . . . . . . . . . . . | 0.00044 | 98,852 | 43 | 98,831 | 5,609,965 | 56.8 |
| 25–26 . . . . . . . . . . . . . . . . . . . . | 0.00045 | 98,809 | 45 | 98,786 | 5,511,135 | 55.8 |
| 26–27 . . . . . . . . . . . . . . . . . . . . | 0.00047 | 98,764 | 46 | 98,741 | 5,412,348 | 54.8 |
| 27–28 . . . . . . . . . . . . . . . . . . . . | 0.00049 | 98,718 | 48 | 98,694 | 5,313,607 | 53.8 |
| 28–29 . . . . . . . . . . . . . . . . . . . . | 0.00051 | 98,669 | 50 | 98,644 | 5,214,914 | 52.9 |
| 29–30 . . . . . . . . . . . . . . . . . . . . | 0.00054 | 98,619 | 53 | 98,593 | 5,116,270 | 51.9 |
| 30–31 . . . . . . . . . . . . . . . . . . . . | 0.00057 | 98,566 | 56 | 98,538 | 5,017,677 | 50.9 |
| 31–32 . . . . . . . . . . . . . . . . . . . . | 0.00060 | 98,510 | 59 | 98,480 | 4,919,139 | 49.9 |
| 32–33 . . . . . . . . . . . . . . . . . . . . | 0.00065 | 98,451 | 64 | 98,419 | 4,820,658 | 49.0 |
| 33–34 . . . . . . . . . . . . . . . . . . . . | 0.00071 | 98,386 | 70 | 98,351 | 4,722,240 | 48.0 |
| 34–35 . . . . . . . . . . . . . . . . . . . . | 0.00078 | 98,316 | 77 | 98,278 | 4,623,888 | 47.0 |
| 35–36 . . . . . . . . . . . . . . . . . . . . | 0.00085 | 98,240 | 84 | 98,198 | 4,525,610 | 46.1 |
| 36–37 . . . . . . . . . . . . . . . . . . . . | 0.00092 | 98,156 | 91 | 98,110 | 4,427,413 | 45.1 |
| 37–38 . . . . . . . . . . . . . . . . . . . . | 0.00100 | 98,065 | 98 | 98,016 | 4,329,302 | 44.2 |
| 38–39 . . . . . . . . . . . . . . . . . . . . | 0.00107 | 97,967 | 105 | 97,915 | 4,231,286 | 43.2 |
| 39–40 . . . . . . . . . . . . . . . . . . . . | 0.00116 | 97,862 | 113 | 97,806 | 4,133,371 | 42.2 |
| 40–41 . . . . . . . . . . . . . . . . . . . . | 0.00125 | 97,749 | 122 | 97,688 | 4,035,565 | 41.3 |
| 41–42 . . . . . . . . . . . . . . . . . . . . | 0.00135 | 97,627 | 131 | 97,561 | 3,937,877 | 40.3 |
| 42–43 . . . . . . . . . . . . . . . . . . . . | 0.00145 | 97,496 | 142 | 97,425 | 3,840,316 | 39.4 |
| 43–44 . . . . . . . . . . . . . . . . . . . . | 0.00157 | 97,354 | 153 | 97,277 | 3,742,891 | 38.5 |
| 44–45 . . . . . . . . . . . . . . . . . . . . | 0.00170 | 97,201 | 166 | 97,118 | 3,645,614 | 37.5 |
| 45–46 . . . . . . . . . . . . . . . . . . . . | 0.00185 | 97,035 | 180 | 96,946 | 3,548,495 | 36.6 |
| 46–47 . . . . . . . . . . . . . . . . . . . . | 0.00202 | 96,856 | 196 | 96,758 | 3,451,550 | 35.6 |
| 47–48 . . . . . . . . . . . . . . . . . . . . | 0.00221 | 96,660 | 213 | 96,554 | 3,354,792 | 34.7 |
| 48–49 . . . . . . . . . . . . . . . . . . . . | 0.00242 | 96,447 | 233 | 96,330 | 3,258,238 | 33.8 |
| 49–50 . . . . . . . . . . . . . . . . . . . . | 0.00265 | 96,214 | 255 | 96,086 | 3,161,908 | 32.9 |
| 50–51 . . . . . . . . . . . . . . . . . . . . | 0.00290 | 95,959 | 278 | 95,820 | 3,065,822 | 32.0 |
| 51–52 . . . . . . . . . . . . . . . . . . . . | 0.00318 | 95,681 | 304 | 95,529 | 2,970,002 | 31.0 |
| 52–53 . . . . . . . . . . . . . . . . . . . . | 0.00348 | 95,377 | 332 | 95,211 | 2,874,473 | 30.1 |
| 53–54 . . . . . . . . . . . . . . . . . . . . | 0.00382 | 95,045 | 363 | 94,863 | 2,779,263 | 29.2 |
| 54–55 . . . . . . . . . . . . . . . . . . . . | 0.00421 | 94,681 | 399 | 94,482 | 2,684,400 | 28.4 |
| 55–56 . . . . . . . . . . . . . . . . . . . . | 0.00467 | 94,282 | 441 | 94,062 | 2,589,918 | 27.5 |
| 56–57 . . . . . . . . . . . . . . . . . . . . | 0.00519 | 93,842 | 487 | 93,598 | 2,495,855 | 26.6 |
| 57–58 . . . . . . . . . . . . . . . . . . . . | 0.00575 | 93,355 | 537 | 93,086 | 2,402,257 | 25.7 |
| 58–59 . . . . . . . . . . . . . . . . . . . . | 0.00634 | 92,817 | 588 | 92,523 | 2,309,171 | 24.9 |
| 59–60 . . . . . . . . . . . . . . . . . . . . | 0.00695 | 92,229 | 641 | 91,909 | 2,216,648 | 24.0 |
| 60–61 . . . . . . . . . . . . . . . . . . . . | 0.00765 | 91,588 | 700 | 91,238 | 2,124,739 | 23.2 |
| 61–62 . . . . . . . . . . . . . . . . . . . . | 0.00845 | 90,888 | 768 | 90,504 | 2,033,501 | 22.4 |
| 62–63 . . . . . . . . . . . . . . . . . . . . | 0.00932 | 90,120 | 840 | 89,700 | 1,942,997 | 21.6 |
| 63–64 . . . . . . . . . . . . . . . . . . . . | 0.01025 | 89,281 | 915 | 88,823 | 1,853,297 | 20.8 |
| 64–65 . . . . . . . . . . . . . . . . . . . . | 0.01124 | 88,366 | 993 | 87,869 | 1,764,474 | 20.0 |
| 65–66 . . . . . . . . . . . . . . . . . . . . | 0.01230 | 87,372 | 1,074 | 86,835 | 1,676,605 | 19.2 |
| 66–67 . . . . . . . . . . . . . . . . . . . . | 0.01345 | 86,298 | 1,161 | 85,718 | 1,589,769 | 18.4 |

## Table 6. Life table for white females: United States, 1999—Con.

| Age | Proportion dying during age interval $q_x$ | Number living at beginning of age interval $l_x$ | Number dying during age interval $d_x$ | Stationary population in the age interval $L_x$ | Stationary population in this and all subsequent age intervals $T_x$ | Life expectancy at beginning of age interval $e_x$ |
|---|---|---|---|---|---|---|
| 67–68 . . . . . . . . . . . . . . . . . . . . . | 0.01473 | 85,138 | 1,254 | 84,510 | 1,504,052 | 17.7 |
| 68–69 . . . . . . . . . . . . . . . . . . . . . | 0.01616 | 83,883 | 1,356 | 83,206 | 1,419,541 | 16.9 |
| 69–70 . . . . . . . . . . . . . . . . . . . . . | 0.01771 | 82,528 | 1,462 | 81,797 | 1,336,336 | 16.2 |
| 70–71 . . . . . . . . . . . . . . . . . . . . . | 0.01930 | 81,066 | 1,564 | 80,284 | 1,254,539 | 15.5 |
| 71–72 . . . . . . . . . . . . . . . . . . . . . | 0.02096 | 79,502 | 1,666 | 78,669 | 1,174,255 | 14.8 |
| 72–73 . . . . . . . . . . . . . . . . . . . . . | 0.02287 | 77,836 | 1,780 | 76,946 | 1,095,586 | 14.1 |
| 73–74 . . . . . . . . . . . . . . . . . . . . . | 0.02512 | 76,056 | 1,910 | 75,101 | 1,018,640 | 13.4 |
| 74–75 . . . . . . . . . . . . . . . . . . . . . | 0.02771 | 74,146 | 2,054 | 73,118 | 943,540 | 12.7 |
| 75–76 . . . . . . . . . . . . . . . . . . . . . | 0.03047 | 72,091 | 2,197 | 70,993 | 870,421 | 12.1 |
| 76–77 . . . . . . . . . . . . . . . . . . . . . | 0.03339 | 69,895 | 2,334 | 68,728 | 799,428 | 11.4 |
| 77–78 . . . . . . . . . . . . . . . . . . . . . | 0.03669 | 67,561 | 2,479 | 66,322 | 730,700 | 10.8 |
| 78–79 . . . . . . . . . . . . . . . . . . . . . | 0.04054 | 65,082 | 2,638 | 63,763 | 664,379 | 10.2 |
| 79–80 . . . . . . . . . . . . . . . . . . . . . | 0.04504 | 62,444 | 2,812 | 61,038 | 600,615 | 9.6 |
| 80–81 . . . . . . . . . . . . . . . . . . . . . | 0.05012 | 59,632 | 2,989 | 58,137 | 539,577 | 9.1 |
| 81–82 . . . . . . . . . . . . . . . . . . . . . | 0.05583 | 56,643 | 3,162 | 55,062 | 481,440 | 8.5 |
| 82–83 . . . . . . . . . . . . . . . . . . . . . | 0.06244 | 53,481 | 3,340 | 51,811 | 426,378 | 8.0 |
| 83–84 . . . . . . . . . . . . . . . . . . . . . | 0.07008 | 50,141 | 3,514 | 48,384 | 374,567 | 7.5 |
| 84–85 . . . . . . . . . . . . . . . . . . . . . | 0.07872 | 46,627 | 3,671 | 44,792 | 326,183 | 7.0 |
| 85–86 . . . . . . . . . . . . . . . . . . . . . | 0.08738 | 42,957 | 3,753 | 41,080 | 281,391 | 6.6 |
| 86–87 . . . . . . . . . . . . . . . . . . . . . | 0.09674 | 39,203 | 3,793 | 37,307 | 240,311 | 6.1 |
| 87–88 . . . . . . . . . . . . . . . . . . . . . | 0.10686 | 35,411 | 3,784 | 33,519 | 203,004 | 5.7 |
| 88–89 . . . . . . . . . . . . . . . . . . . . . | 0.11774 | 31,627 | 3,724 | 29,765 | 169,485 | 5.4 |
| 89–90 . . . . . . . . . . . . . . . . . . . . . | 0.12942 | 27,903 | 3,611 | 26,098 | 139,720 | 5.0 |
| 90–91 . . . . . . . . . . . . . . . . . . . . . | 0.14191 | 24,292 | 3,447 | 22,568 | 113,623 | 4.7 |
| 91–92 . . . . . . . . . . . . . . . . . . . . . | 0.15522 | 20,845 | 3,236 | 19,227 | 91,054 | 4.4 |
| 92–93 . . . . . . . . . . . . . . . . . . . . . | 0.16938 | 17,609 | 2,983 | 16,118 | 71,827 | 4.1 |
| 93–94 . . . . . . . . . . . . . . . . . . . . . | 0.18438 | 14,627 | 2,697 | 13,278 | 55,709 | 3.8 |
| 94–95 . . . . . . . . . . . . . . . . . . . . . | 0.20021 | 11,930 | 2,389 | 10,736 | 42,431 | 3.6 |
| 95–96 . . . . . . . . . . . . . . . . . . . . . | 0.21688 | 9,541 | 2,069 | 8,507 | 31,695 | 3.3 |
| 96–97 . . . . . . . . . . . . . . . . . . . . . | 0.23437 | 7,472 | 1,751 | 6,596 | 23,189 | 3.1 |
| 97–98 . . . . . . . . . . . . . . . . . . . . . | 0.25266 | 5,721 | 1,445 | 4,998 | 16,592 | 2.9 |
| 98–99 . . . . . . . . . . . . . . . . . . . . . | 0.27171 | 4,275 | 1,162 | 3,695 | 11,594 | 2.7 |
| 99–100 . . . . . . . . . . . . . . . . . . . . | 0.29148 | 3,114 | 908 | 2,660 | 7,900 | 2.5 |
| 100+ . . . . . . . . . . . . . . . . . . . . . | 1.00000 | 2,206 | 2,206 | 5,240 | 5,240 | 2.4 |

## Table 7. Life table for the black population: United States, 1999

| Age | Proportion dying during age interval | Number living at beginning of age interval | Number dying during age interval | Stationary population in the age interval | Stationary population in this and all subsequent age intervals | Life expectancy at beginning of age interval |
|---|---|---|---|---|---|---|
| | $q_x$ | $l_x$ | $d_x$ | $L_x$ | $T_x$ | $e_x$ |
| 0–1 . . . . . . . . . . . . . . . . . . . . . . | 0.00635 | 100,000 | 1,456 | 98,720 | 7,140,985 | 71.4 |
| 1–2 . . . . . . . . . . . . . . . . . . . . . . | 0.00097 | 98,544 | 96 | 98,496 | 7,042,265 | 71.5 |
| 2–3 . . . . . . . . . . . . . . . . . . . . . . | 0.00059 | 98,448 | 58 | 98,419 | 6,943,769 | 70.5 |
| 3–4 . . . . . . . . . . . . . . . . . . . . . . | 0.00040 | 98,390 | 40 | 98,370 | 6,845,350 | 69.6 |
| 4–5 . . . . . . . . . . . . . . . . . . . . . . | 0.00037 | 98,351 | 37 | 98,332 | 6,746,980 | 68.6 |
| 5–6 . . . . . . . . . . . . . . . . . . . . . . | 0.00033 | 98,314 | 33 | 98,297 | 6,648,648 | 67.6 |
| 6–7 . . . . . . . . . . . . . . . . . . . . . . | 0.00031 | 98,281 | 30 | 98,266 | 6,550,350 | 66.7 |
| 7–8 . . . . . . . . . . . . . . . . . . . . . . | 0.00028 | 98,251 | 28 | 98,237 | 6,452,084 | 65.7 |
| 8–9 . . . . . . . . . . . . . . . . . . . . . . | 0.00026 | 98,223 | 25 | 98,211 | 6,353,847 | 64.7 |
| 9–10 . . . . . . . . . . . . . . . . . . . . . | 0.00022 | 98,198 | 22 | 98,187 | 6,255,637 | 63.7 |
| 10–11. . . . . . . . . . . . . . . . . . . . . | 0.00020 | 98,176 | 20 | 98,166 | 6,157,450 | 62.7 |
| 11–12. . . . . . . . . . . . . . . . . . . . . | 0.00020 | 98,157 | 19 | 98,147 | 6,059,283 | 61.7 |
| 12–13 . . . . . . . . . . . . . . . . . . . . | 0.00024 | 98,137 | 24 | 98,125 | 5,961,136 | 60.7 |
| 13–14 . . . . . . . . . . . . . . . . . . . . | 0.00035 | 98,113 | 34 | 98,097 | 5,863,011 | 59.8 |
| 14–15 . . . . . . . . . . . . . . . . . . . . | 0.00049 | 98,080 | 48 | 98,056 | 5,764,914 | 58.8 |
| 15–16 . . . . . . . . . . . . . . . . . . . . | 0.00065 | 98,031 | 64 | 98,000 | 5,666,859 | 57.8 |
| 16–17 . . . . . . . . . . . . . . . . . . . . | 0.00080 | 97,968 | 79 | 97,929 | 5,568,859 | 56.8 |
| 17–18 . . . . . . . . . . . . . . . . . . . . | 0.00095 | 97,889 | 93 | 97,843 | 5,470,931 | 55.9 |
| 18–19 . . . . . . . . . . . . . . . . . . . . | 0.00109 | 97,796 | 106 | 97,743 | 5,373,088 | 54.9 |
| 19–20 . . . . . . . . . . . . . . . . . . . . | 0.00122 | 97,690 | 119 | 97,631 | 5,275,344 | 54.0 |
| 20–21 . . . . . . . . . . . . . . . . . . . . | 0.00136 | 97,572 | 133 | 97,505 | 5,177,713 | 53.1 |
| 21–22 . . . . . . . . . . . . . . . . . . . . | 0.00151 | 97,439 | 147 | 97,365 | 5,080,208 | 52.1 |
| 22–23 . . . . . . . . . . . . . . . . . . . . | 0.00162 | 97,292 | 158 | 97,213 | 4,982,843 | 51.2 |
| 23–24 . . . . . . . . . . . . . . . . . . . . | 0.00167 | 97,134 | 162 | 97,053 | 4,885,630 | 50.3 |
| 24–25 . . . . . . . . . . . . . . . . . . . . | 0.00167 | 96,972 | 162 | 96,891 | 4,788,577 | 49.4 |
| 25–26 . . . . . . . . . . . . . . . . . . . . | 0.00165 | 96,810 | 160 | 96,730 | 4,691,687 | 48.5 |
| 26–27 . . . . . . . . . . . . . . . . . . . . | 0.00166 | 96,650 | 160 | 96,570 | 4,594,957 | 47.5 |
| 27–28 . . . . . . . . . . . . . . . . . . . . | 0.00167 | 96,490 | 162 | 96,409 | 4,498,387 | 46.6 |
| 28–29 . . . . . . . . . . . . . . . . . . . . | 0.00172 | 96,328 | 166 | 96,245 | 4,401,978 | 45.7 |
| 29–30 . . . . . . . . . . . . . . . . . . . . | 0.00180 | 96,162 | 173 | 96,076 | 4,305,733 | 44.8 |
| 30–31 . . . . . . . . . . . . . . . . . . . . | 0.00188 | 95,989 | 181 | 95,899 | 4,209,657 | 43.9 |
| 31–32 . . . . . . . . . . . . . . . . . . . . | 0.00197 | 95,809 | 189 | 95,714 | 4,113,758 | 42.9 |
| 32–33 . . . . . . . . . . . . . . . . . . . . | 0.00209 | 95,620 | 200 | 95,520 | 4,018,043 | 42.0 |
| 33–34 . . . . . . . . . . . . . . . . . . . . | 0.00223 | 95,420 | 213 | 95,313 | 3,922,524 | 41.1 |
| 34–35 . . . . . . . . . . . . . . . . . . . . | 0.00239 | 95,207 | 228 | 95,093 | 3,827,210 | 40.2 |
| 35–36 . . . . . . . . . . . . . . . . . . . . | 0.00256 | 94,979 | 243 | 94,858 | 3,732,118 | 39.3 |
| 36–37 . . . . . . . . . . . . . . . . . . . . | 0.00273 | 94,736 | 259 | 94,607 | 3,637,260 | 38.4 |
| 37–38 . . . . . . . . . . . . . . . . . . . . | 0.00294 | 94,477 | 278 | 94,339 | 3,542,653 | 37.5 |
| 38–39 . . . . . . . . . . . . . . . . . . . . | 0.00319 | 94,200 | 300 | 94,050 | 3,448,315 | 36.6 |
| 39–40 . . . . . . . . . . . . . . . . . . . . | 0.00348 | 93,899 | 327 | 93,736 | 3,354,265 | 35.7 |
| 40–41 . . . . . . . . . . . . . . . . . . . . | 0.00379 | 93,573 | 355 | 93,395 | 3,260,529 | 34.8 |
| 41–42 . . . . . . . . . . . . . . . . . . . . | 0.00412 | 93,218 | 384 | 93,026 | 3,167,134 | 34.0 |
| 42–43 . . . . . . . . . . . . . . . . . . . . | 0.00447 | 92,834 | 415 | 92,626 | 3,074,108 | 33.1 |
| 43–44 . . . . . . . . . . . . . . . . . . . . | 0.00487 | 92,419 | 450 | 92,194 | 2,981,481 | 32.3 |
| 44–45 . . . . . . . . . . . . . . . . . . . . | 0.00531 | 91,969 | 488 | 91,725 | 2,889,288 | 31.4 |
| 45–46 . . . . . . . . . . . . . . . . . . . . | 0.00581 | 91,481 | 531 | 91,215 | 2,797,563 | 30.6 |
| 46–47 . . . . . . . . . . . . . . . . . . . . | 0.00635 | 90,949 | 577 | 90,661 | 2,706,348 | 29.8 |
| 47–48 . . . . . . . . . . . . . . . . . . . . | 0.00689 | 90,372 | 622 | 90,061 | 2,615,687 | 28.9 |
| 48–49 . . . . . . . . . . . . . . . . . . . . | 0.00740 | 89,750 | 664 | 89,418 | 2,525,626 | 28.1 |
| 49–50 . . . . . . . . . . . . . . . . . . . . | 0.00789 | 89,086 | 703 | 88,735 | 2,436,208 | 27.4 |
| 50–51 . . . . . . . . . . . . . . . . . . . . | 0.00842 | 88,383 | 744 | 88,011 | 2,347,473 | 26.6 |
| 51–52 . . . . . . . . . . . . . . . . . . . . | 0.00903 | 87,640 | 791 | 87,244 | 2,259,462 | 25.8 |
| 52–53 . . . . . . . . . . . . . . . . . . . . | 0.00971 | 86,849 | 843 | 86,427 | 2,172,218 | 25.0 |
| 53–54 . . . . . . . . . . . . . . . . . . . . | 0.01047 | 86,006 | 900 | 85,556 | 2,085,791 | 24.3 |
| 54–55 . . . . . . . . . . . . . . . . . . . . | 0.01130 | 85,106 | 962 | 84,625 | 2,000,235 | 23.5 |
| 55–56 . . . . . . . . . . . . . . . . . . . . | 0.01221 | 84,144 | 1,028 | 83,630 | 1,915,610 | 22.8 |
| 56–57 . . . . . . . . . . . . . . . . . . . . | 0.01320 | 83,116 | 1,097 | 82,568 | 1,831,980 | 22.0 |
| 57–58 . . . . . . . . . . . . . . . . . . . . | 0.01422 | 82,019 | 1,166 | 81,436 | 1,749,412 | 21.3 |
| 58–59 . . . . . . . . . . . . . . . . . . . . | 0.01526 | 80,853 | 1,234 | 80,236 | 1,667,976 | 20.6 |
| 59–60 . . . . . . . . . . . . . . . . . . . . | 0.01632 | 79,619 | 1,299 | 78,970 | 1,587,740 | 19.9 |
| 60–61 . . . . . . . . . . . . . . . . . . . . | 0.01744 | 78,320 | 1,366 | 77,637 | 1,508,770 | 19.3 |
| 61–62 . . . . . . . . . . . . . . . . . . . . | 0.01863 | 76,954 | 1,434 | 76,237 | 1,431,133 | 18.6 |
| 62–63 . . . . . . . . . . . . . . . . . . . . | 0.01986 | 75,521 | 1,500 | 74,771 | 1,354,896 | 17.9 |
| 63–64 . . . . . . . . . . . . . . . . . . . . | 0.02110 | 74,021 | 1,562 | 73,240 | 1,280,125 | 17.3 |
| 64–65 . . . . . . . . . . . . . . . . . . . . | 0.02236 | 72,459 | 1,620 | 71,649 | 1,206,885 | 16.7 |
| 65–66 . . . . . . . . . . . . . . . . . . . . | 0.02357 | 70,839 | 1,670 | 70,004 | 1,135,236 | 16.0 |
| 66–67 . . . . . . . . . . . . . . . . . . . . | 0.02486 | 69,169 | 1,719 | 68,309 | 1,065,233 | 15.4 |

## Table 7. Life table for the black population: United States, 1999—Con.

| Age | Proportion dying during age interval $q_x$ | Number living at beginning of age interval $l_x$ | Number dying during age interval $d_x$ | Stationary population in the age interval $L_x$ | Stationary population in this and all subsequent age intervals $T_x$ | Life expectancy at beginning of age interval $e_x$ |
|---|---|---|---|---|---|---|
| 67–68 . . . . . . . . . . . . . . . . . . . . | 0.02649 | 67,449 | 1,787 | 66,556 | 996,924 | 14.8 |
| 68–69 . . . . . . . . . . . . . . . . . . . . | 0.02866 | 65,662 | 1,882 | 64,721 | 930,368 | 14.2 |
| 69–70 . . . . . . . . . . . . . . . . . . . . | 0.03136 | 63,780 | 2,000 | 62,780 | 865,646 | 13.6 |
| 70–71 . . . . . . . . . . . . . . . . . . . . | 0.03437 | 61,781 | 2,124 | 60,719 | 802,866 | 13.0 |
| 71–72 . . . . . . . . . . . . . . . . . . . . | 0.03750 | 59,657 | 2,237 | 58,538 | 742,147 | 12.4 |
| 72–73 . . . . . . . . . . . . . . . . . . . . | 0.04075 | 57,419 | 2,340 | 56,250 | 683,609 | 11.9 |
| 73–74 . . . . . . . . . . . . . . . . . . . . | 0.04396 | 55,080 | 2,422 | 53,869 | 627,359 | 11.4 |
| 74–75 . . . . . . . . . . . . . . . . . . . . | 0.04713 | 52,658 | 2,482 | 51,417 | 573,491 | 10.9 |
| 75–76 . . . . . . . . . . . . . . . . . . . . | 0.05048 | 50,176 | 2,533 | 48,910 | 522,074 | 10.4 |
| 76–77 . . . . . . . . . . . . . . . . . . . . | 0.05406 | 47,644 | 2,576 | 46,356 | 473,164 | 9.9 |
| 77–78 . . . . . . . . . . . . . . . . . . . . | 0.05773 | 45,068 | 2,602 | 43,767 | 426,808 | 9.5 |
| 78–79 . . . . . . . . . . . . . . . . . . . . | 0.06157 | 42,466 | 2,615 | 41,159 | 383,041 | 9.0 |
| 79–80 . . . . . . . . . . . . . . . . . . . . | 0.06580 | 39,852 | 2,622 | 38,540 | 341,882 | 8.6 |
| 80–81 . . . . . . . . . . . . . . . . . . . . | 0.07051 | 37,229 | 2,625 | 35,917 | 303,342 | 8.2 |
| 81–82 . . . . . . . . . . . . . . . . . . . . | 0.07593 | 34,605 | 2,628 | 33,291 | 267,425 | 7.7 |
| 82–83 . . . . . . . . . . . . . . . . . . . . | 0.08242 | 31,977 | 2,636 | 30,659 | 234,134 | 7.3 |
| 83–84 . . . . . . . . . . . . . . . . . . . . | 0.09002 | 29,341 | 2,641 | 28,021 | 203,475 | 6.9 |
| 84–85 . . . . . . . . . . . . . . . . . . . . | 0.09846 | 26,700 | 2,629 | 25,386 | 175,454 | 6.6 |
| 85–86 . . . . . . . . . . . . . . . . . . . . | 0.10579 | 24,071 | 2,547 | 22,798 | 150,068 | 6.2 |
| 86–87 . . . . . . . . . . . . . . . . . . . . | 0.11356 | 21,525 | 2,444 | 20,303 | 127,270 | 5.9 |
| 87–88 . . . . . . . . . . . . . . . . . . . . | 0.12176 | 19,080 | 2,323 | 17,919 | 106,968 | 5.6 |
| 88–89 . . . . . . . . . . . . . . . . . . . . | 0.13041 | 16,757 | 2,185 | 15,665 | 89,049 | 5.3 |
| 89–90 . . . . . . . . . . . . . . . . . . . . | 0.13953 | 14,572 | 2,033 | 13,555 | 73,384 | 5.0 |
| 90–91 . . . . . . . . . . . . . . . . . . . . | 0.14912 | 12,539 | 1,870 | 11,604 | 59,829 | 4.8 |
| 91–92 . . . . . . . . . . . . . . . . . . . . | 0.15921 | 10,669 | 1,699 | 9,820 | 48,225 | 4.5 |
| 92–93 . . . . . . . . . . . . . . . . . . . . | 0.16979 | 8,970 | 1,523 | 8,209 | 38,405 | 4.3 |
| 93–94 . . . . . . . . . . . . . . . . . . . . | 0.18089 | 7,447 | 1,347 | 6,774 | 30,196 | 4.1 |
| 94–95 . . . . . . . . . . . . . . . . . . . . | 0.19251 | 6,100 | 1,174 | 5,513 | 23,423 | 3.8 |
| 95–96 . . . . . . . . . . . . . . . . . . . . | 0.20465 | 4,926 | 1,008 | 4,422 | 17,910 | 3.6 |
| 96–97 . . . . . . . . . . . . . . . . . . . . | 0.21732 | 3,918 | 851 | 3,492 | 13,488 | 3.4 |
| 97–98 . . . . . . . . . . . . . . . . . . . . | 0.23054 | 3,066 | 707 | 2,713 | 9,996 | 3.3 |
| 98–99 . . . . . . . . . . . . . . . . . . . . | 0.24429 | 2,359 | 576 | 2,071 | 7,283 | 3.1 |
| 99–100 . . . . . . . . . . . . . . . . . . . . | 0.25859 | 1,783 | 461 | 1,553 | 5,212 | 2.9 |
| 100+ . . . . . . . . . . . . . . . . . . . . | 1.00000 | 1,322 | 1,322 | 3,659 | 3,659 | 2.8 |

## Table 8. Life table for black males: United States, 1999

| Age | Proportion dying during age interval $q_x$ | Number living at beginning of age interval $l_x$ | Number dying during age interval $d_x$ | Stationary population in the age interval $L_x$ | Stationary population in this and all subsequent age intervals $T_x$ | Life expectancy at beginning of age interval $e_x$ |
|---|---|---|---|---|---|---|
| 0–1 . . . . . . . . . . . . . . . . . . . . . . | 0.01592 | 100,000 | 1,592 | 98,601 | 6,779,735 | 67.8 |
| 1–2 . . . . . . . . . . . . . . . . . . . . . . | 0.00111 | 98,408 | 109 | 98,353 | 6,681,134 | 67.9 |
| 2–3 . . . . . . . . . . . . . . . . . . . . . . | 0.00065 | 98,299 | 64 | 98,267 | 6,582,781 | 67.0 |
| 3–4 . . . . . . . . . . . . . . . . . . . . . . | 0.00042 | 98,235 | 41 | 98,214 | 6,484,515 | 66.0 |
| 4–5 . . . . . . . . . . . . . . . . . . . . . . | 0.00044 | 98,193 | 43 | 98,172 | 6,386,301 | 65.0 |
| 5–6 . . . . . . . . . . . . . . . . . . . . . . | 0.00038 | 98,150 | 37 | 98,132 | 6,288,129 | 64.1 |
| 6–7 . . . . . . . . . . . . . . . . . . . . . . | 0.00036 | 98,113 | 35 | 98,095 | 6,189,997 | 63.1 |
| 7–8 . . . . . . . . . . . . . . . . . . . . . . | 0.00034 | 98,078 | 33 | 98,061 | 6,091,902 | 62.1 |
| 8–9 . . . . . . . . . . . . . . . . . . . . . . | 0.00030 | 98,045 | 30 | 98,030 | 5,993,840 | 61.1 |
| 9–10 . . . . . . . . . . . . . . . . . . . . . . | 0.00026 | 98,015 | 25 | 98,003 | 5,895,810 | 60.2 |
| 10–11. . . . . . . . . . . . . . . . . . . . . . | 0.00022 | 97,991 | 21 | 97,980 | 5,797,807 | 59.2 |
| 11–12. . . . . . . . . . . . . . . . . . . . . . | 0.00021 | 97,969 | 21 | 97,959 | 5,699,827 | 58.2 |
| 12–13 . . . . . . . . . . . . . . . . . . . . . . | 0.00028 | 97,949 | 28 | 97,935 | 5,601,868 | 57.2 |
| 13–14 . . . . . . . . . . . . . . . . . . . . . . | 0.00045 | 97,921 | 44 | 97,899 | 5,503,933 | 56.2 |
| 14–15 . . . . . . . . . . . . . . . . . . . . . . | 0.00068 | 97,877 | 67 | 97,844 | 5,406,034 | 55.2 |
| 15–16 . . . . . . . . . . . . . . . . . . . . . . | 0.00094 | 97,810 | 92 | 97,764 | 5,308,190 | 54.3 |
| 16–17 . . . . . . . . . . . . . . . . . . . . . . | 0.00118 | 97,718 | 115 | 97,661 | 5,210,426 | 53.3 |
| 17–18 . . . . . . . . . . . . . . . . . . . . . . | 0.00141 | 97,603 | 138 | 97,534 | 5,112,765 | 52.4 |
| 18–19 . . . . . . . . . . . . . . . . . . . . . . | 0.00163 | 97,465 | 159 | 97,386 | 5,015,231 | 51.5 |
| 19–20 . . . . . . . . . . . . . . . . . . . . . . | 0.00184 | 97,307 | 179 | 97,217 | 4,917,845 | 50.5 |
| 20–21 . . . . . . . . . . . . . . . . . . . . . . | 0.00208 | 97,127 | 202 | 97,026 | 4,820,628 | 49.6 |
| 21–22 . . . . . . . . . . . . . . . . . . . . . . | 0.00233 | 96,925 | 225 | 96,812 | 4,723,601 | 48.7 |
| 22–23 . . . . . . . . . . . . . . . . . . . . . . | 0.00250 | 96,700 | 242 | 96,579 | 4,626,789 | 47.9 |
| 23–24 . . . . . . . . . . . . . . . . . . . . . . | 0.00256 | 96,458 | 247 | 96,335 | 4,530,210 | 47.0 |
| 24–25 . . . . . . . . . . . . . . . . . . . . . . | 0.00253 | 96,212 | 243 | 96,090 | 4,433,875 | 46.1 |
| 25–26 . . . . . . . . . . . . . . . . . . . . . . | 0.00246 | 95,968 | 236 | 95,850 | 4,337,785 | 45.2 |
| 26–27 . . . . . . . . . . . . . . . . . . . . . . | 0.00242 | 95,732 | 232 | 95,616 | 4,241,935 | 44.3 |
| 27–28 . . . . . . . . . . . . . . . . . . . . . . | 0.00241 | 95,500 | 230 | 95,385 | 4,146,319 | 43.4 |
| 28–29 . . . . . . . . . . . . . . . . . . . . . . | 0.00245 | 95,270 | 234 | 95,153 | 4,050,933 | 42.5 |
| 29–30 . . . . . . . . . . . . . . . . . . . . . . | 0.00255 | 95,036 | 242 | 94,915 | 3,955,780 | 41.6 |
| 30–31 . . . . . . . . . . . . . . . . . . . . . . | 0.00266 | 94,794 | 252 | 94,669 | 3,860,865 | 40.7 |
| 31–32 . . . . . . . . . . . . . . . . . . . . . . | 0.00277 | 94,543 | 261 | 94,412 | 3,766,196 | 39.8 |
| 32–33 . . . . . . . . . . . . . . . . . . . . . . | 0.00289 | 94,281 | 272 | 94,145 | 3,671,784 | 38.9 |
| 33–34 . . . . . . . . . . . . . . . . . . . . . . | 0.00302 | 94,009 | 284 | 93,867 | 3,577,639 | 38.1 |
| 34–35 . . . . . . . . . . . . . . . . . . . . . . | 0.00316 | 93,725 | 296 | 93,577 | 3,483,772 | 37.2 |
| 35–36 . . . . . . . . . . . . . . . . . . . . . . | 0.00331 | 93,429 | 309 | 93,274 | 3,390,195 | 36.3 |
| 36–37 . . . . . . . . . . . . . . . . . . . . . . | 0.00348 | 93,119 | 324 | 92,957 | 3,296,921 | 35.4 |
| 37–38 . . . . . . . . . . . . . . . . . . . . . . | 0.00371 | 92,795 | 344 | 92,623 | 3,203,964 | 34.5 |
| 38–39 . . . . . . . . . . . . . . . . . . . . . . | 0.00401 | 92,450 | 371 | 92,265 | 3,111,342 | 33.7 |
| 39–40 . . . . . . . . . . . . . . . . . . . . . . | 0.00438 | 92,080 | 404 | 91,878 | 3,019,077 | 32.8 |
| 40–41 . . . . . . . . . . . . . . . . . . . . . . | 0.00478 | 91,676 | 438 | 91,457 | 2,927,199 | 31.9 |
| 41–42 . . . . . . . . . . . . . . . . . . . . . . | 0.00519 | 91,238 | 474 | 91,001 | 2,835,742 | 31.1 |
| 42–43 . . . . . . . . . . . . . . . . . . . . . . | 0.00567 | 90,764 | 515 | 90,507 | 2,744,741 | 30.2 |
| 43–44 . . . . . . . . . . . . . . . . . . . . . . | 0.00624 | 90,249 | 563 | 89,968 | 2,654,234 | 29.4 |
| 44–45 . . . . . . . . . . . . . . . . . . . . . . | 0.00689 | 89,686 | 618 | 89,377 | 2,564,267 | 28.6 |
| 45–46 . . . . . . . . . . . . . . . . . . . . . . | 0.00765 | 89,068 | 682 | 88,727 | 2,474,890 | 27.8 |
| 46–47 . . . . . . . . . . . . . . . . . . . . . . | 0.00847 | 88,386 | 749 | 88,012 | 2,386,162 | 27.0 |
| 47–48 . . . . . . . . . . . . . . . . . . . . . . | 0.00927 | 87,637 | 812 | 87,231 | 2,298,150 | 26.2 |
| 48–49 . . . . . . . . . . . . . . . . . . . . . . | 0.00998 | 86,825 | 867 | 86,392 | 2,210,919 | 25.5 |
| 49–50 . . . . . . . . . . . . . . . . . . . . . . | 0.01063 | 85,958 | 914 | 85,502 | 2,124,527 | 24.7 |
| 50–51 . . . . . . . . . . . . . . . . . . . . . . | 0.01131 | 85,045 | 962 | 84,564 | 2,039,026 | 24.0 |
| 51–52 . . . . . . . . . . . . . . . . . . . . . . | 0.01211 | 84,083 | 1,018 | 83,574 | 1,954,462 | 23.2 |
| 52–53 . . . . . . . . . . . . . . . . . . . . . . | 0.01300 | 83,065 | 1,080 | 82,525 | 1,870,888 | 22.5 |
| 53–54 . . . . . . . . . . . . . . . . . . . . . . | 0.01401 | 81,985 | 1,148 | 81,411 | 1,788,363 | 21.8 |
| 54–55 . . . . . . . . . . . . . . . . . . . . . . | 0.01512 | 80,837 | 1,222 | 80,226 | 1,706,953 | 21.1 |
| 55–56 . . . . . . . . . . . . . . . . . . . . . . | 0.01633 | 79,614 | 1,300 | 78,964 | 1,626,727 | 20.4 |
| 56–57 . . . . . . . . . . . . . . . . . . . . . . | 0.01762 | 78,314 | 1,380 | 77,624 | 1,547,763 | 19.8 |
| 57–58 . . . . . . . . . . . . . . . . . . . . . . | 0.01898 | 76,934 | 1,460 | 76,204 | 1,470,139 | 19.1 |
| 58–59 . . . . . . . . . . . . . . . . . . . . . . | 0.02039 | 75,474 | 1,539 | 74,704 | 1,393,935 | 18.5 |
| 59–60 . . . . . . . . . . . . . . . . . . . . . . | 0.02183 | 73,935 | 1,614 | 73,128 | 1,319,231 | 17.8 |
| 60–61 . . . . . . . . . . . . . . . . . . . . . . | 0.02336 | 72,321 | 1,689 | 71,476 | 1,246,103 | 17.2 |
| 61–62 . . . . . . . . . . . . . . . . . . . . . . | 0.02496 | 70,632 | 1,763 | 69,750 | 1,174,626 | 16.6 |
| 62–63 . . . . . . . . . . . . . . . . . . . . . . | 0.02653 | 68,869 | 1,827 | 67,955 | 1,104,876 | 16.0 |
| 63–64 . . . . . . . . . . . . . . . . . . . . . . | 0.02798 | 67,042 | 1,876 | 66,104 | 1,036,921 | 15.5 |
| 64–65 . . . . . . . . . . . . . . . . . . . . . . | 0.02933 | 65,166 | 1,911 | 64,211 | 970,816 | 14.9 |
| 65–66 . . . . . . . . . . . . . . . . . . . . . . | 0.03054 | 63,255 | 1,932 | 62,289 | 906,606 | 14.3 |
| 66–67 . . . . . . . . . . . . . . . . . . . . . . | 0.03183 | 61,323 | 1,952 | 60,347 | 844,317 | 13.8 |

## Table 8. Life table for black males: United States, 1999—Con.

| Age | Proportion dying during age interval | Number living at beginning of age interval | Number dying during age interval | Stationary population in the age interval | Stationary population in this and all subsequent age intervals | Life expectancy at beginning of age interval |
|---|---|---|---|---|---|---|
| | $q_x$ | $l_x$ | $d_x$ | $L_x$ | $T_x$ | $e_x$ |
| 67–68 . . . . . . . . . . . . . . . . . . . . . | 0.03355 | 59,372 | 1,992 | 58,376 | 783,969 | 13.2 |
| 68–69 . . . . . . . . . . . . . . . . . . . . . | 0.03600 | 57,380 | 2,066 | 56,347 | 725,594 | 12.7 |
| 69–70 . . . . . . . . . . . . . . . . . . . . . | 0.03916 | 55,314 | 2,166 | 54,231 | 669,247 | 12.1 |
| 70–71 . . . . . . . . . . . . . . . . . . . . . | 0.04274 | 53,148 | 2,272 | 52,012 | 615,016 | 11.6 |
| 71–72 . . . . . . . . . . . . . . . . . . . . . | 0.04644 | 50,876 | 2,363 | 49,695 | 563,004 | 11.1 |
| 72–73 . . . . . . . . . . . . . . . . . . . . . | 0.05034 | 48,514 | 2,442 | 47,293 | 513,309 | 10.6 |
| 73–74 . . . . . . . . . . . . . . . . . . . . . | 0.05423 | 46,072 | 2,498 | 44,822 | 466,016 | 10.1 |
| 74–75 . . . . . . . . . . . . . . . . . . . . . | 0.05809 | 43,573 | 2,531 | 42,308 | 421,194 | 9.7 |
| 75–76 . . . . . . . . . . . . . . . . . . . . . | 0.06224 | 41,042 | 2,555 | 39,765 | 378,886 | 9.2 |
| 76–77 . . . . . . . . . . . . . . . . . . . . . | 0.06672 | 38,487 | 2,568 | 37,203 | 339,121 | 8.8 |
| 77–78 . . . . . . . . . . . . . . . . . . . . . | 0.07119 | 35,919 | 2,557 | 34,641 | 301,918 | 8.4 |
| 78–79 . . . . . . . . . . . . . . . . . . . . . | 0.07565 | 33,362 | 2,524 | 32,101 | 267,277 | 8.0 |
| 79–80 . . . . . . . . . . . . . . . . . . . . . | 0.08038 | 30,839 | 2,479 | 29,599 | 235,176 | 7.6 |
| 80–81 . . . . . . . . . . . . . . . . . . . . . | 0.08572 | 28,360 | 2,431 | 27,144 | 205,577 | 7.3 |
| 81–82 . . . . . . . . . . . . . . . . . . . . . | 0.09206 | 25,929 | 2,387 | 24,735 | 178,433 | 6.9 |
| 82–83 . . . . . . . . . . . . . . . . . . . . . | 0.09958 | 23,542 | 2,344 | 22,370 | 153,697 | 6.5 |
| 83–84 . . . . . . . . . . . . . . . . . . . . . | 0.10809 | 21,198 | 2,291 | 20,052 | 131,327 | 6.2 |
| 84–85 . . . . . . . . . . . . . . . . . . . . . | 0.11713 | 18,906 | 2,215 | 17,799 | 111,275 | 5.9 |
| 85–86 . . . . . . . . . . . . . . . . . . . . . | 0.12513 | 16,692 | 2,089 | 15,648 | 93,476 | 5.6 |
| 86–87 . . . . . . . . . . . . . . . . . . . . . | 0.13346 | 14,603 | 1,949 | 13,629 | 77,828 | 5.3 |
| 87–88 . . . . . . . . . . . . . . . . . . . . . | 0.14212 | 12,654 | 1,798 | 11,755 | 64,200 | 5.1 |
| 88–89 . . . . . . . . . . . . . . . . . . . . . | 0.15110 | 10,856 | 1,640 | 10,036 | 52,445 | 4.8 |
| 89–90 . . . . . . . . . . . . . . . . . . . . . | 0.16040 | 9,215 | 1,478 | 8,476 | 42,409 | 4.6 |
| 90–91 . . . . . . . . . . . . . . . . . . . . . | 0.16999 | 7,737 | 1,315 | 7,080 | 33,933 | 4.4 |
| 91–92 . . . . . . . . . . . . . . . . . . . . . | 0.17987 | 6,422 | 1,155 | 5,844 | 26,853 | 4.2 |
| 92–93 . . . . . . . . . . . . . . . . . . . . . | 0.19003 | 5,267 | 1,001 | 4,766 | 21,009 | 4.0 |
| 93–94 . . . . . . . . . . . . . . . . . . . . . | 0.20044 | 4,266 | 855 | 3,838 | 16,242 | 3.8 |
| 94–95 . . . . . . . . . . . . . . . . . . . . . | 0.21108 | 3,411 | 720 | 3,051 | 12,404 | 3.6 |
| 95–96 . . . . . . . . . . . . . . . . . . . . . | 0.22194 | 2,691 | 597 | 2,392 | 9,353 | 3.5 |
| 96–97 . . . . . . . . . . . . . . . . . . . . . | 0.23298 | 2,094 | 488 | 1,850 | 6,960 | 3.3 |
| 97–98 . . . . . . . . . . . . . . . . . . . . . | 0.24418 | 1,606 | 392 | 1,410 | 5,111 | 3.2 |
| 98–99 . . . . . . . . . . . . . . . . . . . . . | 0.25552 | 1,214 | 310 | 1,059 | 3,701 | 3.1 |
| 99–100 . . . . . . . . . . . . . . . . . . . . | 0.26695 | 904 | 241 | 783 | 2,642 | 2.9 |
| 100+ . . . . . . . . . . . . . . . . . . . . . | 1.00000 | 662 | 662 | 1,859 | 1,859 | 2.8 |

## Table 9. Life table for black females: United States, 1999

| Age | Proportion dying during age interval | Number living at beginning of age interval | Number dying during age interval | Stationary population in the age interval | Stationary population in this and all subsequent age intervals | Life expectancy at beginning of age interval |
|---|---|---|---|---|---|---|
| | $q_x$ | $l_x$ | $d_x$ | $L_x$ | $T_x$ | $e_x$ |
| 0–1 . . . . . . . . . . . . . . . . . . . . . . | 0.01316 | 100,000 | 1,316 | 98,843 | 7,473,945 | 74.7 |
| 1–2 . . . . . . . . . . . . . . . . . . . . . . | 0.00083 | 98,684 | 82 | 98,643 | 7,375,101 | 74.7 |
| 2–3 . . . . . . . . . . . . . . . . . . . . . . | 0.00053 | 98,602 | 52 | 98,576 | 7,276,458 | 73.8 |
| 3–4 . . . . . . . . . . . . . . . . . . . . . . | 0.00038 | 98,551 | 38 | 98,532 | 7,177,882 | 72.8 |
| 4–5 . . . . . . . . . . . . . . . . . . . . . . | 0.00031 | 98,513 | 30 | 98,498 | 7,079,350 | 71.9 |
| 5–6 . . . . . . . . . . . . . . . . . . . . . . | 0.00029 | 98,483 | 28 | 98,468 | 6,980,852 | 70.9 |
| 6–7 . . . . . . . . . . . . . . . . . . . . . . | 0.00025 | 98,454 | 25 | 98,442 | 6,882,384 | 69.9 |
| 7–8 . . . . . . . . . . . . . . . . . . . . . . | 0.00023 | 98,429 | 22 | 98,418 | 6,783,942 | 68.9 |
| 8–9 . . . . . . . . . . . . . . . . . . . . . . | 0.00021 | 98,407 | 20 | 98,397 | 6,685,524 | 67.9 |
| 9–10 . . . . . . . . . . . . . . . . . . . . . | 0.00019 | 98,387 | 19 | 98,377 | 6,587,127 | 67.0 |
| 10–11. . . . . . . . . . . . . . . . . . . . . | 0.00018 | 98,368 | 18 | 98,359 | 6,488,750 | 66.0 |
| 11–12. . . . . . . . . . . . . . . . . . . . . | 0.00018 | 98,350 | 18 | 98,341 | 6,390,391 | 65.0 |
| 12–13 . . . . . . . . . . . . . . . . . . . . . | 0.00020 | 98,332 | 20 | 98,322 | 6,292,051 | 64.0 |
| 13–14 . . . . . . . . . . . . . . . . . . . . . | 0.00024 | 98,312 | 23 | 98,300 | 6,193,729 | 63.0 |
| 14–15 . . . . . . . . . . . . . . . . . . . . . | 0.00029 | 98,288 | 28 | 98,274 | 6,095,429 | 62.0 |
| 15–16 . . . . . . . . . . . . . . . . . . . . . | 0.00035 | 98,260 | 34 | 98,243 | 5,997,154 | 61.0 |
| 16–17 . . . . . . . . . . . . . . . . . . . . . | 0.00041 | 98,226 | 40 | 98,206 | 5,898,911 | 60.1 |
| 17–18 . . . . . . . . . . . . . . . . . . . . . | 0.00047 | 98,186 | 46 | 98,163 | 5,800,706 | 59.1 |
| 18–19 . . . . . . . . . . . . . . . . . . . . . | 0.00052 | 98,140 | 51 | 98,114 | 5,702,543 | 58.1 |
| 19–20 . . . . . . . . . . . . . . . . . . . . . | 0.00058 | 98,089 | 56 | 98,061 | 5,604,428 | 57.1 |
| 20–21 . . . . . . . . . . . . . . . . . . . . . | 0.00064 | 98,032 | 62 | 98,001 | 5,506,368 | 56.2 |
| 21–22 . . . . . . . . . . . . . . . . . . . . . | 0.00070 | 97,970 | 69 | 97,935 | 5,408,367 | 55.2 |
| 22–23 . . . . . . . . . . . . . . . . . . . . . | 0.00076 | 97,901 | 75 | 97,864 | 5,310,431 | 54.2 |
| 23–24 . . . . . . . . . . . . . . . . . . . . . | 0.00081 | 97,826 | 79 | 97,786 | 5,212,568 | 53.3 |
| 24–25 . . . . . . . . . . . . . . . . . . . . . | 0.00085 | 97,747 | 83 | 97,705 | 5,114,781 | 52.3 |
| 25–26 . . . . . . . . . . . . . . . . . . . . . | 0.00090 | 97,663 | 87 | 97,620 | 5,017,076 | 51.4 |
| 26–27 . . . . . . . . . . . . . . . . . . . . . | 0.00095 | 97,576 | 92 | 97,530 | 4,919,457 | 50.4 |
| 27–28 . . . . . . . . . . . . . . . . . . . . . | 0.00100 | 97,484 | 98 | 97,435 | 4,821,927 | 49.5 |
| 28–29 . . . . . . . . . . . . . . . . . . . . . | 0.00106 | 97,386 | 103 | 97,334 | 4,724,492 | 48.5 |
| 29–30 . . . . . . . . . . . . . . . . . . . . . | 0.00112 | 97,283 | 109 | 97,228 | 4,627,158 | 47.6 |
| 30–31 . . . . . . . . . . . . . . . . . . . . . | 0.00119 | 97,173 | 116 | 97,116 | 4,529,930 | 46.6 |
| 31–32 . . . . . . . . . . . . . . . . . . . . . | 0.00127 | 97,058 | 124 | 96,996 | 4,432,814 | 45.7 |
| 32–33 . . . . . . . . . . . . . . . . . . . . . | 0.00139 | 96,934 | 134 | 96,867 | 4,335,818 | 44.7 |
| 33–34 . . . . . . . . . . . . . . . . . . . . . | 0.00154 | 96,800 | 149 | 96,725 | 4,238,951 | 43.8 |
| 34–35 . . . . . . . . . . . . . . . . . . . . . | 0.00171 | 96,651 | 165 | 96,568 | 4,142,226 | 42.9 |
| 35–36 . . . . . . . . . . . . . . . . . . . . . | 0.00189 | 96,486 | 182 | 96,395 | 4,045,657 | 41.9 |
| 36–37 . . . . . . . . . . . . . . . . . . . . . | 0.00206 | 96,304 | 199 | 96,204 | 3,949,263 | 41.0 |
| 37–38 . . . . . . . . . . . . . . . . . . . . . | 0.00225 | 96,105 | 216 | 95,997 | 3,853,058 | 40.1 |
| 38–39 . . . . . . . . . . . . . . . . . . . . . | 0.00246 | 95,889 | 236 | 95,771 | 3,757,062 | 39.2 |
| 39–40 . . . . . . . . . . . . . . . . . . . . . | 0.00268 | 95,653 | 256 | 95,525 | 3,661,291 | 38.3 |
| 40–41 . . . . . . . . . . . . . . . . . . . . . | 0.00292 | 95,397 | 278 | 95,258 | 3,565,766 | 37.4 |
| 41–42 . . . . . . . . . . . . . . . . . . . . . | 0.00316 | 95,119 | 301 | 94,968 | 3,470,508 | 36.5 |
| 42–43 . . . . . . . . . . . . . . . . . . . . . | 0.00341 | 94,818 | 323 | 94,656 | 3,375,540 | 35.6 |
| 43–44 . . . . . . . . . . . . . . . . . . . . . | 0.00366 | 94,495 | 346 | 94,322 | 3,280,884 | 34.7 |
| 44–45 . . . . . . . . . . . . . . . . . . . . . | 0.00393 | 94,149 | 370 | 93,964 | 3,186,562 | 33.9 |
| 45–46 . . . . . . . . . . . . . . . . . . . . . | 0.00422 | 93,779 | 395 | 93,581 | 3,092,598 | 33.0 |
| 46–47 . . . . . . . . . . . . . . . . . . . . . | 0.00454 | 93,383 | 424 | 93,172 | 2,999,017 | 32.1 |
| 47–48 . . . . . . . . . . . . . . . . . . . . . | 0.00488 | 92,960 | 453 | 92,733 | 2,905,845 | 31.3 |
| 48–49 . . . . . . . . . . . . . . . . . . . . . | 0.00523 | 92,507 | 484 | 92,265 | 2,813,112 | 30.4 |
| 49–50 . . . . . . . . . . . . . . . . . . . . . | 0.00560 | 92,023 | 516 | 91,765 | 2,720,847 | 29.6 |
| 50–51 . . . . . . . . . . . . . . . . . . . . . | 0.00602 | 91,507 | 551 | 91,232 | 2,629,082 | 28.7 |
| 51–52 . . . . . . . . . . . . . . . . . . . . . | 0.00649 | 90,957 | 590 | 90,661 | 2,537,850 | 27.9 |
| 52–53 . . . . . . . . . . . . . . . . . . . . . | 0.00702 | 90,366 | 634 | 90,049 | 2,447,189 | 27.1 |
| 53–54 . . . . . . . . . . . . . . . . . . . . . | 0.00760 | 89,732 | 682 | 89,391 | 2,357,140 | 26.3 |
| 54–55 . . . . . . . . . . . . . . . . . . . . . | 0.00823 | 89,050 | 733 | 88,684 | 2,267,748 | 25.5 |
| 55–56 . . . . . . . . . . . . . . . . . . . . . | 0.00894 | 88,317 | 789 | 87,923 | 2,179,065 | 24.7 |
| 56–57 . . . . . . . . . . . . . . . . . . . . . | 0.00971 | 87,528 | 850 | 87,103 | 2,091,142 | 23.9 |
| 57–58 . . . . . . . . . . . . . . . . . . . . . | 0.01050 | 86,678 | 910 | 86,223 | 2,004,039 | 23.1 |
| 58–59 . . . . . . . . . . . . . . . . . . . . . | 0.01130 | 85,768 | 969 | 85,284 | 1,917,816 | 22.4 |
| 59–60 . . . . . . . . . . . . . . . . . . . . . | 0.01210 | 84,799 | 1,026 | 84,286 | 1,832,532 | 21.6 |
| 60–61 . . . . . . . . . . . . . . . . . . . . . | 0.01296 | 83,773 | 1,085 | 83,230 | 1,748,246 | 20.9 |
| 61–62 . . . . . . . . . . . . . . . . . . . . . | 0.01389 | 82,688 | 1,149 | 82,113 | 1,665,016 | 20.1 |
| 62–63 . . . . . . . . . . . . . . . . . . . . . | 0.01490 | 81,539 | 1,215 | 80,932 | 1,582,903 | 19.4 |
| 63–64 . . . . . . . . . . . . . . . . . . . . . | 0.01599 | 80,324 | 1,284 | 79,682 | 1,501,971 | 18.7 |
| 64–65 . . . . . . . . . . . . . . . . . . . . . | 0.01716 | 79,040 | 1,356 | 78,362 | 1,422,289 | 18.0 |
| 65–66 . . . . . . . . . . . . . . . . . . . . . | 0.01833 | 77,684 | 1,424 | 76,972 | 1,343,926 | 17.3 |
| 66–67 . . . . . . . . . . . . . . . . . . . . . | 0.01959 | 76,260 | 1,494 | 75,513 | 1,266,954 | 16.6 |

## Table 9. Life table for black females: United States, 1999—Con.

| Age | Proportion dying during age interval $q_x$ | Number living at beginning of age interval $l_x$ | Number dying during age interval $d_x$ | Stationary population in the age interval $L_x$ | Stationary population in this and all subsequent age intervals $T_x$ | Life expectancy at beginning of age interval $e_x$ |
|---|---|---|---|---|---|---|
| 67–68 . . . . . . . . . . . . . . . . . . . . . | 0.02115 | 74,766 | 1,581 | 73,975 | 1,191,441 | 15.9 |
| 68–69 . . . . . . . . . . . . . . . . . . . . . | 0.02314 | 73,185 | 1,694 | 72,338 | 1,117,466 | 15.3 |
| 69–70 . . . . . . . . . . . . . . . . . . . . . | 0.02555 | 71,491 | 1,827 | 70,578 | 1,045,128 | 14.6 |
| 70–71 . . . . . . . . . . . . . . . . . . . . . | 0.02825 | 69,664 | 1,968 | 68,681 | 974,550 | 14.0 |
| 71–72 . . . . . . . . . . . . . . . . . . . . . | 0.03105 | 67,697 | 2,102 | 66,646 | 905,869 | 13.4 |
| 72–73 . . . . . . . . . . . . . . . . . . . . . | 0.03394 | 65,595 | 2,226 | 64,481 | 839,224 | 12.8 |
| 73–74 . . . . . . . . . . . . . . . . . . . . . | 0.03679 | 63,368 | 2,331 | 62,203 | 774,742 | 12.2 |
| 74–75 . . . . . . . . . . . . . . . . . . . . . | 0.03960 | 61,037 | 2,417 | 59,828 | 712,540 | 11.7 |
| 75–76 . . . . . . . . . . . . . . . . . . . . . | 0.04253 | 58,620 | 2,493 | 57,373 | 652,711 | 11.1 |
| 76–77 . . . . . . . . . . . . . . . . . . . . . | 0.04568 | 56,127 | 2,564 | 54,845 | 595,338 | 10.6 |
| 77–78 . . . . . . . . . . . . . . . . . . . . . | 0.04903 | 53,563 | 2,626 | 52,250 | 540,493 | 10.1 |
| 78–79 . . . . . . . . . . . . . . . . . . . . . | 0.05271 | 50,937 | 2,685 | 49,594 | 488,244 | 9.6 |
| 79–80 . . . . . . . . . . . . . . . . . . . . . | 0.05691 | 48,252 | 2,746 | 46,879 | 438,649 | 9.1 |
| 80–81 . . . . . . . . . . . . . . . . . . . . . | 0.06159 | 45,506 | 2,803 | 44,105 | 391,771 | 8.6 |
| 81–82 . . . . . . . . . . . . . . . . . . . . . | 0.06691 | 42,703 | 2,857 | 41,275 | 347,666 | 8.1 |
| 82–83 . . . . . . . . . . . . . . . . . . . . . | 0.07324 | 39,846 | 2,918 | 38,387 | 306,391 | 7.7 |
| 83–84 . . . . . . . . . . . . . . . . . . . . . | 0.08069 | 36,928 | 2,980 | 35,438 | 268,005 | 7.3 |
| 84–85 . . . . . . . . . . . . . . . . . . . . . | 0.08906 | 33,948 | 3,024 | 32,436 | 232,567 | 6.9 |
| 85–86 . . . . . . . . . . . . . . . . . . . . . | 0.09673 | 30,925 | 2,991 | 29,429 | 200,130 | 6.5 |
| 86–87 . . . . . . . . . . . . . . . . . . . . . | 0.10490 | 27,933 | 2,930 | 26,468 | 170,701 | 6.1 |
| 87–88 . . . . . . . . . . . . . . . . . . . . . | 0.11359 | 25,003 | 2,840 | 23,583 | 144,233 | 5.8 |
| 88–89 . . . . . . . . . . . . . . . . . . . . . | 0.12281 | 22,163 | 2,722 | 20,802 | 120,650 | 5.4 |
| 89–90 . . . . . . . . . . . . . . . . . . . . . | 0.13258 | 19,441 | 2,578 | 18,152 | 99,848 | 5.1 |
| 90–91 . . . . . . . . . . . . . . . . . . . . . | 0.14291 | 16,864 | 2,410 | 15,659 | 81,695 | 4.8 |
| 91–92 . . . . . . . . . . . . . . . . . . . . . | 0.15382 | 14,454 | 2,223 | 13,342 | 66,036 | 4.6 |
| 92–93 . . . . . . . . . . . . . . . . . . . . . | 0.16530 | 12,230 | 2,022 | 11,220 | 52,694 | 4.3 |
| 93–94 . . . . . . . . . . . . . . . . . . . . . | 0.17738 | 10,209 | 1,811 | 9,303 | 41,475 | 4.1 |
| 94–95 . . . . . . . . . . . . . . . . . . . . . | 0.19005 | 8,398 | 1,596 | 7,600 | 32,171 | 3.8 |
| 95–96 . . . . . . . . . . . . . . . . . . . . . | 0.20332 | 6,802 | 1,383 | 6,110 | 24,572 | 3.6 |
| 96–97 . . . . . . . . . . . . . . . . . . . . . | 0.21719 | 5,419 | 1,177 | 4,831 | 18,461 | 3.4 |
| 97–98 . . . . . . . . . . . . . . . . . . . . . | 0.23165 | 4,242 | 983 | 3,751 | 13,631 | 3.2 |
| 98–99 . . . . . . . . . . . . . . . . . . . . . | 0.24670 | 3,259 | 804 | 2,857 | 9,880 | 3.0 |
| 99–100 . . . . . . . . . . . . . . . . . . . . | 0.26234 | 2,455 | 644 | 2,133 | 7,022 | 2.9 |
| 100+ . . . . . . . . . . . . . . . . . . . . . | 1.00000 | 1,811 | 1,811 | 4,889 | 4,889 | 2.7 |

## Table 10. Survivorship by age, race, and sex: Death-registration States, 1900–1902 to 1919–21, and United States, 1929–31 to 1999

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–31, data are for groups of registration States as follows: 1900–1902 and 1909–11, 10 States and the District of Columbia; 1919–21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

| Age, race, and sex | Number of survivors out of 100,000 born alive ($l_x$) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 1989–91 | 1979–81 | 1969–71 | 1959–61 | 1949–51 | 1939–41 | 1929–31 | 1919–21 | 1909–11 | 1900–1902 |
| **All races** | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . . | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 1 . . . . . . . . . . . . . . . | 99,294 | 99,064 | 98,740 | 97,998 | 97,407 | 97,024 | 95,290 | 94,028 | 92,515 | 88,538 | 87,552 |
| 5 . . . . . . . . . . . . . . . | 99,157 | 98,877 | 98,495 | 97,668 | 96,998 | 96,482 | 94,220 | 91,978 | 83,389 | 83,887 | 81,804 |
| 10 . . . . . . . . . . . . . . . | 99,070 | 98,766 | 98,347 | 97,460 | 96,765 | 96,177 | 93,710 | 91,106 | 88,129 | 82,458 | 80,052 |
| 15 . . . . . . . . . . . . . . . | 98,966 | 98,635 | 98,196 | 97,261 | 96,551 | 95,885 | 93,235 | 90,385 | 87,144 | 81,506 | 78,963 |
| 20 . . . . . . . . . . . . . . . | 98,621 | 98,215 | 97,741 | 96,716 | 96,111 | 95,366 | 92,435 | 89,089 | 85,441 | 80,074 | 77,239 |
| 25 . . . . . . . . . . . . . . . | 98,160 | 97,671 | 97,110 | 96,000 | 95,517 | 94,676 | 91,335 | 87,269 | 83,146 | 78,046 | 74,768 |
| 30 . . . . . . . . . . . . . . . | 97,684 | 97,070 | 96,477 | 95,307 | 94,905 | 93,919 | 90,078 | 85,302 | 80,642 | 75,779 | 72,043 |
| 35 . . . . . . . . . . . . . . . | 97,109 | 96,322 | 95,808 | 94,482 | 94,144 | 92,976 | 88,573 | 83,118 | 77,961 | 73,127 | 69,078 |
| 40 . . . . . . . . . . . . . . . | 96,321 | 95,373 | 94,926 | 93,322 | 93,064 | 91,648 | 86,650 | 80,557 | 75,114 | 70,042 | 65,890 |
| 45 . . . . . . . . . . . . . . . | 95,190 | 94,154 | 93,599 | 91,587 | 91,378 | 89,634 | 84,069 | 77,343 | 72,036 | 66,561 | 62,436 |
| 50 . . . . . . . . . . . . . . . | 93,521 | 92,370 | 91,526 | 88,972 | 88,756 | 86,591 | 80,487 | 73,321 | 68,429 | 62,460 | 58,514 |
| 55 . . . . . . . . . . . . . . . | 91,123 | 89,658 | 88,348 | 85,110 | 84,711 | 82,176 | 75,557 | 68,182 | 63,947 | 57,555 | 53,852 |
| 60 . . . . . . . . . . . . . . . | 87,453 | 85,537 | 83,726 | 79,529 | 79,067 | 75,921 | 68,924 | 61,563 | 58,079 | 51,138 | 47,946 |
| 65 . . . . . . . . . . . . . . . | 82,020 | 79,519 | 77,107 | 71,933 | 71,147 | 67,555 | 60,366 | 53,195 | 50,560 | 43,194 | 40,911 |
| 70 . . . . . . . . . . . . . . . | 74,284 | 71,357 | 68,248 | 61,984 | 60,857 | 56,987 | 49,655 | 42,768 | 41,090 | 33,816 | 32,390 |
| 75 . . . . . . . . . . . . . . . | 63,799 | 60,449 | 56,799 | 49,705 | 48,170 | 43,903 | 36,735 | 30,789 | 29,729 | 23,552 | 22,960 |
| 80 . . . . . . . . . . . . . . . | 50,526 | 47,084 | 43,180 | 35,285 | 33,576 | 29,313 | 22,883 | 18,580 | 18,298 | 13,712 | 13,529 |
| 85 . . . . . . . . . . . . . . . | 34,467 | 31,770 | 27,960 | 20,908 | 18,542 | 15,785 | 11,073 | 8,542 | 8,683 | 6,001 | 6,053 |
| 90 . . . . . . . . . . . . . . . | 18,445 | 17,046 | 14,154 | 9,297 | 7,080 | 6,144 | 3,796 | 2,998 | 2,941 | 1,868 | 1,867 |
| 95 . . . . . . . . . . . . . . . | 7,021 | 6,282 | 5,043 | 2,786 | 1,524 | 1,511 | 857 | 636 | 646 | 361 | 344 |
| 100 . . . . . . . . . . . . . . | 1,695 | 1,424 | 1,150 | 542 | 183 | 199 | 123 | 62 | 67 | 40 | 31 |
| **Male** | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . . | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 1 . . . . . . . . . . . . . . . | 99,228 | 98,961 | 98,607 | 97,755 | 97,087 | 96,661 | 94,762 | 93,440 | 91,745 | 87,505 | 86,426 |
| 5 . . . . . . . . . . . . . . . | 99,075 | 98,754 | 98,333 | 97,395 | 96,643 | 96,077 | 93,624 | 91,294 | 88,505 | 82,718 | 80,548 |
| 10 . . . . . . . . . . . . . . . | 98,980 | 98,627 | 98,160 | 97,151 | 96,375 | 95,726 | 93,054 | 90,346 | 87,184 | 81,249 | 78,775 |
| 15 . . . . . . . . . . . . . . . | 98,855 | 98,464 | 97,972 | 96,904 | 96,107 | 95,366 | 92,508 | 89,561 | 86,156 | 80,261 | 77,681 |
| 20 . . . . . . . . . . . . . . . | 98,379 | 97,854 | 97,316 | 96,126 | 95,491 | 94,695 | 91,617 | 88,220 | 84,440 | 78,792 | 75,984 |
| 25 . . . . . . . . . . . . . . . | 97,704 | 97,049 | 96,361 | 95,040 | 94,631 | 93,791 | 90,385 | 86,359 | 82,252 | 76,675 | 73,472 |
| 30 . . . . . . . . . . . . . . . | 97,030 | 96,166 | 95,430 | 94,072 | 93,826 | 92,861 | 89,009 | 84,346 | 79,890 | 74,378 | 70,747 |
| 35 . . . . . . . . . . . . . . . | 96,253 | 95,091 | 94,501 | 92,997 | 92,889 | 91,760 | 87,371 | 82,075 | 77,514 | 71,614 | 67,752 |
| 40 . . . . . . . . . . . . . . . | 95,244 | 93,761 | 93,345 | 91,541 | 91,572 | 90,207 | 85,246 | 79,357 | 74,432 | 68,297 | 64,447 |
| 45 . . . . . . . . . . . . . . . | 93,808 | 92,139 | 91,649 | 89,369 | 89,492 | 87,819 | 82,336 | 75,882 | 71,244 | 64,518 | 60,849 |
| 50 . . . . . . . . . . . . . . . | 91,683 | 89,865 | 89,007 | 86,070 | 86,199 | 84,158 | 78,254 | 71,518 | 67,553 | 60,118 | 56,736 |
| 55 . . . . . . . . . . . . . . . | 88,710 | 86,492 | 84,936 | 81,139 | 81,039 | 78,781 | 72,627 | 65,981 | 62,965 | 54,970 | 51,939 |
| 60 . . . . . . . . . . . . . . . | 84,232 | 81,378 | 79,012 | 73,958 | 73,887 | 71,246 | 65,142 | 58,909 | 56,917 | 48,343 | 45,895 |
| 65 . . . . . . . . . . . . . . . | 77,730 | 73,971 | 70,646 | 64,318 | 64,177 | 61,566 | 55,776 | 50,154 | 49,218 | 40,264 | 38,736 |
| 70 . . . . . . . . . . . . . . . | 68,632 | 64,107 | 59,681 | 52,296 | 52,244 | 49,950 | 44,588 | 39,516 | 39,668 | 31,023 | 30,217 |
| 75 . . . . . . . . . . . . . . . | 56,651 | 51,385 | 46,272 | 38,797 | 38,950 | 36,756 | 31,864 | 27,718 | 28,316 | 21,213 | 21,076 |
| 80 . . . . . . . . . . . . . . . | 42,406 | 36,749 | 31,810 | 24,921 | 25,300 | 25,237 | 18,995 | 16,172 | 17,128 | 11,942 | 12,084 |
| 85 . . . . . . . . . . . . . . . | 26,487 | 21,815 | 18,020 | 13,168 | 12,845 | 11,750 | 8,693 | 7,107 | 7,920 | 5,059 | 5,179 |
| 90 . . . . . . . . . . . . . . . | 12,453 | 9,878 | 7,732 | 5,107 | 4,609 | 4,197 | 2,787 | 2,283 | 2,527 | 1,502 | 1,508 |
| 95 . . . . . . . . . . . . . . . | 3,963 | 2,927 | 2,279 | 1,326 | 970 | 955 | 586 | 451 | 556 | 289 | 262 |
| 100 . . . . . . . . . . . . . . | 770 | 529 | 423 | 222 | 117 | 121 | 78 | 40 | 62 | 33 | 22 |
| **Female** | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . . | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 1 . . . . . . . . . . . . . . . | 99,364 | 99,172 | 98,880 | 98,254 | 97,744 | 97,406 | 95,848 | 94,728 | 93,383 | 89,623 | 88,733 |
| 5 . . . . . . . . . . . . . . . | 99,242 | 99,006 | 98,666 | 97,955 | 97,371 | 96,908 | 94,848 | 92,789 | 90,380 | 85,117 | 83,119 |
| 10 . . . . . . . . . . . . . . . | 99,165 | 98,911 | 98,544 | 97,784 | 97,173 | 96,652 | 94,402 | 92,008 | 89,186 | 83,728 | 81,390 |
| 15 . . . . . . . . . . . . . . . | 99,082 | 98,814 | 98,432 | 97,636 | 97,016 | 96,431 | 94,000 | 91,364 | 88,247 | 82,813 | 80,307 |
| 20 . . . . . . . . . . . . . . . | 98,876 | 98,597 | 98,184 | 97,331 | 96,756 | 96,066 | 93,293 | 90,116 | 86,556 | 81,418 | 78,555 |
| 25 . . . . . . . . . . . . . . . | 98,639 | 98,325 | 97,883 | 96,966 | 96,418 | 95,583 | 92,322 | 88,328 | 84,135 | 79,481 | 76,119 |
| 30 . . . . . . . . . . . . . . . | 98,361 | 98,013 | 97,551 | 96,544 | 95,996 | 94,933 | 91,182 | 86,398 | 81,463 | 77,247 | 73,394 |
| 35 . . . . . . . . . . . . . . . | 97,987 | 97,596 | 97,140 | 95,966 | 95,409 | 94,206 | 89,810 | 84,304 | 78,713 | 74,719 | 70,463 |
| 40 . . . . . . . . . . . . . . . | 97,422 | 97,033 | 96,531 | 95,097 | 94,560 | 93,101 | 88,092 | 81,927 | 75,907 | 71,894 | 67,407 |
| 45 . . . . . . . . . . . . . . . | 96,599 | 96,222 | 95,570 | 93,793 | 93,265 | 91,469 | 85,856 | 79,041 | 72,954 | 68,755 | 64,121 |
| 50 . . . . . . . . . . . . . . . | 95,384 | 94,932 | 94,060 | 91,852 | 91,327 | 89,075 | 82,828 | 75,456 | 69,452 | 65,001 | 60,415 |
| 55 . . . . . . . . . . . . . . . | 93,554 | 92,881 | 91,760 | 89,066 | 88,451 | 85,694 | 78,708 | 70,832 | 65,099 | 60,392 | 55,908 |

See footnote at end of table.

## Table 10. Survivorship by age, race, and sex: Death-registration States, 1900–1902 to 1919–21, and United States, 1929–31 to 1999—Con.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–31, data are for groups of registration States as follows: 1900–1902 and 1909–11, 10 States and the District of Columbia; 1919–21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

| Age, race, and sex | Number of survivors out of 100,000 born alive ($l_x$) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 1989–91 | 1979–81 | 1969–71 | 1959–61 | 1949–51 | 1939–41 | 1929–31 | 1919–21 | 1909–11 | 1900–1902 |
| **Female—Con.** | | | | | | | | | | | |
| 60 | 90,677 | 89,742 | 88,414 | 85,139 | 84,430 | 80,890 | 73,093 | 64,795 | 59,438 | 54,226 | 50,155 |
| 65 | 86,283 | 85,075 | 83,520 | 79,698 | 78,462 | 74,119 | 65,523 | 56,924 | 52,126 | 46,438 | 43,246 |
| 70 | 79,843 | 78,522 | 76,720 | 71,955 | 70,100 | 64,873 | 55,449 | 46,774 | 42,741 | 36,916 | 34,721 |
| 75 | 70,741 | 69,287 | 67,186 | 61,107 | 58,394 | 52,111 | 42,425 | 34,600 | 31,344 | 26,155 | 24,994 |
| 80 | 58,317 | 56,986 | 54,372 | 46,445 | 43,063 | 36,486 | 27,524 | 21,578 | 19,613 | 15,682 | 15,129 |
| 85 | 41,923 | 41,115 | 37,772 | 29,538 | 25,269 | 20,668 | 13,972 | 10,322 | 9,515 | 7,051 | 7,063 |
| 90 | 23,749 | 23,666 | 20,578 | 14,160 | 10,056 | 8,548 | 5,044 | 3,656 | 3,314 | 2,269 | 2,306 |
| 95 | 9,553 | 9,346 | 7,862 | 4,565 | 2,193 | 2,207 | 1,195 | 807 | 728 | 441 | 452 |
| 100 | 2,433 | 2,251 | 1,927 | 954 | 264 | 298 | 179 | 82 | 72 | 49 | 43 |
| **White** | | | | | | | | | | | |
| 0 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 1 | 99,423 | 99,233 | 98,898 | 98,224 | 97,714 | 97,278 | 95,685 | 94,392 | 92,780 | 88,709 | 87,762 |
| 5 | 99,301 | 99,068 | 98,675 | 97,930 | 97,353 | 96,790 | 94,713 | 92,466 | 89,771 | 84,147 | 82,071 |
| 10 | 99,224 | 98,966 | 98,536 | 97,733 | 97,131 | 96,502 | 94,228 | 91,627 | 88,536 | 82,734 | 80,371 |
| 15 | 99,126 | 98,843 | 98,391 | 97,546 | 96,928 | 96,228 | 93,792 | 90,982 | 87,633 | 81,816 | 79,344 |
| 20 | 98,798 | 98,455 | 97,939 | 97,036 | 96,508 | 95,763 | 93,117 | 89,933 | 86,159 | 80,407 | 77,998 |
| 25 | 98,386 | 97,972 | 97,340 | 96,406 | 95,965 | 95,169 | 92,213 | 88,454 | 84,106 | 78,392 | 75,202 |
| 30 | 97,961 | 97,451 | 96,774 | 95,824 | 95,440 | 94,536 | 91,185 | 86,836 | 81,787 | 76,167 | 72,317 |
| 35 | 97,446 | 96,810 | 96,192 | 95,152 | 94,798 | 93,750 | 89,941 | 85,004 | 79,277 | 73,568 | 69,522 |
| 40 | 96,739 | 96,000 | 95,427 | 94,190 | 93,870 | 92,616 | 88,318 | 82,803 | 76,642 | 70,525 | 66,082 |
| 45 | 95,730 | 94,932 | 94,257 | 92,681 | 92,374 | 90,847 | 86,069 | 79,989 | 73,705 | 67,090 | 62,920 |
| 50 | 94,231 | 93,326 | 92,384 | 90,306 | 89,958 | 88,110 | 82,833 | 76,340 | 70,250 | 62,994 | 58,647 |
| 55 | 92,024 | 90,833 | 89,427 | 86,688 | 86,173 | 84,027 | 78,218 | 71,551 | 65,875 | 58,163 | 54,450 |
| 60 | 88,574 | 86,943 | 85,031 | 81,323 | 80,811 | 78,066 | 71,785 | 65,100 | 60,013 | 51,822 | 48,288 |
| 65 | 83,338 | 81,123 | 78,585 | 73,889 | 73,102 | 69,850 | 63,201 | 56,655 | 52,411 | 43,904 | 41,505 |
| 70 | 75,692 | 73,106 | 69,801 | 63,991 | 62,834 | 59,189 | 52,165 | 45,841 | 42,736 | 34,484 | 32,902 |
| 75 | 65,240 | 62,175 | 58,299 | 51,586 | 49,895 | 45,688 | 38,610 | 33,406 | 31,086 | 24,151 | 23,356 |
| 80 | 51,840 | 48,583 | 44,409 | 36,659 | 34,697 | 30,438 | 23,976 | 20,260 | 19,149 | 14,100 | 13,794 |
| 85 | 35,398 | 32,850 | 28,768 | 21,578 | 19,017 | 16,239 | 11,483 | 9,325 | 9,078 | 6,178 | 6,192 |
| 90 | 18,875 | 17,571 | 14,471 | 9,433 | 7,149 | 6,201 | 3,819 | 3,066 | 2,991 | 1,918 | 1,919 |
| 95 | 7,004 | 6,416 | 5,067 | 2,743 | 1,521 | 1,500 | 801 | 636 | 643 | 364 | 355 |
| 100 | 1,543 | 1,423 | 1,105 | 487 | 183 | 196 | 98 | 58 | 62 | 38 | 31 |
| **White male** | | | | | | | | | | | |
| 0 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 1 | 99,365 | 99,138 | 98,769 | 97,994 | 97,408 | 96,931 | 95,188 | 93,768 | 91,975 | 87,674 | 86,655 |
| 5 | 99,230 | 98,956 | 98,519 | 97,671 | 97,015 | 96,403 | 94,150 | 91,738 | 88,842 | 82,972 | 80,864 |
| 10 | 99,146 | 98,839 | 98,357 | 97,441 | 96,758 | 96,069 | 93,601 | 90,810 | 87,530 | 81,519 | 79,109 |
| 15 | 99,029 | 98,686 | 98,176 | 97,208 | 96,503 | 95,728 | 93,089 | 90,074 | 86,546 | 80,549 | 78,037 |
| 20 | 98,587 | 98,134 | 97,525 | 96,480 | 95,908 | 95,104 | 92,293 | 88,904 | 84,997 | 79,116 | 76,376 |
| 25 | 97,987 | 97,430 | 96,616 | 95,524 | 95,106 | 94,294 | 91,241 | 87,371 | 83,061 | 77,047 | 73,907 |
| 30 | 97,383 | 96,662 | 95,783 | 94,716 | 94,401 | 93,489 | 90,092 | 85,707 | 80,888 | 74,810 | 71,219 |
| 35 | 96,684 | 95,731 | 94,980 | 93,843 | 93,589 | 92,543 | 88,713 | 83,812 | 78,441 | 72,108 | 68,245 |
| 40 | 95,766 | 94,588 | 93,984 | 92,631 | 92,427 | 91,173 | 86,880 | 81,457 | 75,733 | 68,848 | 64,954 |
| 45 | 94,469 | 93,167 | 92,494 | 90,725 | 90,533 | 89,002 | 84,285 | 78,345 | 72,696 | 65,115 | 61,369 |
| 50 | 92,555 | 91,124 | 90,105 | 87,690 | 87,424 | 85,601 | 80,521 | 74,288 | 69,107 | 60,741 | 57,274 |
| 55 | 89,821 | 88,022 | 86,303 | 83,001 | 82,463 | 80,496 | 75,156 | 68,981 | 64,574 | 55,622 | 52,491 |
| 60 | 85,612 | 83,182 | 80,625 | 75,969 | 75,485 | 73,172 | 67,787 | 61,933 | 58,498 | 48,987 | 46,452 |
| 65 | 79,344 | 75,962 | 72,393 | 66,343 | 65,834 | 63,541 | 58,305 | 52,964 | 50,663 | 40,862 | 39,245 |
| 70 | 70,303 | 66,181 | 61,384 | 54,138 | 53,825 | 51,735 | 46,739 | 41,880 | 40,873 | 31,527 | 30,640 |
| 75 | 58,258 | 53,308 | 47,712 | 40,324 | 40,207 | 38,104 | 33,404 | 29,471 | 29,205 | 21,585 | 21,387 |
| 80 | 43,769 | 38,245 | 32,788 | 25,885 | 25,993 | 24,005 | 19,860 | 17,221 | 17,655 | 12,160 | 12,266 |
| 85 | 27,328 | 22,720 | 18,538 | 13,527 | 13,065 | 12,015 | 9,013 | 7,572 | 8,154 | 5,145 | 5,252 |
| 90 | 12,751 | 10,214 | 7,891 | 5,125 | 4,600 | 4,209 | 2,812 | 2,356 | 2,568 | 1,523 | 1,523 |
| 95 | 3,924 | 2,988 | 2,279 | 1,274 | 956 | 942 | 552 | 461 | 556 | 289 | 263 |
| 100 | 689 | 523 | 404 | 189 | 115 | 118 | 65 | 40 | 61 | 31 | 22 |

See footnote at end of table.

## Table 10. Survivorship by age, race, and sex: Death-registration States, 1900–1902 to 1919–21, and United States, 1929–31 to 1999—Con.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–31, data are for groups of registration States as follows: 1900–1902 and 1909–11, 10 States and the District of Columbia; 1919–21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

| Age, race, and sex | Number of survivors out of 100,000 born alive ($l_x$) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 1989–91 | 1979–81 | 1969–71 | 1959–61 | 1949–51 | 1939–41 | 1929–31 | 1919–21 | 1909–11 | 1900–1902 |
| **White female** | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . . | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 1 . . . . . . . . . . . . . . . | 99,485 | 99,333 | 99,035 | 98,468 | 98,036 | 97,645 | 96,211 | 95,037 | 93,608 | 89,774 | 88,939 |
| 5 . . . . . . . . . . . . . . . | 99,376 | 99,187 | 98,841 | 98,203 | 97,709 | 97,199 | 95,309 | 93,216 | 90,721 | 85,349 | 83,426 |
| 10 . . . . . . . . . . . . . . . | 99,306 | 99,099 | 98,725 | 98,042 | 97,525 | 96,960 | 94,890 | 92,466 | 89,564 | 83,979 | 81,723 |
| 15 . . . . . . . . . . . . . . . | 99,227 | 99,007 | 98,618 | 97,902 | 97,375 | 96,756 | 94,534 | 91,894 | 88,712 | 83,093 | 80,680 |
| 20 . . . . . . . . . . . . . . . | 99,022 | 98,795 | 98,374 | 97,618 | 97,135 | 96,454 | 93,984 | 90,939 | 87,281 | 81,750 | 78,978 |
| 25 . . . . . . . . . . . . . . . | 98,809 | 98,547 | 98,093 | 97,299 | 96,844 | 96,072 | 93,228 | 89,524 | 85,163 | 79,865 | 76,588 |
| 30 . . . . . . . . . . . . . . . | 98,566 | 98,283 | 97,802 | 96,945 | 96,499 | 95,605 | 92,320 | 87,972 | 82,740 | 77,676 | 73,887 |
| 35 . . . . . . . . . . . . . . . | 98,240 | 97,939 | 97,445 | 96,474 | 96,026 | 94,977 | 91,211 | 86,248 | 80,206 | 75,200 | 70,971 |
| 40 . . . . . . . . . . . . . . . | 97,749 | 97,472 | 96,913 | 95,762 | 95,326 | 94,080 | 89,805 | 84,256 | 77,624 | 72,425 | 67,935 |
| 45 . . . . . . . . . . . . . . . | 97,035 | 96,768 | 96,065 | 94,649 | 94,228 | 92,725 | 87,920 | 81,780 | 74,871 | 69,341 | 64,677 |
| 50 . . . . . . . . . . . . . . . | 95,959 | 95,608 | 94,710 | 92,924 | 92,522 | 90,685 | 85,267 | 78,572 | 71,547 | 65,629 | 61,005 |
| 55 . . . . . . . . . . . . . . . | 94,282 | 93,730 | 92,594 | 90,383 | 89,967 | 87,699 | 81,520 | 74,321 | 67,323 | 61,053 | 56,509 |
| 60 . . . . . . . . . . . . . . . | 91,588 | 90,789 | 89,451 | 86,726 | 86,339 | 83,279 | 76,200 | 68,462 | 61,704 | 54,900 | 50,752 |
| 65 . . . . . . . . . . . . . . . | 87,372 | 86,339 | 84,764 | 81,579 | 80,739 | 76,773 | 68,701 | 60,499 | 54,299 | 47,086 | 43,806 |
| 70 . . . . . . . . . . . . . . . | 81,066 | 79,984 | 78,139 | 74,101 | 72,507 | 67,545 | 58,363 | 49,932 | 44,638 | 37,482 | 35,206 |
| 75 . . . . . . . . . . . . . . . | 72,091 | 70,834 | 68,712 | 63,290 | 60,461 | 54,397 | 44,685 | 37,024 | 32,777 | 26,569 | 25,362 |
| 80 . . . . . . . . . . . . . . . | 59,632 | 58,454 | 55,770 | 48,182 | 44,676 | 38,026 | 28,882 | 23,053 | 20,492 | 15,929 | 15,349 |
| 85 . . . . . . . . . . . . . . . | 42,957 | 42,274 | 38,774 | 30,490 | 26,046 | 21,348 | 14,487 | 10,937 | 9,909 | 7,152 | 7,149 |
| 90 . . . . . . . . . . . . . . . | 24,292 | 24,270 | 20,996 | 14,406 | 10,219 | 8,662 | 5,061 | 3,719 | 3,372 | 2,291 | 2,322 |
| 95 . . . . . . . . . . . . . . . | 9,541 | 9,495 | 7,900 | 4,526 | 2,203 | 2,200 | 1,109 | 797 | 721 | 434 | 448 |
| 100 . . . . . . . . . . . . . . . | 2,206 | 2,239 | 1,858 | 872 | 265 | 294 | 139 | 74 | 63 | 44 | 41 |
| **Black[1]** | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . . | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 1 . . . . . . . . . . . . . . . | 98,544 | 98,187 | 97,885 | 96,731 | 95,732 | 95,407 | 92,584 | 92,035 | 90,379 | 79,784 | 76,609 |
| 5 . . . . . . . . . . . . . . . | 98,314 | 97,884 | 97,522 | 96,207 | 95,051 | 94,482 | 90,983 | 89,303 | 86,174 | 70,691 | 66,222 |
| 10 . . . . . . . . . . . . . . . | 98,176 | 97,720 | 97,322 | 95,928 | 94,745 | 94,060 | 90,339 | 88,258 | 84,690 | 68,437 | 63,410 |
| 15 . . . . . . . . . . . . . . . | 98,031 | 97,539 | 97,134 | 95,661 | 94,460 | 93,646 | 89,591 | 87,156 | 83,180 | 66,410 | 61,060 |
| 20 . . . . . . . . . . . . . . . | 97,572 | 96,925 | 96,652 | 94,887 | 93,880 | 92,738 | 87,839 | 84,386 | 79,641 | 63,165 | 57,931 |
| 25 . . . . . . . . . . . . . . . | 96,810 | 95,972 | 95,804 | 93,513 | 92,925 | 91,321 | 85,210 | 80,320 | 74,973 | 59,608 | 54,512 |
| 30 . . . . . . . . . . . . . . . | 95,989 | 94,809 | 94,680 | 91,934 | 91,699 | 89,584 | 82,194 | 75,962 | 70,492 | 56,112 | 51,287 |
| 35 . . . . . . . . . . . . . . . | 94,979 | 93,260 | 93,288 | 89,977 | 90,046 | 87,402 | 78,683 | 71,141 | 65,865 | 52,125 | 48,007 |
| 40 . . . . . . . . . . . . . . . | 93,573 | 91,239 | 91,439 | 87,304 | 87,766 | 84,478 | 74,466 | 65,974 | 61,244 | 47,866 | 44,518 |
| 45 . . . . . . . . . . . . . . . | 91,481 | 88,689 | 88,834 | 83,700 | 84,501 | 80,507 | 69,284 | 59,827 | 56,442 | 43,054 | 40,628 |
| 50 . . . . . . . . . . . . . . . | 88,383 | 85,285 | 85,044 | 78,938 | 80,172 | 74,976 | 62,702 | 53,141 | 51,422 | 37,800 | 36,103 |
| 55 . . . . . . . . . . . . . . . | 84,144 | 80,635 | 79,816 | 72,826 | 73,893 | 67,660 | 54,846 | 45,558 | 45,803 | 32,233 | 31,404 |
| 60 . . . . . . . . . . . . . . . | 78,320 | 74,335 | 72,913 | 65,250 | 65,795 | 58,593 | 46,318 | 37,654 | 39,418 | 26,046 | 25,698 |
| 65 . . . . . . . . . . . . . . . | 70,839 | 66,154 | 64,391 | 56,102 | 56,038 | 48,649 | 37,838 | 30,015 | 32,738 | 19,806 | 20,474 |
| 70 . . . . . . . . . . . . . . . | 61,781 | 56,192 | 54,617 | 45,785 | 45,434 | 38,616 | 29,654 | 22,505 | 25,585 | 14,021 | 14,960 |
| 75 . . . . . . . . . . . . . . . | 50,176 | 44,872 | 43,274 | 34,262 | 34,531 | 28,968 | 21,798 | 15,546 | 18,011 | 9,139 | 9,956 |
| 80 . . . . . . . . . . . . . . . | 37,229 | 33,149 | 31,711 | 23,710 | 24,815 | 20,003 | 14,408 | 9,589 | 11,376 | 5,158 | 5,750 |
| 85 . . . . . . . . . . . . . . . | 24,071 | 21,352 | 19,939 | 15,044 | 15,337 | 12,433 | 8,326 | 4,900 | 5,794 | 2,414 | 2,782 |
| 90 . . . . . . . . . . . . . . . | 12,539 | 11,646 | 10,713 | 8,087 | 7,195 | 6,394 | 4,077 | 2,044 | 2,317 | 913 | 1,054 |
| 95 . . . . . . . . . . . . . . . | 4,926 | 4,729 | 4,463 | 3,252 | 1,777 | 2,010 | 1,557 | 638 | 689 | 324 | 296 |
| 100 . . . . . . . . . . . . . . . | 1,322 | 1,376 | 1,360 | 1,036 | 214 | 301 | 399 | 120 | 129 | 77 | 57 |
| **Black male[1]** | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . . | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 1 . . . . . . . . . . . . . . . | 98,408 | 98,023 | 97,703 | 96,394 | 95,301 | 94,911 | 91,772 | 91,268 | 89,499 | 78,065 | 74,674 |
| 5 . . . . . . . . . . . . . . . | 98,150 | 97,688 | 97,300 | 95,826 | 94,570 | 93,921 | 90,082 | 88,412 | 85,195 | 68,589 | 64,385 |
| 10 . . . . . . . . . . . . . . . | 97,991 | 97,501 | 97,061 | 95,497 | 94,234 | 93,453 | 89,393 | 87,311 | 83,768 | 66,377 | 61,730 |
| 15 . . . . . . . . . . . . . . . | 97,810 | 97,268 | 96,826 | 95,161 | 93,874 | 92,965 | 88,610 | 86,152 | 82,332 | 64,478 | 59,667 |
| 20 . . . . . . . . . . . . . . . | 97,127 | 96,301 | 96,132 | 94,053 | 93,108 | 91,941 | 86,968 | 83,621 | 79,057 | 61,426 | 56,733 |
| 25 . . . . . . . . . . . . . . . | 95,968 | 94,809 | 94,827 | 91,904 | 91,825 | 90,285 | 84,227 | 79,516 | 74,540 | 57,736 | 53,285 |
| 30 . . . . . . . . . . . . . . . | 94,794 | 93,070 | 93,125 | 89,584 | 90,270 | 88,327 | 80,979 | 75,083 | 70,344 | 54,073 | 49,867 |
| 35 . . . . . . . . . . . . . . . | 93,429 | 90,827 | 91,080 | 86,885 | 88,331 | 85,940 | 77,221 | 70,049 | 65,873 | 49,865 | 46,541 |
| 40 . . . . . . . . . . . . . . . | 91,676 | 87,948 | 88,490 | 83,441 | 85,744 | 82,832 | 72,780 | 64,710 | 61,353 | 45,414 | 42,989 |
| 45 . . . . . . . . . . . . . . . | 89,068 | 84,467 | 84,997 | 78,976 | 82,075 | 78,686 | 67,346 | 58,432 | 56,589 | 40,563 | 39,230 |
| 50 . . . . . . . . . . . . . . . | 85,045 | 79,984 | 80,065 | 73,282 | 77,239 | 72,891 | 60,495 | 51,748 | 51,880 | 35,427 | 34,766 |
| 55 . . . . . . . . . . . . . . . | 79,614 | 74,095 | 73,413 | 66,101 | 70,351 | 65,122 | 52,426 | 44,436 | 46,581 | 29,754 | 29,987 |

See footnote at end of table.

## Table 10. Survivorship by age, race, and sex: Death-registration States, 1900–1902 to 1919–21, and United States, 1929–31 to 1999—Con.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–31, data are for groups of registration States as follows: 1900–1902 and 1909–11, 10 States and the District of Columbia; 1919–21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

| Age, race, and sex | Number of survivors out of 100,000 born alive ($l_x$) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 1989–91 | 1979–81 | 1969–71 | 1959–61 | 1949–51 | 1939–41 | 1929–31 | 1919–21 | 1909–11 | 1900–1902 |
| Black male[1]—Con. | | | | | | | | | | | |
| 60 . . . . . . . . . . . . . . . | 72,321 | 66,334 | 64,980 | 57,457 | 61,669 | 55,535 | 43,833 | 36,790 | 40,506 | 23,750 | 24,194 |
| 65 . . . . . . . . . . . . . . . | 63,255 | 56,795 | 55,061 | 47,485 | 51,392 | 45,198 | 35,371 | 29,314 | 34,042 | 17,806 | 19,015 |
| 70 . . . . . . . . . . . . . . . | 53,148 | 45,690 | 44,213 | 36,925 | 39,914 | 35,018 | 27,236 | 21,741 | 26,923 | 12,295 | 13,829 |
| 75 . . . . . . . . . . . . . . . | 41,042 | 33,755 | 32,717 | 25,921 | 29,064 | 25,472 | 19,456 | 14,419 | 18,854 | 7,494 | 8,892 |
| 80 . . . . . . . . . . . . . . . | 28,360 | 22,549 | 22,017 | 16,560 | 19,994 | 16,904 | 12,186 | 8,239 | 11,615 | 3,894 | 4,831 |
| 85 . . . . . . . . . . . . . . . | 16,692 | 12,709 | 12,383 | 9,648 | 11,620 | 9,898 | 6,444 | 3,660 | 5,605 | 1,747 | 2,030 |
| 90 . . . . . . . . . . . . . . . | 7,737 | 5,972 | 5,708 | 4,696 | 5,174 | 4,642 | 2,836 | 1,246 | 2,040 | 595 | 634 |
| 95 . . . . . . . . . . . . . . . | 2,691 | 1,971 | 2,009 | 1,721 | 1,240 | 1,342 | 961 | 307 | 552 | 189 | 137 |
| 100 . . . . . . . . . . . . . . | 662 | 466 | 513 | 489 | 149 | 192 | 209 | 41 | 77 | 40 | 18 |
| Black female[1] | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . . | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| 1 . . . . . . . . . . . . . . . | 98,684 | 98,356 | 98,073 | 97,076 | 96,172 | 95,913 | 93,416 | 92,796 | 91,251 | 81,493 | 78,525 |
| 5 . . . . . . . . . . . . . . . | 98,483 | 98,087 | 97,751 | 96,598 | 95,543 | 95,055 | 91,906 | 90,185 | 87,149 | 72,768 | 68,056 |
| 10 . . . . . . . . . . . . . . . | 98,368 | 97,946 | 97,590 | 96,369 | 95,265 | 94,679 | 91,308 | 89,201 | 85,607 | 70,508 | 65,111 |
| 15 . . . . . . . . . . . . . . . | 98,260 | 97,818 | 97,450 | 96,172 | 95,057 | 94,343 | 90,594 | 88,088 | 83,954 | 68,218 | 62,384 |
| 20 . . . . . . . . . . . . . . . | 98,032 | 97,566 | 97,180 | 95,729 | 94,660 | 93,544 | 88,736 | 85,078 | 80,154 | 64,764 | 59,053 |
| 25 . . . . . . . . . . . . . . . | 97,663 | 97,140 | 96,754 | 95,035 | 94,005 | 92,336 | 86,198 | 81,067 | 75,359 | 61,430 | 55,795 |
| 30 . . . . . . . . . . . . . . . | 97,173 | 96,514 | 96,150 | 94,114 | 93,070 | 90,799 | 83,384 | 76,816 | 70,633 | 58,281 | 52,773 |
| 35 . . . . . . . . . . . . . . . | 96,486 | 95,599 | 95,338 | 92,807 | 91,670 | 88,805 | 80,092 | 72,192 | 65,857 | 54,595 | 49,567 |
| 40 . . . . . . . . . . . . . . . | 95,397 | 94,364 | 94,137 | 90,817 | 89,676 | 86,052 | 76,084 | 67,271 | 61,130 | 50,568 | 46,146 |
| 45 . . . . . . . . . . . . . . . | 93,779 | 92,676 | 92,322 | 88,001 | 86,793 | 82,257 | 71,157 | 61,365 | 56,230 | 45,947 | 42,279 |
| 50 . . . . . . . . . . . . . . . | 91,507 | 90,277 | 89,563 | 84,168 | 82,979 | 77,007 | 64,885 | 54,920 | 50,780 | 40,886 | 37,681 |
| 55 . . . . . . . . . . . . . . . | 88,317 | 86,793 | 85,653 | 79,177 | 77,362 | 70,196 | 57,314 | 47,074 | 44,742 | 35,415 | 33,124 |
| 60 . . . . . . . . . . . . . . . | 83,773 | 81,886 | 80,293 | 72,820 | 69,941 | 61,758 | 48,928 | 38,761 | 37,954 | 28,908 | 27,524 |
| 65 . . . . . . . . . . . . . . . | 77,684 | 75,031 | 73,266 | 64,716 | 60,825 | 52,358 | 40,504 | 30,852 | 31,044 | 22,302 | 21,995 |
| 70 . . . . . . . . . . . . . . . | 69,664 | 66,278 | 64,729 | 54,873 | 51,274 | 42,612 | 32,354 | 23,341 | 24,107 | 15,871 | 16,140 |
| 75 . . . . . . . . . . . . . . . | 58,620 | 55,684 | 53,831 | 43,193 | 40,540 | 32,981 | 24,502 | 16,576 | 17,216 | 10,657 | 11,066 |
| 80 . . . . . . . . . . . . . . . | 45,506 | 43,622 | 41,686 | 31,756 | 30,315 | 23,712 | 17,039 | 10,822 | 11,151 | 6,324 | 6,708 |
| 85 . . . . . . . . . . . . . . . | 30,925 | 30,089 | 28,004 | 21,358 | 19,744 | 15,550 | 10,622 | 6,033 | 5,972 | 3,029 | 3,567 |
| 90 . . . . . . . . . . . . . . . | 16,864 | 17,536 | 16,260 | 12,210 | 9,675 | 8,590 | 5,652 | 2,774 | 2,579 | 1,206 | 1,492 |
| 95 . . . . . . . . . . . . . . . | 6,802 | 7,687 | 7,312 | 5,217 | 2,438 | 2,875 | 2,345 | 941 | 818 | 448 | 462 |
| 100 . . . . . . . . . . . . . . | 1,811 | 2,364 | 2,398 | 1,803 | 293 | 445 | 659 | 193 | 179 | 112 | 97 |

[1]For 1939–41 and 1949–51, data shown are for the entire nonwhite population. During these periods, life tables were not constructed for the black population.

## Table 11. Life expectancy by age, race, and sex: Death-registration States, 1900–1902 to 1919–21, and United States, 1929–31 to 1999

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–31, data are for groups of registration States as follows: 1900–1902 and 1909–11, 10 States and the District of Columbia; 1919–21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

| Age, race, and sex | Average number of years of life remaining ($e_x$) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 1989–91 | 1979–81 | 1969–71 | 1959–61 | 1949–51 | 1939–41 | 1929–31 | 1919–21 | 1909–11 | 1900–1902 |
| **All races** | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . . | 76.7 | 75.37 | 73.88 | 70.75 | 69.89 | 68.07 | 63.62 | 59.20 | 56.40 | 51.49 | 49.24 |
| 1 . . . . . . . . . . . . . . . | 76.3 | 75.08 | 73.82 | 71.19 | 70.75 | 69.16 | 65.76 | 61.94 | 59.94 | 57.11 | 55.20 |
| 5 . . . . . . . . . . . . . . . | 72.4 | 71.22 | 70.00 | 67.43 | 67.04 | 65.54 | 62.49 | 59.29 | 57.99 | 56.21 | 54.98 |
| 10 . . . . . . . . . . . . . . | 67.4 | 66.29 | 65.10 | 62.57 | 62.19 | 60.74 | 57.82 | 54.84 | 53.79 | 52.15 | 51.14 |
| 15 . . . . . . . . . . . . . . | 62.5 | 61.38 | 60.19 | 57.69 | 57.33 | 55.91 | 53.10 | 50.25 | 49.37 | 47.73 | 46.81 |
| 20 . . . . . . . . . . . . . . | 57.7 | 56.63 | 55.46 | 53.00 | 52.58 | 51.20 | 48.54 | 45.94 | 45.30 | 43.53 | 42.79 |
| 25 . . . . . . . . . . . . . . | 53.0 | 51.93 | 50.81 | 48.37 | 47.89 | 46.56 | 44.09 | 41.85 | 41.47 | 39.60 | 39.12 |
| 30 . . . . . . . . . . . . . . | 48.2 | 47.23 | 46.12 | 43.71 | 43.18 | 41.91 | 39.67 | 37.75 | 37.68 | 35.70 | 35.51 |
| 35 . . . . . . . . . . . . . . | 43.5 | 42.58 | 41.43 | 39.07 | 38.51 | 37.31 | 35.30 | 33.68 | 33.89 | 31.90 | 31.92 |
| 40 . . . . . . . . . . . . . . | 38.8 | 37.98 | 36.79 | 34.52 | 33.92 | 32.81 | 31.03 | 29.67 | 30.08 | 28.20 | 28.34 |
| 45 . . . . . . . . . . . . . . | 34.3 | 33.44 | 32.27 | 30.12 | 29.50 | 28.49 | 26.90 | 25.79 | 26.25 | 24.54 | 24.77 |
| 50 . . . . . . . . . . . . . . | 29.8 | 29.03 | 27.94 | 25.93 | 25.29 | 24.40 | 22.98 | 22.06 | 22.50 | 20.98 | 21.26 |
| 55 . . . . . . . . . . . . . . | 25.5 | 24.83 | 23.85 | 21.99 | 21.37 | 20.57 | 19.31 | 18.53 | 18.90 | 17.55 | 17.88 |
| 60 . . . . . . . . . . . . . . | 21.5 | 20.90 | 20.02 | 18.34 | 17.71 | 17.04 | 15.91 | 15.24 | 15.54 | 14.42 | 14.76 |
| 65 . . . . . . . . . . . . . . | 17.7 | 17.28 | 16.51 | 15.00 | 14.39 | 13.83 | 12.80 | 12.23 | 12.47 | 11.60 | 11.86 |
| 70 . . . . . . . . . . . . . . | 14.3 | 13.96 | 13.32 | 12.00 | 11.38 | 10.92 | 10.00 | 9.58 | 9.74 | 9.11 | 9.30 |
| 75 . . . . . . . . . . . . . . | 11.2 | 11.00 | 10.48 | 9.32 | 8.71 | 8.40 | 7.62 | 7.32 | 7.49 | 6.99 | 7.08 |
| 80 . . . . . . . . . . . . . . | 8.5 | 8.40 | 7.98 | 7.10 | 6.39 | 6.34 | 5.73 | 5.50 | 5.63 | 5.25 | 5.30 |
| 85 . . . . . . . . . . . . . . | 6.3 | 6.23 | 5.96 | 5.28 | 4.58 | 4.69 | 4.31 | 4.19 | 4.21 | 4.00 | 3.96 |
| 90 . . . . . . . . . . . . . . | 4.6 | 4.50 | 4.43 | 3.94 | 3.22 | 3.44 | 3.30 | 3.15 | 3.22 | 3.03 | 2.95 |
| 95 . . . . . . . . . . . . . . | 3.4 | 3.29 | 3.34 | 3.06 | 2.43 | 2.54 | 2.61 | 2.26 | 2.32 | 2.35 | 2.18 |
| 100 . . . . . . . . . . . . . . | 2.6 | 2.46 | 2.73 | 2.62 | 1.91 | 1.92 | 2.13 | 1.51 | 1.53 | 1.85 | 1.58 |
| **Male** | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . . | 73.9 | 71.83 | 70.11 | 67.04 | 66.80 | 65.47 | 61.60 | 57.71 | 55.50 | 49.86 | 47.88 |
| 1 . . . . . . . . . . . . . . . | 73.5 | 71.58 | 70.10 | 67.58 | 67.80 | 66.73 | 64.00 | 60.75 | 59.47 | 55.95 | 54.35 |
| 5 . . . . . . . . . . . . . . . | 69.6 | 67.73 | 66.29 | 63.82 | 64.10 | 63.12 | 60.76 | 58.14 | 57.60 | 55.11 | 54.22 |
| 10 . . . . . . . . . . . . . . | 64.7 | 62.81 | 61.41 | 58.98 | 59.27 | 58.35 | 56.12 | 53.75 | 53.44 | 51.07 | 50.39 |
| 15 . . . . . . . . . . . . . . | 59.8 | 57.91 | 56.52 | 54.12 | 54.43 | 53.56 | 51.43 | 49.18 | 49.05 | 46.66 | 46.06 |
| 20 . . . . . . . . . . . . . . | 55.0 | 53.25 | 51.88 | 49.54 | 49.77 | 48.92 | 46.91 | 44.88 | 44.99 | 42.48 | 42.03 |
| 25 . . . . . . . . . . . . . . | 50.4 | 48.67 | 47.37 | 45.07 | 45.19 | 44.36 | 42.51 | 40.79 | 41.11 | 38.59 | 38.38 |
| 30 . . . . . . . . . . . . . . | 45.7 | 44.10 | 42.81 | 40.51 | 40.56 | 39.78 | 38.13 | 36.71 | 37.26 | 34.70 | 34.76 |
| 35 . . . . . . . . . . . . . . | 41.1 | 39.57 | 38.20 | 35.95 | 35.94 | 35.23 | 33.79 | 32.65 | 33.43 | 30.94 | 31.19 |
| 40 . . . . . . . . . . . . . . | 36.5 | 35.09 | 33.64 | 31.48 | 31.42 | 30.79 | 29.57 | 28.68 | 29.63 | 27.32 | 27.65 |
| 45 . . . . . . . . . . . . . . | 32.0 | 30.66 | 29.22 | 27.18 | 27.09 | 26.55 | 25.52 | 24.87 | 25.84 | 23.77 | 24.14 |
| 50 . . . . . . . . . . . . . . | 27.7 | 26.37 | 25.00 | 23.12 | 23.02 | 22.59 | 21.72 | 21.25 | 22.11 | 20.32 | 20.70 |
| 55 . . . . . . . . . . . . . . | 23.5 | 22.30 | 21.08 | 19.36 | 19.32 | 18.96 | 18.20 | 17.79 | 18.53 | 16.98 | 17.38 |
| 60 . . . . . . . . . . . . . . | 19.6 | 18.53 | 17.46 | 15.99 | 15.94 | 15.68 | 14.99 | 14.62 | 15.22 | 13.95 | 14.33 |
| 65 . . . . . . . . . . . . . . | 16.1 | 15.12 | 14.21 | 12.99 | 12.95 | 12.74 | 12.07 | 11.72 | 12.20 | 11.24 | 11.50 |
| 70 . . . . . . . . . . . . . . | 12.8 | 12.05 | 11.35 | 10.39 | 10.33 | 10.11 | 9.46 | 9.18 | 9.52 | 8.83 | 9.02 |
| 75 . . . . . . . . . . . . . . | 10.0 | 9.39 | 8.90 | 8.13 | 7.99 | 7.83 | 7.22 | 7.02 | 7.31 | 6.75 | 6.84 |
| 80 . . . . . . . . . . . . . . | 7.5 | 7.12 | 6.80 | 6.27 | 5.95 | 5.94 | 5.44 | 5.27 | 5.49 | 5.10 | 5.11 |
| 85 . . . . . . . . . . . . . . | 5.5 | 5.31 | 5.13 | 4.73 | 4.39 | 4.41 | 4.11 | 4.02 | 4.10 | 3.90 | 3.82 |
| 90 . . . . . . . . . . . . . . | 4.1 | 3.89 | 3.89 | 3.60 | 3.18 | 3.30 | 3.17 | 3.06 | 3.21 | 3.01 | 2.86 |
| 95 . . . . . . . . . . . . . . | 3.0 | 2.92 | 2.98 | 2.82 | 2.43 | 2.49 | 2.52 | 2.21 | 2.38 | 2.36 | 2.13 |
| 100 . . . . . . . . . . . . . . | 2.4 | 2.25 | 2.49 | 2.43 | 1.91 | 1.92 | 2.05 | 1.50 | 1.58 | 1.81 | 1.55 |
| **Female** | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . . | 79.4 | 78.81 | 77.62 | 74.64 | 73.24 | 70.96 | 65.89 | 60.90 | 57.40 | 53.24 | 50.70 |
| 1 . . . . . . . . . . . . . . . | 78.9 | 78.47 | 77.50 | 74.97 | 73.93 | 71.84 | 67.73 | 65.37 | 60.45 | 58.37 | 56.10 |
| 5 . . . . . . . . . . . . . . . | 75.0 | 74.60 | 73.67 | 71.19 | 70.21 | 68.21 | 64.43 | 60.66 | 58.41 | 57.39 | 55.80 |
| 10 . . . . . . . . . . . . . . | 70.1 | 69.67 | 68.75 | 66.31 | 65.35 | 63.38 | 59.73 | 56.16 | 54.16 | 53.31 | 51.94 |
| 15 . . . . . . . . . . . . . . | 65.1 | 64.73 | 63.83 | 61.41 | 60.45 | 58.52 | 54.97 | 51.54 | 49.71 | 48.87 | 47.60 |
| 20 . . . . . . . . . . . . . . | 60.2 | 59.87 | 58.98 | 56.59 | 55.60 | 53.73 | 50.37 | 47.21 | 45.63 | 44.66 | 43.60 |
| 25 . . . . . . . . . . . . . . | 55.4 | 55.03 | 54.16 | 51.80 | 50.79 | 48.99 | 45.87 | 43.11 | 41.86 | 40.69 | 39.92 |
| 30 . . . . . . . . . . . . . . | 50.5 | 50.19 | 49.33 | 47.01 | 46.00 | 44.28 | 41.41 | 39.02 | 38.15 | 36.79 | 36.30 |
| 35 . . . . . . . . . . . . . . | 45.7 | 45.40 | 44.53 | 42.28 | 41.27 | 39.63 | 37.01 | 34.92 | 34.40 | 32.95 | 32.71 |
| 40 . . . . . . . . . . . . . . | 41.0 | 40.65 | 39.80 | 37.64 | 36.61 | 35.06 | 32.68 | 30.86 | 30.58 | 29.15 | 29.08 |
| 45 . . . . . . . . . . . . . . | 36.3 | 35.97 | 35.17 | 33.13 | 32.09 | 30.64 | 28.46 | 26.89 | 26.71 | 25.36 | 25.44 |
| 50 . . . . . . . . . . . . . . | 31.7 | 31.42 | 30.69 | 28.77 | 27.71 | 26.40 | 24.40 | 23.05 | 22.92 | 21.67 | 21.84 |
| 55 . . . . . . . . . . . . . . | 27.3 | 27.05 | 26.39 | 24.59 | 23.53 | 22.33 | 20.54 | 19.38 | 19.28 | 18.13 | 18.39 |

See footnote at end of table.

## Table 11. Life expectancy by age, race, and sex: Death-registration States, 1900–1902 to 1919–21, and United States, 1929–31 to 1999—Con.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–31, data are for groups of registration States as follows: 1900–1902 and 1909–11, 10 States and the District of Columbia; 1919–21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

| Age, race, and sex | Average number of years of life remaining ($e_x$) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 1989–91 | 1979–81 | 1969–71 | 1959–61 | 1949–51 | 1939–41 | 1929–31 | 1919–21 | 1909–11 | 1900–1902 |
| *Female—Con.* | | | | | | | | | | | |
| 60 . . . . . . . . . . . . . . | 23.1 | 22.90 | 22.29 | 20.60 | 19.52 | 18.50 | 16.92 | 15.94 | 15.87 | 14.90 | 15.21 |
| 65 . . . . . . . . . . . . . . | 19.1 | 19.02 | 18.44 | 16.83 | 15.80 | 14.95 | 13.57 | 12.78 | 12.73 | 11.96 | 12.22 |
| 70 . . . . . . . . . . . . . . | 15.4 | 15.38 | 14.84 | 13.35 | 12.37 | 11.71 | 10.56 | 9.99 | 9.96 | 9.38 | 9.59 |
| 75 . . . . . . . . . . . . . . | 12.1 | 12.08 | 11.58 | 10.26 | 9.33 | 8.94 | 8.01 | 7.61 | 7.65 | 7.20 | 7.34 |
| 80 . . . . . . . . . . . . . . | 9.1 | 9.13 | 8.69 | 7.68 | 6.72 | 6.67 | 5.99 | 5.70 | 5.75 | 5.37 | 5.51 |
| 85 . . . . . . . . . . . . . . | 6.6 | 6.66 | 6.38 | 5.63 | 4.71 | 4.90 | 4.47 | 4.32 | 4.30 | 4.08 | 4.12 |
| 90 . . . . . . . . . . . . . . | 4.8 | 4.73 | 4.66 | 4.14 | 3.25 | 3.54 | 3.39 | 3.24 | 3.23 | 3.05 | 3.04 |
| 95 . . . . . . . . . . . . . . | 3.5 | 3.40 | 3.48 | 3.18 | 2.43 | 2.57 | 2.67 | 2.30 | 2.27 | 2.34 | 2.24 |
| 100 . . . . . . . . . . . . . . | 2.7 | 2.52 | 2.81 | 2.69 | 1.91 | 1.93 | 2.17 | 1.52 | 1.48 | 1.91 | 1.61 |
| *White* | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . | 77.3 | 76.13 | 74.53 | 71.62 | 70.73 | 69.02 | 64.92 | 60.86 | 57.42 | 51.90 | 49.64 |
| 1 . . . . . . . . . . . . . . | 76.8 | 75.72 | 74.35 | 71.91 | 71.38 | 69.95 | 66.84 | 63.46 | 60.87 | 57.46 | 55.47 |
| 5 . . . . . . . . . . . . . . | 72.9 | 71.84 | 70.52 | 68.12 | 67.64 | 66.29 | 63.52 | 60.75 | 58.86 | 56.51 | 55.18 |
| 10 . . . . . . . . . . . . . . | 67.9 | 66.92 | 65.62 | 63.26 | 62.79 | 61.48 | 58.83 | 56.29 | 54.65 | 52.43 | 51.34 |
| 15 . . . . . . . . . . . . . . | 63.0 | 61.99 | 60.71 | 58.37 | 57.92 | 56.65 | 54.09 | 51.69 | 50.21 | 48.01 | 47.01 |
| 20 . . . . . . . . . . . . . . | 58.2 | 57.23 | 55.98 | 53.66 | 53.16 | 51.91 | 49.47 | 47.28 | 46.04 | 43.77 | 43.17 |
| 25 . . . . . . . . . . . . . . | 53.4 | 52.50 | 51.30 | 49.00 | 48.44 | 47.22 | 44.92 | 43.02 | 42.07 | 39.79 | 39.26 |
| 30 . . . . . . . . . . . . . . | 48.6 | 47.76 | 46.59 | 44.28 | 43.69 | 42.52 | 40.40 | 38.76 | 38.17 | 35.86 | 35.51 |
| 35 . . . . . . . . . . . . . . | 43.9 | 43.06 | 41.86 | 39.58 | 38.97 | 37.86 | 35.93 | 34.50 | 34.27 | 32.03 | 32.01 |
| 40 . . . . . . . . . . . . . . | 39.2 | 38.41 | 37.17 | 34.95 | 34.33 | 33.29 | 31.54 | 30.33 | 30.38 | 28.29 | 28.28 |
| 45 . . . . . . . . . . . . . . | 34.6 | 33.81 | 32.60 | 30.48 | 29.84 | 28.88 | 27.29 | 26.29 | 26.45 | 24.60 | 24.82 |
| 50 . . . . . . . . . . . . . . | 30.1 | 29.34 | 28.21 | 26.21 | 25.57 | 24.70 | 23.26 | 22.42 | 22.64 | 21.01 | 21.18 |
| 55 . . . . . . . . . . . . . . | 25.7 | 25.08 | 24.05 | 22.19 | 21.58 | 20.77 | 19.47 | 18.75 | 18.97 | 17.57 | 17.91 |
| 60 . . . . . . . . . . . . . . | 21.6 | 21.08 | 20.16 | 18.48 | 17.84 | 17.15 | 15.98 | 15.37 | 15.57 | 14.43 | 14.73 |
| 65 . . . . . . . . . . . . . . | 17.8 | 17.40 | 16.59 | 15.08 | 14.44 | 13.86 | 12.80 | 12.28 | 12.47 | 11.60 | 11.87 |
| 70 . . . . . . . . . . . . . . | 14.4 | 14.02 | 13.35 | 12.01 | 11.37 | 10.89 | 9.96 | 9.58 | 9.72 | 9.10 | 9.31 |
| 75 . . . . . . . . . . . . . . | 11.2 | 11.03 | 10.47 | 9.27 | 8.65 | 8.34 | 7.55 | 7.30 | 7.47 | 6.98 | 7.08 |
| 80 . . . . . . . . . . . . . . | 8.5 | 8.39 | 7.95 | 7.01 | 6.33 | 6.27 | 5.64 | 5.45 | 5.59 | 5.22 | 5.30 |
| 85 . . . . . . . . . . . . . . | 6.2 | 6.20 | 5.90 | 5.19 | 4.53 | 4.62 | 4.20 | 4.12 | 4.15 | 3.97 | 3.95 |
| 90 . . . . . . . . . . . . . . | 4.5 | 4.46 | 4.36 | 3.84 | 3.20 | 3.41 | 3.16 | 3.10 | 3.17 | 3.00 | 2.93 |
| 95 . . . . . . . . . . . . . . | 3.2 | 3.25 | 3.25 | 2.92 | 2.43 | 2.53 | 2.45 | 2.22 | 2.28 | 2.29 | 2.16 |
| 100 . . . . . . . . . . . . . . | 2.3 | 2.43 | 2.62 | 2.41 | 1.91 | 1.92 | 1.95 | 1.48 | 1.50 | 1.71 | 1.56 |
| *White male* | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . | 74.6 | 72.72 | 70.82 | 67.94 | 67.55 | 66.31 | 62.81 | 59.12 | 56.34 | 50.23 | 48.23 |
| 1 . . . . . . . . . . . . . . | 74.1 | 72.35 | 70.70 | 68.33 | 68.34 | 67.41 | 64.98 | 62.04 | 60.24 | 56.26 | 54.61 |
| 5 . . . . . . . . . . . . . . | 70.2 | 68.48 | 66.87 | 64.55 | 64.61 | 63.77 | 61.68 | 59.38 | 58.31 | 55.37 | 54.43 |
| 10 . . . . . . . . . . . . . . | 65.3 | 63.55 | 61.98 | 59.69 | 59.78 | 58.98 | 57.03 | 54.96 | 54.15 | 51.32 | 50.59 |
| 15 . . . . . . . . . . . . . . | 60.3 | 58.65 | 57.09 | 54.83 | 54.93 | 54.18 | 52.33 | 50.39 | 49.74 | 46.91 | 46.25 |
| 20 . . . . . . . . . . . . . . | 55.6 | 53.96 | 52.45 | 50.22 | 50.25 | 49.52 | 47.76 | 46.02 | 45.60 | 42.71 | 42.19 |
| 25 . . . . . . . . . . . . . . | 50.9 | 49.33 | 47.92 | 45.70 | 45.65 | 44.93 | 43.28 | 41.78 | 41.60 | 38.79 | 38.52 |
| 30 . . . . . . . . . . . . . . | 46.2 | 44.71 | 43.31 | 41.07 | 40.97 | 40.29 | 38.80 | 37.54 | 37.65 | 34.87 | 34.88 |
| 35 . . . . . . . . . . . . . . | 41.5 | 40.12 | 38.66 | 36.43 | 36.31 | 35.68 | 34.36 | 33.33 | 33.74 | 31.08 | 31.29 |
| 40 . . . . . . . . . . . . . . | 36.9 | 35.57 | 34.04 | 31.87 | 31.73 | 31.17 | 30.03 | 29.22 | 29.86 | 27.43 | 27.74 |
| 45 . . . . . . . . . . . . . . | 32.4 | 31.07 | 29.55 | 27.48 | 27.34 | 26.87 | 25.87 | 25.28 | 26.00 | 23.86 | 24.21 |
| 50 . . . . . . . . . . . . . . | 28.0 | 26.71 | 25.26 | 23.34 | 23.22 | 22.83 | 21.96 | 21.51 | 22.22 | 20.39 | 20.76 |
| 55 . . . . . . . . . . . . . . | 23.8 | 22.56 | 21.25 | 19.51 | 19.45 | 19.11 | 18.34 | 17.97 | 18.59 | 17.03 | 17.42 |
| 60 . . . . . . . . . . . . . . | 19.8 | 18.71 | 17.56 | 16.07 | 16.01 | 15.76 | 15.05 | 14.72 | 15.25 | 13.98 | 14.35 |
| 65 . . . . . . . . . . . . . . | 16.1 | 15.24 | 14.26 | 13.02 | 12.97 | 12.75 | 12.07 | 11.77 | 12.21 | 11.25 | 11.51 |
| 70 . . . . . . . . . . . . . . | 12.9 | 12.11 | 11.35 | 10.38 | 10.29 | 10.07 | 9.42 | 9.20 | 9.51 | 8.83 | 9.03 |
| 75 . . . . . . . . . . . . . . | 10.0 | 9.40 | 8.87 | 8.06 | 7.92 | 7.77 | 7.17 | 7.02 | 7.30 | 6.75 | 6.84 |
| 80 . . . . . . . . . . . . . . | 7.5 | 7.11 | 6.76 | 6.18 | 5.89 | 5.88 | 5.38 | 5.26 | 5.47 | 5.09 | 5.10 |
| 85 . . . . . . . . . . . . . . | 5.5 | 5.28 | 5.09 | 4.63 | 4.34 | 4.35 | 4.02 | 3.99 | 4.06 | 3.88 | 3.81 |
| 90 . . . . . . . . . . . . . . | 4.0 | 3.85 | 3.83 | 3.49 | 3.16 | 3.27 | 3.06 | 3.03 | 3.18 | 2.99 | 2.85 |
| 95 . . . . . . . . . . . . . . | 2.9 | 2.88 | 2.91 | 2.67 | 2.43 | 2.48 | 2.40 | 2.19 | 2.36 | 2.31 | 2.12 |
| 100 . . . . . . . . . . . . . . | 2.2 | 2.21 | 2.41 | 2.20 | 1.91 | 1.92 | 1.96 | 1.49 | 1.58 | 1.68 | 1.55 |

See footnote at end of table.

## Table 11. Life expectancy by age, race, and sex: Death-registration States, 1900–1902 to 1919–21, and United States, 1929–31 to 1999—Con.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–31, data are for groups of registration States as follows: 1900–1902 and 1909–11, 10 States and the District of Columbia; 1919–21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

| Age, race, and sex | Average number of years of life remaining ($e_x$) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 1989–91 | 1979–81 | 1969–71 | 1959–61 | 1949–51 | 1939–41 | 1929–31 | 1919–21 | 1909–11 | 1900–1902 |
| **White female** | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . | 79.9 | 79.45 | 78.22 | 75.49 | 74.19 | 72.03 | 67.29 | 62.67 | 58.53 | 53.62 | 51.08 |
| 1 . . . . . . . . . . . . . . | 79.3 | 78.99 | 77.98 | 75.66 | 74.68 | 72.77 | 68.93 | 64.93 | 61.51 | 58.69 | 56.39 |
| 5 . . . . . . . . . . . . . . | 75.4 | 75.10 | 74.13 | 71.86 | 70.92 | 69.09 | 65.57 | 62.17 | 59.43 | 57.67 | 56.03 |
| 10 . . . . . . . . . . . . . . | 70.5 | 70.16 | 69.21 | 66.97 | 66.05 | 64.26 | 60.85 | 57.65 | 55.17 | 53.57 | 52.15 |
| 15 . . . . . . . . . . . . . . | 65.5 | 65.23 | 64.29 | 62.07 | 61.15 | 59.39 | 56.07 | 53.00 | 50.67 | 49.12 | 47.79 |
| 20 . . . . . . . . . . . . . . | 60.7 | 60.36 | 59.44 | 57.24 | 56.29 | 54.56 | 51.38 | 48.52 | 46.46 | 44.88 | 43.77 |
| 25 . . . . . . . . . . . . . . | 55.8 | 55.51 | 54.60 | 52.42 | 51.45 | 49.77 | 46.78 | 44.25 | 42.55 | 40.88 | 40.05 |
| 30 . . . . . . . . . . . . . . | 50.9 | 50.65 | 49.76 | 47.60 | 46.63 | 45.00 | 42.21 | 39.99 | 38.72 | 36.96 | 36.42 |
| 35 . . . . . . . . . . . . . . | 46.1 | 45.82 | 44.93 | 42.82 | 41.84 | 40.28 | 37.70 | 35.73 | 34.86 | 33.09 | 32.82 |
| 40 . . . . . . . . . . . . . . | 41.3 | 41.03 | 40.16 | 38.12 | 37.13 | 35.64 | 33.25 | 31.52 | 30.94 | 29.26 | 29.17 |
| 45 . . . . . . . . . . . . . . | 36.6 | 36.30 | 35.49 | 33.54 | 32.53 | 31.12 | 28.90 | 27.39 | 26.98 | 25.45 | 25.51 |
| 50 . . . . . . . . . . . . . . | 32.0 | 31.71 | 30.96 | 29.11 | 28.08 | 26.76 | 24.72 | 23.41 | 23.12 | 21.74 | 21.89 |
| 55 . . . . . . . . . . . . . . | 27.5 | 27.29 | 26.61 | 24.85 | 23.81 | 22.58 | 20.73 | 19.60 | 19.40 | 18.18 | 18.43 |
| 60 . . . . . . . . . . . . . . | 23.2 | 23.09 | 22.45 | 20.79 | 19.69 | 18.64 | 17.00 | 16.05 | 15.93 | 14.92 | 15.23 |
| 65 . . . . . . . . . . . . . . | 19.2 | 19.14 | 18.55 | 16.93 | 15.88 | 15.00 | 13.56 | 12.81 | 12.75 | 11.97 | 12.23 |
| 70 . . . . . . . . . . . . . . | 15.5 | 15.46 | 14.89 | 13.37 | 12.38 | 11.68 | 10.50 | 9.98 | 9.94 | 9.38 | 9.59 |
| 75 . . . . . . . . . . . . . . | 12.1 | 12.11 | 11.58 | 10.21 | 9.28 | 8.87 | 7.92 | 7.56 | 7.62 | 7.20 | 7.33 |
| 80 . . . . . . . . . . . . . . | 9.1 | 9.12 | 8.65 | 7.59 | 6.67 | 6.59 | 5.88 | 5.63 | 5.70 | 5.35 | 5.50 |
| 85 . . . . . . . . . . . . . . | 6.6 | 6.62 | 6.32 | 5.54 | 4.66 | 4.83 | 4.34 | 4.24 | 4.24 | 4.06 | 4.10 |
| 90 . . . . . . . . . . . . . . | 4.7 | 4.69 | 4.59 | 4.05 | 3.23 | 3.51 | 3.24 | 3.17 | 3.16 | 3.00 | 3.02 |
| 95 . . . . . . . . . . . . . . | 3.3 | 3.36 | 3.39 | 3.04 | 2.43 | 2.56 | 2.47 | 2.24 | 2.20 | 2.27 | 2.21 |
| 100 . . . . . . . . . . . . . . | 2.4 | 2.49 | 2.70 | 2.49 | 1.91 | 1.92 | 1.95 | 1.48 | 1.42 | 1.74 | 1.58 |
| **Black[1] . . . . . . . . . . . .** | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . | 71.4 | 69.16 | 68.52 | 64.11 | 63.91 | 60.73 | 53.85 | 48.53 | 47.03 | 35.87 | 33.80 |
| 1 . . . . . . . . . . . . . . | 71.5 | 69.43 | 68.99 | 65.27 | 65.75 | 62.65 | 57.15 | 51.71 | 51.01 | 43.84 | 43.00 |
| 5 . . . . . . . . . . . . . . | 67.6 | 65.64 | 65.25 | 61.62 | 62.21 | 59.25 | 54.13 | 49.25 | 49.44 | 45.34 | 45.55 |
| 10 . . . . . . . . . . . . . . | 62.7 | 60.75 | 60.38 | 56.79 | 57.41 | 54.50 | 49.50 | 44.80 | 45.26 | 41.74 | 42.46 |
| 15 . . . . . . . . . . . . . . | 57.8 | 55.86 | 55.49 | 51.94 | 52.57 | 49.73 | 44.89 | 40.37 | 41.02 | 38.02 | 39.04 |
| 20 . . . . . . . . . . . . . . | 53.1 | 51.19 | 50.75 | 47.34 | 47.88 | 45.19 | 40.73 | 36.62 | 37.72 | 34.86 | 36.03 |
| 25 . . . . . . . . . . . . . . | 48.5 | 46.67 | 46.18 | 43.00 | 43.35 | 40.85 | 36.91 | 33.32 | 34.91 | 31.72 | 33.04 |
| 30 . . . . . . . . . . . . . . | 43.9 | 42.22 | 41.69 | 38.70 | 38.89 | 36.59 | 33.17 | 30.07 | 31.98 | 28.43 | 29.96 |
| 35 . . . . . . . . . . . . . . | 39.3 | 37.87 | 37.28 | 34.48 | 34.56 | 32.44 | 29.53 | 26.94 | 29.07 | 25.39 | 26.82 |
| 40 . . . . . . . . . . . . . . | 34.8 | 33.65 | 32.98 | 30.46 | 30.39 | 28.48 | 26.06 | 23.82 | 26.07 | 22.41 | 23.73 |
| 45 . . . . . . . . . . . . . . | 30.6 | 29.55 | 28.87 | 26.65 | 26.46 | 24.75 | 22.82 | 20.97 | 23.17 | 19.58 | 20.67 |
| 50 . . . . . . . . . . . . . . | 26.6 | 25.62 | 25.03 | 23.11 | 22.74 | 21.38 | 19.94 | 18.22 | 20.17 | 16.84 | 17.95 |
| 55 . . . . . . . . . . . . . . | 22.8 | 21.95 | 21.50 | 19.83 | 19.45 | 18.41 | 17.43 | 15.80 | 17.33 | 14.33 | 15.23 |
| 60 . . . . . . . . . . . . . . | 19.3 | 18.59 | 18.29 | 16.83 | 16.53 | 15.87 | 15.18 | 13.62 | 14.72 | 12.16 | 13.06 |
| 65 . . . . . . . . . . . . . . | 16.0 | 15.56 | 15.37 | 14.16 | 13.96 | 13.59 | 13.02 | 11.49 | 12.22 | 10.22 | 10.87 |
| 70 . . . . . . . . . . . . . . | 13.0 | 12.87 | 12.67 | 11.77 | 11.63 | 11.48 | 10.93 | 9.54 | 9.90 | 8.59 | 8.96 |
| 75 . . . . . . . . . . . . . . | 10.4 | 10.48 | 10.32 | 9.89 | 9.52 | 9.48 | 8.97 | 7.84 | 8.00 | 7.08 | 7.24 |
| 80 . . . . . . . . . . . . . . | 8.2 | 8.30 | 8.17 | 8.20 | 7.28 | 7.62 | 7.31 | 6.19 | 6.22 | 5.80 | 5.79 |
| 85 . . . . . . . . . . . . . . | 6.2 | 6.51 | 6.54 | 6.54 | 5.27 | 5.79 | 5.91 | 4.92 | 4.88 | 4.80 | 4.56 |
| 90 . . . . . . . . . . . . . . | 4.8 | 4.94 | 5.13 | 5.09 | 3.48 | 3.97 | 4.64 | 3.83 | 3.84 | 4.26 | 3.60 |
| 95 . . . . . . . . . . . . . . | 3.6 | 3.82 | 4.08 | 4.28 | 2.43 | 2.70 | 3.51 | 2.83 | 2.90 | 3.31 | 2.82 |
| 100 . . . . . . . . . . . . . . | 2.8 | 2.91 | 3.58 | 3.93 | 1.91 | 1.94 | 2.57 | 1.87 | 1.94 | 2.27 | 2.18 |
| **Black male[1]** | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . | 67.8 | 64.47 | 64.10 | 60.00 | 61.48 | 58.91 | 52.26 | 47.55 | 47.14 | 34.05 | 32.54 |
| 1 . . . . . . . . . . . . . . | 67.9 | 64.76 | 64.60 | 61.24 | 63.50 | 61.06 | 55.93 | 51.08 | 51.63 | 42.53 | 42.46 |
| 5 . . . . . . . . . . . . . . | 64.1 | 60.98 | 60.86 | 57.60 | 59.98 | 57.69 | 52.95 | 48.69 | 50.18 | 44.25 | 45.06 |
| 10 . . . . . . . . . . . . . . | 59.2 | 56.09 | 56.01 | 52.79 | 55.19 | 52.96 | 48.34 | 44.27 | 45.99 | 40.65 | 41.90 |
| 15 . . . . . . . . . . . . . . | 54.3 | 51.22 | 51.14 | 47.96 | 50.39 | 48.23 | 43.74 | 39.83 | 41.75 | 36.77 | 38.26 |
| 20 . . . . . . . . . . . . . . | 49.6 | 46.71 | 46.48 | 43.49 | 45.78 | 43.73 | 39.52 | 35.95 | 38.36 | 33.46 | 35.11 |
| 25 . . . . . . . . . . . . . . | 45.2 | 42.40 | 42.09 | 39.45 | 41.38 | 39.49 | 35.72 | 32.67 | 35.54 | 30.44 | 32.21 |
| 30 . . . . . . . . . . . . . . | 40.7 | 38.14 | 37.81 | 35.40 | 37.05 | 35.31 | 32.05 | 29.45 | 32.51 | 27.33 | 29.25 |
| 35 . . . . . . . . . . . . . . | 36.3 | 34.02 | 33.60 | 31.42 | 32.81 | 31.21 | 28.48 | 26.39 | 29.54 | 24.42 | 26.16 |
| 40 . . . . . . . . . . . . . . | 31.9 | 30.05 | 29.51 | 27.61 | 28.72 | 27.29 | 25.06 | 23.36 | 26.53 | 21.57 | 23.12 |
| 45 . . . . . . . . . . . . . . | 27.8 | 26.18 | 25.61 | 24.03 | 24.89 | 23.59 | 21.88 | 20.59 | 23.55 | 18.85 | 20.09 |
| 50 . . . . . . . . . . . . . . | 24.0 | 22.50 | 22.03 | 20.69 | 21.28 | 20.25 | 19.06 | 17.92 | 20.47 | 16.21 | 17.34 |
| 55 . . . . . . . . . . . . . . | 20.4 | 19.08 | 18.79 | 17.66 | 18.11 | 17.36 | 16.60 | 15.46 | 17.50 | 13.82 | 14.69 |

See footnote at end of table.

## Table 11. Life expectancy by age, race, and sex: Death-registration States, 1900–1902 to 1919–21, and United States, 1929–31 to 1999—Con.

[Alaska and Hawaii included beginning in 1959. For decennial periods prior to 1929–31, data are for groups of registration States as follows: 1900–1902 and 1909–11, 10 States and the District of Columbia; 1919–21, 34 States and the District of Columbia. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

| Age, race, and sex | Average number of years of life remaining ($e_x$) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 1989–91 | 1979–81 | 1969–71 | 1959–61 | 1949–51 | 1939–41 | 1929–31 | 1919–21 | 1909–11 | 1900–1902 |
| Black male[1]—Con. | | | | | | | | | | | |
| 60 . . . . . . . . . . . . . . . | 17.2 | 16.01 | 15.89 | 14.93 | 15.29 | 14.91 | 14.37 | 13.15 | 14.74 | 11.67 | 12.62 |
| 65 . . . . . . . . . . . . . . . | 14.3 | 13.27 | 13.29 | 12.53 | 12.84 | 12.75 | 12.21 | 10.87 | 12.07 | 9.74 | 10.38 |
| 70 . . . . . . . . . . . . . . . | 11.6 | 10.88 | 10.94 | 10.40 | 10.81 | 10.74 | 10.11 | 8.78 | 9.58 | 8.00 | 8.33 |
| 75 . . . . . . . . . . . . . . . | 9.2 | 8.84 | 8.90 | 8.76 | 8.93 | 8.83 | 8.17 | 6.99 | 7.61 | 6.58 | 6.60 |
| 80 . . . . . . . . . . . . . . . | 7.3 | 7.01 | 7.03 | 7.35 | 6.87 | 7.07 | 6.58 | 5.42 | 5.83 | 5.53 | 5.12 |
| 85 . . . . . . . . . . . . . . . | 5.6 | 5.58 | 5.61 | 5.92 | 5.08 | 5.38 | 5.34 | 4.30 | 4.53 | 4.48 | 4.04 |
| 90 . . . . . . . . . . . . . . . | 4.4 | 4.24 | 4.47 | 4.68 | 3.42 | 3.78 | 4.23 | 3.42 | 3.60 | 4.01 | 3.21 |
| 95 . . . . . . . . . . . . . . . | 3.5 | 3.37 | 3.62 | 3.92 | 2.43 | 2.64 | 3.20 | 2.54 | 2.61 | 3.15 | 2.50 |
| 100 . . . . . . . . . . . . . . | 2.8 | 2.63 | 3.24 | 3.61 | 1.91 | 1.93 | 2.29 | 1.68 | 1.64 | 2.14 | 1.89 |
| Black female[1] | | | | | | | | | | | |
| 0 . . . . . . . . . . . . . . . | 74.7 | 73.73 | 72.88 | 68.32 | 66.47 | 62.70 | 55.56 | 49.51 | 46.92 | 37.67 | 35.04 |
| 1 . . . . . . . . . . . . . . . | 74.7 | 73.96 | 73.31 | 69.37 | 68.10 | 64.37 | 58.46 | 52.33 | 50.39 | 45.15 | 43.54 |
| 5 . . . . . . . . . . . . . . . | 70.9 | 70.16 | 69.54 | 65.70 | 64.54 | 60.93 | 55.40 | 49.81 | 48.70 | 46.42 | 46.04 |
| 10 . . . . . . . . . . . . . . . | 66.0 | 65.26 | 64.65 | 60.85 | 59.72 | 56.17 | 50.75 | 45.33 | 44.54 | 42.84 | 43.02 |
| 15 . . . . . . . . . . . . . . . | 61.0 | 60.34 | 59.74 | 55.97 | 54.85 | 51.36 | 46.13 | 40.87 | 40.36 | 39.18 | 39.79 |
| 20 . . . . . . . . . . . . . . . | 56.2 | 55.49 | 54.90 | 51.22 | 50.07 | 46.77 | 42.04 | 37.22 | 37.15 | 36.14 | 36.89 |
| 25 . . . . . . . . . . . . . . . | 51.4 | 50.72 | 50.13 | 46.57 | 45.40 | 42.35 | 38.20 | 33.93 | 34.35 | 32.97 | 33.90 |
| 30 . . . . . . . . . . . . . . . | 46.6 | 46.03 | 45.43 | 42.00 | 40.83 | 38.02 | 34.40 | 30.67 | 31.48 | 29.61 | 30.70 |
| 35 . . . . . . . . . . . . . . . | 41.9 | 41.45 | 40.79 | 37.56 | 36.41 | 33.82 | 30.83 | 27.47 | 28.58 | 26.44 | 27.52 |
| 40 . . . . . . . . . . . . . . . | 37.4 | 36.96 | 36.28 | 33.32 | 32.16 | 29.82 | 27.19 | 24.30 | 25.60 | 23.34 | 24.37 |
| 45 . . . . . . . . . . . . . . . | 33.0 | 32.58 | 31.94 | 29.31 | 28.14 | 26.07 | 23.89 | 21.39 | 22.61 | 20.43 | 21.36 |
| 50 . . . . . . . . . . . . . . . | 28.7 | 28.38 | 27.84 | 25.52 | 24.31 | 22.67 | 20.95 | 18.60 | 19.76 | 17.65 | 18.67 |
| 55 . . . . . . . . . . . . . . . | 24.7 | 24.41 | 24.00 | 21.97 | 20.89 | 19.62 | 18.38 | 16.27 | 17.09 | 14.98 | 15.88 |
| 60 . . . . . . . . . . . . . . . | 20.9 | 20.71 | 20.42 | 18.66 | 17.83 | 16.95 | 16.10 | 14.22 | 14.69 | 12.78 | 13.60 |
| 65 . . . . . . . . . . . . . . . | 17.3 | 17.37 | 17.13 | 15.67 | 15.12 | 14.54 | 13.95 | 12.24 | 12.41 | 10.82 | 11.38 |
| 70 . . . . . . . . . . . . . . . | 14.0 | 14.32 | 14.05 | 13.02 | 12.46 | 12.29 | 11.82 | 10.38 | 10.25 | 9.22 | 9.62 |
| 75 . . . . . . . . . . . . . . . | 11.1 | 11.56 | 11.37 | 10.85 | 10.10 | 10.15 | 9.81 | 8.62 | 8.37 | 7.55 | 7.90 |
| 80 . . . . . . . . . . . . . . . | 8.6 | 9.05 | 8.95 | 8.87 | 7.66 | 8.15 | 8.02 | 6.90 | 6.58 | 6.05 | 6.48 |
| 85 . . . . . . . . . . . . . . . | 6.5 | 6.99 | 7.09 | 7.00 | 5.44 | 6.15 | 6.41 | 5.48 | 5.22 | 5.09 | 5.10 |
| 90 . . . . . . . . . . . . . . . | 4.8 | 5.24 | 5.47 | 5.41 | 3.52 | 4.13 | 4.96 | 4.20 | 4.07 | 4.50 | 4.01 |
| 95 . . . . . . . . . . . . . . . | 3.6 | 3.97 | 4.30 | 4.58 | 2.43 | 2.74 | 3.71 | 3.09 | 3.18 | 3.45 | 3.15 |
| 100 . . . . . . . . . . . . . . | 2.7 | 2.97 | 3.69 | 4.20 | 1.91 | 1.94 | 2.70 | 2.04 | 2.23 | 2.39 | 2.49 |

[1]For 1939–41 and 1949–51, data shown are for the entire nonwhite population. During these periods, life tables were not constructed for the black population. See Technical notes.

## Table 12. Estimated life expectancy at birth in years, by race and sex: Death-registration States, 1900–28, and United States, 1929–99

[For selected years, life table values shown are estimates; see Technical notes. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

| Area and year | All races | | | White | | | Black[4] | | |
|---|---|---|---|---|---|---|---|---|---|
| | Both sexes | Male | Female | Both sexes | Male | Female | Both sexes | Male | Female |
| United States[1] | | | | | | | | | |
| 1999 | 76.7 | 73.9 | 79.4 | 77.3 | 74.6 | 79.9 | 71.4 | 67.8 | 74.7 |
| 1998 | 76.7 | 73.8 | 79.5 | 77.3 | 74.5 | 80.0 | 71.3 | 67.6 | 74.8 |
| 1997 | 76.5 | 73.6 | 79.4 | 77.2 | 74.3 | 79.9 | 71.1 | 67.2 | 74.7 |
| 1996 | 76.1 | 73.1 | 79.1 | 76.8 | 73.9 | 79.7 | 70.2 | 66.1 | 74.2 |
| 1995 | 75.8 | 72.5 | 78.9 | 76.5 | 73.4 | 79.6 | 69.6 | 65.2 | 73.9 |
| 1994 | 75.7 | 72.4 | 79.0 | 76.5 | 73.3 | 79.6 | 69.5 | 64.9 | 73.9 |
| 1993 | 75.5 | 72.2 | 78.8 | 76.3 | 73.1 | 79.5 | 69.2 | 64.6 | 73.7 |
| 1992 | 75.8 | 72.3 | 79.1 | 76.5 | 73.2 | 79.8 | 69.6 | 65.0 | 73.9 |
| 1991 | 75.5 | 72.0 | 78.9 | 76.3 | 72.9 | 79.6 | 69.3 | 64.6 | 73.8 |
| 1990 | 75.4 | 71.8 | 78.8 | 76.1 | 72.7 | 79.4 | 69.1 | 64.5 | 73.6 |
| 1989 | 75.1 | 71.7 | 78.5 | 75.9 | 72.5 | 79.2 | 68.8 | 64.3 | 73.3 |
| 1988 | 74.9 | 71.4 | 78.3 | 75.6 | 72.2 | 78.9 | 68.9 | 64.4 | 73.2 |
| 1987 | 74.9 | 71.4 | 78.3 | 75.6 | 72.1 | 78.9 | 69.1 | 64.7 | 73.4 |
| 1986 | 74.7 | 71.2 | 78.2 | 75.4 | 71.9 | 78.8 | 69.1 | 64.8 | 73.4 |
| 1985 | 74.7 | 71.1 | 78.2 | 75.3 | 71.8 | 78.7 | 69.3 | 65.0 | 73.4 |
| 1984 | 74.7 | 71.1 | 78.2 | 75.3 | 71.8 | 78.7 | 69.5 | 65.3 | 73.6 |
| 1983 | 74.6 | 71.0 | 78.1 | 75.2 | 71.6 | 78.7 | 69.4 | 65.2 | 73.5 |
| 1982 | 74.5 | 70.8 | 78.1 | 75.1 | 71.5 | 78.7 | 69.4 | 65.1 | 73.6 |
| 1981 | 74.1 | 70.4 | 77.8 | 74.8 | 71.1 | 78.4 | 68.9 | 64.5 | 73.2 |
| 1980 | 73.7 | 70.0 | 77.4 | 74.4 | 70.7 | 78.1 | 68.1 | 63.8 | 72.5 |
| 1979 | 73.9 | 70.0 | 77.8 | 74.6 | 70.8 | 78.4 | 68.5 | 64.0 | 72.9 |
| 1978 | 73.5 | 69.6 | 77.3 | 74.1 | 70.4 | 78.0 | 68.1 | 63.7 | 72.4 |
| 1977 | 73.3 | 69.5 | 77.2 | 74.0 | 70.2 | 77.9 | 67.7 | 63.4 | 72.0 |
| 1976 | 72.9 | 69.1 | 76.8 | 73.6 | 69.9 | 77.5 | 67.2 | 62.9 | 71.6 |
| 1975 | 72.6 | 68.8 | 76.6 | 73.4 | 69.5 | 77.3 | 66.8 | 62.4 | 71.3 |
| 1974 | 72.0 | 68.2 | 75.9 | 72.8 | 69.0 | 76.7 | 66.0 | 61.7 | 70.3 |
| 1973 | 71.4 | 67.6 | 75.3 | 72.2 | 68.5 | 76.1 | 65.0 | 60.9 | 69.3 |
| 1972[2] | 71.2 | 67.4 | 75.1 | 72.0 | 68.3 | 75.9 | 64.7 | 60.4 | 69.1 |
| 1971 | 71.1 | 67.4 | 75.0 | 72.0 | 68.3 | 75.8 | 64.6 | 60.5 | 68.9 |
| 1970 | 70.8 | 67.1 | 74.7 | 71.7 | 68.0 | 75.6 | 64.1 | 60.0 | 68.3 |
| 1969 | 70.5 | 66.8 | 74.4 | 71.4 | 67.7 | 75.3 | 64.5 | 60.6 | 68.6 |
| 1968 | 70.2 | 66.6 | 74.1 | 71.1 | 67.5 | 75.0 | 64.1 | 60.4 | 67.9 |
| 1967 | 70.5 | 67.0 | 74.3 | 71.4 | 67.8 | 75.2 | 64.9 | 61.4 | 68.5 |
| 1966 | 70.2 | 66.7 | 73.9 | 71.1 | 67.5 | 74.8 | 64.2 | 60.9 | 67.6 |
| 1965 | 70.2 | 66.8 | 73.8 | 71.1 | 67.6 | 74.8 | 64.3 | 61.2 | 67.6 |
| 1964 | 70.2 | 66.8 | 73.7 | 71.0 | 67.7 | 74.7 | 64.2 | 61.3 | 67.3 |
| 1963[3] | 69.9 | 66.6 | 73.4 | 70.8 | 67.4 | 74.4 | 63.7 | 61.0 | 66.6 |
| 1962[3] | 70.1 | 66.9 | 73.5 | 70.9 | 67.7 | 74.5 | 64.2 | 61.6 | 66.9 |
| 1961 | 70.2 | 67.1 | 73.6 | 71.0 | 67.8 | 74.6 | 64.5 | 62.0 | 67.1 |
| 1960 | 69.7 | 66.6 | 73.1 | 70.6 | 67.4 | 74.1 | 63.6 | 61.1 | 66.3 |
| 1959 | 69.9 | 66.8 | 73.2 | 70.7 | 67.5 | 74.2 | 63.9 | 61.3 | 66.5 |
| 1958 | 69.6 | 66.6 | 72.9 | 70.5 | 67.4 | 73.9 | 63.4 | 61.0 | 65.8 |
| 1957 | 69.5 | 66.4 | 72.7 | 70.3 | 67.2 | 73.7 | 63.0 | 60.7 | 65.5 |
| 1956 | 69.7 | 66.7 | 72.9 | 70.5 | 67.5 | 73.9 | 63.6 | 61.3 | 66.1 |
| 1955 | 69.6 | 66.7 | 72.8 | 70.5 | 67.4 | 73.7 | 63.7 | 61.4 | 66.1 |
| 1954 | 69.6 | 66.7 | 72.8 | 70.5 | 67.5 | 73.7 | 63.4 | 61.1 | 65.9 |
| 1953 | 68.8 | 66.0 | 72.0 | 69.7 | 66.8 | 73.0 | 62.0 | 59.7 | 64.5 |
| 1952 | 68.6 | 65.8 | 71.6 | 69.5 | 66.6 | 72.6 | 61.4 | 59.1 | 63.8 |
| 1951 | 68.4 | 65.6 | 71.4 | 69.3 | 66.5 | 72.4 | 61.2 | 59.2 | 63.4 |
| 1950 | 68.2 | 65.6 | 71.1 | 69.1 | 66.5 | 72.2 | 60.8 | 59.1 | 62.9 |
| 1949 | 68.0 | 65.2 | 70.7 | 68.8 | 66.2 | 71.9 | 60.6 | 58.9 | 62.7 |
| 1948 | 67.2 | 64.6 | 69.9 | 68.0 | 65.5 | 71.0 | 60.0 | 58.1 | 62.5 |
| 1947 | 66.8 | 64.4 | 69.7 | 67.6 | 65.2 | 70.5 | 59.7 | 57.9 | 61.9 |
| 1946 | 66.7 | 64.4 | 69.4 | 67.5 | 65.1 | 70.3 | 59.1 | 57.5 | 61.0 |
| 1945 | 65.9 | 63.6 | 67.9 | 66.8 | 64.4 | 69.5 | 57.7 | 56.1 | 59.6 |
| 1944 | 65.2 | 63.6 | 66.8 | 66.2 | 64.5 | 68.4 | 56.6 | 55.8 | 57.7 |
| 1943 | 63.3 | 62.4 | 64.4 | 64.2 | 63.2 | 65.7 | 55.6 | 55.4 | 56.1 |
| 1942 | 66.2 | 64.7 | 67.9 | 67.3 | 65.9 | 69.4 | 56.6 | 55.4 | 58.2 |
| 1941 | 64.8 | 63.1 | 66.8 | 66.2 | 64.4 | 68.5 | 53.8 | 52.5 | 55.3 |
| 1940 | 62.9 | 60.8 | 65.2 | 64.2 | 62.1 | 66.6 | 53.1 | 51.5 | 54.9 |
| 1939 | 63.7 | 62.1 | 65.4 | 64.9 | 63.3 | 66.6 | 54.5 | 53.2 | 56.0 |
| 1938 | 63.5 | 61.9 | 65.3 | 65.0 | 63.2 | 66.8 | 52.9 | 51.7 | 54.3 |
| 1937 | 60.0 | 58.0 | 62.4 | 61.4 | 59.3 | 63.8 | 50.3 | 48.3 | 52.5 |
| 1936 | 58.5 | 56.6 | 60.6 | 59.8 | 58.0 | 61.9 | 49.0 | 47.0 | 51.4 |

See footnotes at end of table.

## Table 12. Estimated life expectancy at birth in years, by race and sex: Death-registration States, 1900–28, and United States, 1929–99—Con.

[For selected years, life table values shown are estimates; see Technical notes. Beginning 1970 excludes deaths of nonresidents of the United States; see Technical notes]

| Area and year | All races | | | White | | | Black[4] | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Both sexes | Male | Female | Both sexes | Male | Female | Both sexes | Male | Female |
| *United States—Con.* | | | | | | | | | |
| 1935 . . . . . . . . . . . . . . . . . . . . . . | 61.7 | 59.9 | 63.9 | 62.9 | 61.0 | 65.0 | 53.1 | 51.3 | 55.2 |
| 1934 . . . . . . . . . . . . . . . . . . . . . . | 61.1 | 59.3 | 63.3 | 62.4 | 60.5 | 64.6 | 51.8 | 50.2 | 53.7 |
| 1933 . . . . . . . . . . . . . . . . . . . . . . | 63.3 | 61.7 | 65.1 | 64.3 | 62.7 | 66.3 | 54.7 | 53.5 | 56.0 |
| 1932 . . . . . . . . . . . . . . . . . . . . . . | 62.1 | 61.0 | 63.5 | 63.2 | 62.0 | 64.5 | 53.7 | 52.8 | 54.6 |
| 1931 . . . . . . . . . . . . . . . . . . . . . . | 61.1 | 59.4 | 63.1 | 62.6 | 60.8 | 64.7 | 50.4 | 49.5 | 51.5 |
| 1930 . . . . . . . . . . . . . . . . . . . . . . | 59.7 | 58.1 | 61.6 | 61.4 | 59.7 | 63.5 | 48.1 | 47.3 | 49.2 |
| 1929 . . . . . . . . . . . . . . . . . . . . . . | 57.1 | 55.8 | 58.7 | 58.6 | 57.2 | 60.3 | 46.7 | 45.7 | 47.8 |
| *Death-registration States* | | | | | | | | | |
| 1928 . . . . . . . . . . . . . . . . . . . . . . | 56.8 | 55.6 | 58.3 | 58.4 | 57.0 | 60.0 | 46.3 | 45.6 | 47.0 |
| 1927 . . . . . . . . . . . . . . . . . . . . . . | 60.4 | 59.0 | 62.1 | 62.0 | 60.5 | 63.9 | 48.2 | 47.6 | 48.9 |
| 1926 . . . . . . . . . . . . . . . . . . . . . . | 56.7 | 55.5 | 58.0 | 58.2 | 57.0 | 59.6 | 44.6 | 43.7 | 45.6 |
| 1925 . . . . . . . . . . . . . . . . . . . . . . | 59.0 | 57.6 | 60.6 | 60.7 | 59.3 | 62.4 | 45.7 | 44.9 | 46.7 |
| 1924 . . . . . . . . . . . . . . . . . . . . . . | 59.7 | 58.1 | 61.5 | 61.4 | 59.8 | 63.4 | 46.6 | 45.5 | 47.8 |
| 1923 . . . . . . . . . . . . . . . . . . . . . . | 57.2 | 56.1 | 58.5 | 58.3 | 57.1 | 59.6 | 48.3 | 47.7 | 48.9 |
| 1922 . . . . . . . . . . . . . . . . . . . . . . | 59.6 | 58.4 | 61.0 | 60.4 | 59.1 | 61.9 | 52.4 | 51.8 | 53.0 |
| 1921 . . . . . . . . . . . . . . . . . . . . . . | 60.8 | 60.0 | 61.8 | 61.8 | 60.8 | 62.9 | 51.5 | 51.6 | 51.3 |
| 1920 . . . . . . . . . . . . . . . . . . . . . . | 54.1 | 53.6 | 54.6 | 54.9 | 54.4 | 55.6 | 45.3 | 45.5 | 45.2 |
| 1919 . . . . . . . . . . . . . . . . . . . . . . | 54.7 | 53.5 | 56.0 | 55.8 | 54.5 | 57.4 | 44.5 | 44.5 | 44.4 |
| 1918 . . . . . . . . . . . . . . . . . . . . . . | 39.1 | 36.6 | 42.2 | 39.8 | 37.1 | 43.2 | 31.1 | 29.9 | 32.5 |
| 1917 . . . . . . . . . . . . . . . . . . . . . . | 50.9 | 48.4 | 54.0 | 52.0 | 49.3 | 55.3 | 38.8 | 37.0 | 40.8 |
| 1916 . . . . . . . . . . . . . . . . . . . . . . | 51.7 | 49.6 | 54.3 | 52.5 | 50.2 | 55.2 | 41.3 | 39.6 | 43.1 |
| 1915 . . . . . . . . . . . . . . . . . . . . . . | 54.5 | 52.5 | 56.8 | 55.1 | 53.1 | 57.5 | 38.9 | 37.5 | 40.5 |
| 1914 . . . . . . . . . . . . . . . . . . . . . . | 54.2 | 52.0 | 56.8 | 54.9 | 52.7 | 57.5 | 38.9 | 37.1 | 40.8 |
| 1913 . . . . . . . . . . . . . . . . . . . . . . | 52.5 | 50.3 | 55.0 | 53.0 | 50.8 | 55.7 | 38.4 | 36.7 | 40.3 |
| 1912 . . . . . . . . . . . . . . . . . . . . . . | 53.5 | 51.5 | 55.9 | 53.9 | 51.9 | 56.2 | 37.9 | 35.9 | 40.0 |
| 1911 . . . . . . . . . . . . . . . . . . . . . . | 52.6 | 50.9 | 54.4 | 53.0 | 51.3 | 54.9 | 36.4 | 34.6 | 38.2 |
| 1910 . . . . . . . . . . . . . . . . . . . . . . | 50.0 | 48.4 | 51.8 | 50.3 | 48.6 | 52.0 | 35.6 | 33.8 | 37.5 |
| 1909 . . . . . . . . . . . . . . . . . . . . . . | 52.1 | 50.5 | 53.8 | 52.5 | 50.9 | 54.2 | 35.7 | 34.2 | 37.3 |
| 1908 . . . . . . . . . . . . . . . . . . . . . . | 51.1 | 49.5 | 52.8 | 51.5 | 49.9 | 53.3 | 34.9 | 33.8 | 36.0 |
| 1907 . . . . . . . . . . . . . . . . . . . . . . | 47.6 | 45.6 | 49.9 | 48.1 | 46.0 | 50.4 | 32.5 | 31.1 | 34.0 |
| 1906 . . . . . . . . . . . . . . . . . . . . . . | 48.7 | 46.9 | 50.8 | 49.3 | 47.3 | 51.4 | 32.9 | 31.8 | 33.9 |
| 1905 . . . . . . . . . . . . . . . . . . . . . . | 48.7 | 47.3 | 50.2 | 49.1 | 47.6 | 50.6 | 31.3 | 29.6 | 33.1 |
| 1904 . . . . . . . . . . . . . . . . . . . . . . | 47.6 | 46.2 | 49.1 | 48.0 | 46.6 | 49.5 | 30.8 | 29.1 | 32.7 |
| 1903 . . . . . . . . . . . . . . . . . . . . . . | 50.5 | 49.1 | 52.0 | 50.9 | 49.5 | 52.5 | 33.1 | 31.7 | 34.6 |
| 1902 . . . . . . . . . . . . . . . . . . . . . . | 51.5 | 49.8 | 53.4 | 51.9 | 50.2 | 53.8 | 34.6 | 32.9 | 36.4 |
| 1901 . . . . . . . . . . . . . . . . . . . . . . | 49.1 | 47.6 | 50.6 | 49.4 | 48.0 | 51.0 | 33.7 | 32.2 | 35.3 |
| 1900 . . . . . . . . . . . . . . . . . . . . . . | 47.3 | 46.3 | 48.3 | 47.6 | 46.6 | 48.7 | 33.0 | 32.5 | 33.5 |

[1]Alaska included in 1959 and Hawaii in 1960.
[2]Deaths based on a 50-percent sample.
[3]Figures by race exclude data for residents of New Jersey; see Technical notes.
[4]Prior to 1970, data for the black population are not available. Data shown for 1900–69 are for the nonwhite population. See Technical notes.

# Technical notes

*The life table program*—Three series of complete life tables are prepared by the National Center for Health Statistics for the U.S. population—decennial, annual preliminary, and annual final. The U.S. decennial life tables are based on decennial census data and deaths for a 3-year period around the census year. Preliminary life tables are based on a substantial sample (approximately 90 percent) of death records. Estimates of life expectancy from the preliminary series are published annually. The annual final life tables (referred to in this section as "annual life tables") are based on a complete count of all reported deaths.

Available since 1945, the annual life tables are based on deaths occurring during the calendar year and on midyear postcensal population estimates provided by the U.S. Bureau of the Census. From 1945 to 1996, the annual life tables were abridged life tables and were constructed by reference to a standard table (3). Beginning with 1997 mortality data, complete life tables are constructed using a new methodology (4, 5). Also for 1997, life expectancy and other life table values were shown for ages 85 to 100 years for the first time as part of the annual U.S. life tables. Previously, the annual life tables were closed at age 85. Extension of the oldest age interval was implemented by NCHS for several reasons: survival in the United States is such that approximately one-third of the population survives beyond age 85; improvements have occurred in age reporting at older ages; and high-quality old-age mortality data are available from the Medicare program.

*Geographic coverage*—The geographic areas covered in life tables before 1929–31 were limited to the death-registration areas. Life tables for 1900–1902 and 1909–11 were constructed using mortality data from the 1900 death-registration States (10 States and the District of Columbia) and for 1919–21 from the 1920 death-registration States (34 States and the District of Columbia). The tables for 1929–31 through 1958 cover the conterminous United States. Decennial life table values for the 3-year period 1959–61 were derived from data that include both Alaska and Hawaii for each year (tables 10 and 11). Data for each year shown in table 12 include Alaska beginning in 1959 and Hawaii beginning in 1960. However, it is not believed that the inclusion of these two States materially affects life table values.

*Revised life table values, 1961–89*—Life table values for 1960–69, 1970–79, and 1980–89 were constructed using the U.S. decennial life tables for 1959–61, 1969–71, and 1979–81, respectively, as the standard tables. The life table values for years prior to 1989 appearing in this publication are based on revised intercensal estimates of the populations for those years. As a result, the life table values for these years may differ from the life table values for those years published in *Vital Statistics of the United States* for 1989 and earlier years. Life table values for 1991 and later are based on postcensal population estimates and will be recalculated when intercensal estimates become available.

*New Jersey data, 1962–64*—The life tables for 1962 and 1963 for the six population groups involving race do not include data from New Jersey, which omitted the item on race from its certificates of live birth, death, and fetal death in use at the beginning of 1962. The item was restored during the latter part of 1962. However, the certificate revision without this item was used for most of 1962 as well as for 1963. For computing vital rates, populations by age, race, and sex (excluding New Jersey) were estimated to obtain comparable denominators.

Approximately 7 percent of the New Jersey death records for 1964 did not contain the race designation. When the records were being electronically processed for this State, the "race not stated" deaths were proportionally allocated to white or to black.

*Nonresidents*—Beginning in 1970, the deaths of nonresidents of the United States have been excluded from the life table statistics.

*Estimation of life table functions*—For some years, it was necessary to estimate life table functions for some race-sex groups. In tables 10 and 11, figures for the black population during the periods 1949–51 and 1959–61 were estimated using figures for the nonwhite population. Life table functions were also missing in tables 10 and 11 for race-sex groups for the periods from 1900–1902 to 1939–41. Figures were missing for the following groups:

| Years | Race and sex |
|---|---|
| 1900–1902 . . . . . . . . | Total white, total black |
| 1909–11 . . . . . . . . . | Total white, total black |
| 1919–21 . . . . . . . . . | Total, male, female, total white, total black |
| 1929–31 . . . . . . . . . | Total, male, female, total white, total black |

These figures were estimated by weighted averages using population distributions as the weights. For example, life expectancy at age 20 years for the total black population was estimated by a weighted average of black male and black female life expectancies at age 20, using as weights the population distribution by sex of the black population age 20 years.

Annual life tables were initiated in 1945 for white males, white females, all other males, and all other females. The figures in table 12 by race and sex for the following years were estimated using a procedure other than the abridged life table methodology (11).

| Years | Race and sex |
|---|---|
| 1900–45 . . . . . . . . . . . . . . . . . | Total |
| 1900–47 . . . . . . . . . . . . . . . . . | Male |
| 1900–47 . . . . . . . . . . . . . . . . . | Female |
| 1900–50 . . . . . . . . . . . . . . . . . | White |
| 1900–44 . . . . . . . . . . . . . . . . . | White male |
| 1900–44 . . . . . . . . . . . . . . . . . | White female |

Annual life table functions were not calculated for the black population prior to 1970. In table 12, life expectancy for the black population for years prior to 1970 are estimated using figures for the total nonwhite population.

*Population bases for computing life tables*—The population used for computing life table values shown in this section (furnished by the U.S. Bureau of the Census) represents the resident population of the United States. The age-specific populations used for computing the 1999 life table values are based on the July 1, 1999, population estimates that are consistent with the 1990 census (12). The 1990 census counts by race and age were modified. Race was modified to be consistent with the Office of Management and Budget categories and historical categories for mortality data. The modification procedures for race and age are described in a census report (13).

*Medicare data*—Death rates at the oldest ages based on Medicare data are known to be more accurate than those based on vital statistics and census data. Consequently, $q_x$ values calculated for ages 85 to 99 years are based on Medicare data prepared by the Health Care Financing Administration (HCFA). Medicare data were limited to the

group insured for hospital insurance as age reporting is considered best among this group (5, 9, 10). For the 1999 life tables, 1997 Medicare data was used as 1999 data were not available in time for the preparation of this report.

## Methodology

A more detailed treatment of the methodology used to calculate these life tables is contained in a separate report (4). Calculation of the complete life table is derived from the probability of death ($q_x$), which depends on the number of deaths ($D_x$) and the midyear population ($P_x$) for each single year of age ($x$) observed during the calendar year of interest.

*Adjustment for deaths for which age was not reported*—An adjustment must be made to account for the small proportion of deaths each year for which age is not reported. The data are aggregated into 5-year age groups for those aged 5 years and over and into single years of age for those under 5 years. The number of deaths in each age category is adjusted proportionally to account for those with not-stated ages. The following factor is used to make the adjustment. This factor ($F$) is calculated for each race-sex group for which life tables are constructed.

$$F = \frac{D}{D^a} \qquad [1]$$

where $D$ is the total number of deaths and $D^a$ is the total number of deaths for which age is stated. $F$ is then applied by multiplying it times the number of deaths in each age group. Table I shows values for $F$ by race and sex used to adjust the 1999 mortality data.

*Interpolation of $P_x$ and $D_x$*—Anomalies, both random and those associated with reporting age at death, can be problematic when using vital statistics and census data by single years of age to estimate the probability of death (1). Graduation techniques are often used to eliminate these anomalies and to derive a smooth curve by age. Beer's ordinary minimized fifth difference formula is used to obtain smoothed values of $P_x$ and $D_x$ (see reference 4 for details on the application of Beer's method).

*Calculation of $q_0$*—$q_0$ is calculated by using a birth cohort method employing a separation factor ($f$) defined as the proportion of infant deaths in year $t$ occurring to infants born in the previous year ($t$–1). $f$ can be calculated by categorizing infant deaths by date of birth. The probability of death in the first year is calculated as

$$q_0 = \frac{D_0 \, (1-f)}{B^t} + \frac{D_0 \, f}{B^{t-1}} \qquad [2]$$

## Table I. Values for $F$ used to adjust for not-stated age based on 1999 mortality data

| Race and sex | Total deaths | Total deaths for which age was not stated | $F$ |
|---|---|---|---|
| Total | 2,391,399 | 356 | 1.00014889 |
| Male | 1,175,460 | 277 | 1.00023571 |
| Female | 1,215,939 | 79 | 1.00006497 |
| White | 2,061,348 | 271 | 1.00013148 |
| Male | 1,005,335 | 213 | 1.00021191 |
| Female | 1,056,013 | 58 | 1.00005493 |
| Black | 285,064 | 77 | 1.00027019 |
| Male | 145,703 | 58 | 1.00039823 |
| Female | 139,361 | 19 | 1.00013636 |

where $D_0$ is the number of infant deaths adjusted for not-reported age, and $B^t$ and $B^{t-1}$ are the numbers of births in years $t$ and $t$–1 respectively. Table II shows separation factors and numbers of births by race and sex for 1998–99.

*Calculation of $q_x$ for ages 1–84*—$q_x$ is calculated assuming that $l_x$ (number of survivors at exact age $x$ in the life table population) declines linearly between $x$ and $x$+1, i.e., that deaths between exact age $x$ and $x$+1 occur on average at age $x$+½. This simplification is generally considered acceptable when age intervals are 1 year of age in length (1). Under this assumption, $l_x = L_x + \frac{1}{2}d_x$ where $L_x$ is the average life table population at risk of dying between ages $x$ and $x$+1 and $d_x$ is the number of deaths occurring between age $x$ and $x$+1. $q_x$ is then

$$q_x = \frac{d_x}{l_x} = \frac{d_x}{L_x + \frac{1}{2}\,d_x}$$

One can make the same assumption for the observed population, i.e., that the observed population aged $x$ at risk of dying at the beginning of the year ($N_x$) declines linearly between ages $x$ and $x$+1. Under this assumption, $N_x = P_x + \frac{1}{2}D_x$ where $P_x$ is the midyear population or average observed population at risk of dying between ages $x$ and $x$+1 and $D_x$ is the observed number of deaths occurring between ages $x$ and $x$+1. $q_x$ is calculated as

$$q_x = \frac{D_x}{N_x} = \frac{D_x}{P_x + \frac{1}{2}\,D_x} \qquad [3]$$

For $x$ = 1 to 4, $D_x$ is the observed number of deaths adjusted for not-stated age and $P_x$ is obtained by Beer's interpolation formula. For $x$ = 5 to 84, both $D_x$ and $P_x$ are obtained by interpolation (4).

*Use of Medicare data at ages 85 to 99*—There is ample evidence that the rate of increase in $q_x$ declines above age 85 (4, 10, 14–16). The change in $q_x$ for ages over 85 years can be expressed using the formula

$$q_x = q_{x-1} \bullet e^{k_x} \qquad [4]$$

where $k_x$ denotes the age-specific rate of mortality change with age (10,15). Solving for $k_x$ gives

$$k_x = \ln(q_x) - \ln(q_{x-1}) \qquad [5]$$

Values for $k_x$ are then obtained from the Medicare data. Table III shows values for $k$ by age, race, and sex based on 1996 Medicare data. These data show clearly a declining rate of increase in $q_x$ above age 85 years. These $k_x$ values are then used to obtain $q_x$ values for ages 85 to 99 using equation 4. This method allows for flexibility in cases where the Medicare data are not available in a timely fashion. In these cases, Medicare data for the previous year can be used to calculate $k_x$ values. Finally, $_\infty q_{100}$ is set equal to 1.0 since all will die at some point in this open-ended age interval. Once $q_x$ is obtained for each single year of age, the other life table functions may be easily calculated.

*Survivor function ($l_x$)*—The life table radix, $l_0$, is set at 100,000. For ages greater than 0, the number of survivors remaining at exact age $x$ is calculated as

$$l_x = l_{x-1} \, (1 - q_{x-1}) \qquad [6]$$

*Decrement function ($d_x$)*—The number of deaths occurring between age $x$ and $x$ + 1 is calculated from the survivor function.

$$d_x = l_x - l_{x+1} = l_x \, q_x \qquad [7]$$

Note that $_\infty d_{100} = {}_\infty l_{100}$ since $_\infty q_{100} = 1.0$.

**Table II. Births in 1998 and 1999, deaths in 1999 of infants born in 1998 and 1999, and separation factors by race and sex: United States**

| | Total | | | White | | | Black | | |
|---|---|---|---|---|---|---|---|---|---|
| | Both sexes | Male | Female | Both sexes | Male | Female | Both sexes | Male | Female |
| **Births** | | | | | | | | | |
| 1998 . . . . . . . . . . . . . . . . . . . . . | 3,941,553 | 2,016,205 | 1,925,348 | 3,118,727 | 1,596,704 | 1,522,023 | 609,902 | 310,107 | 299,795 |
| 1999 . . . . . . . . . . . . . . . . . . . . . | 3,959,417 | 2,026,854 | 1,932,563 | 3,132,501 | 1,605,603 | 1,526,898 | 605,970 | 307,670 | 298,300 |
| **Deaths in 1999 of infants born in** | | | | | | | | | |
| 1998 . . . . . . . . . . . . . . . . . . . . . | 3,514 | 2,029 | 1,485 | 2,287 | 1,346 | 941 | 1,066 | 593 | 473 |
| 1999 . . . . . . . . . . . . . . . . . . . . . | 24,384 | 13,597 | 10,787 | 15,760 | 8,843 | 6,917 | 7,737 | 4,292 | 3,445 |
| Separation factor (f) . . . . . . . . . . . . | 0.126 | 0.130 | 0.121 | 0.127 | 0.132 | 0.120 | 0.121 | 0.121 | 0.121 |

**Table III. $k$ values by age, race, and sex based on insured Medicare data: United States, 1997**

| | Total | | | White | | | Black | | |
|---|---|---|---|---|---|---|---|---|---|
| Age | Both sexes | Male | Female | Both sexes | Male | Female | Both sexes | Male | Female |
| 84–85 . . . . . . . . . . . . . | 0.092590 | 0.089728 | 0.103281 | 0.093742 | 0.09136 | 0.10428 | 0.071864 | 0.066047 | 0.082589 |
| 85–86 . . . . . . . . . . . . . | 0.090210 | 0.087018 | 0.100251 | 0.091842 | 0.08897 | 0.10185 | 0.070794 | 0.064457 | 0.081079 |
| 86–87 . . . . . . . . . . . . . | 0.087830 | 0.084308 | 0.097221 | 0.089942 | 0.08658 | 0.09942 | 0.069724 | 0.062867 | 0.079569 |
| 87–88 . . . . . . . . . . . . . | 0.085450 | 0.081598 | 0.094191 | 0.088042 | 0.08419 | 0.09699 | 0.068654 | 0.061277 | 0.078059 |
| 88–89 . . . . . . . . . . . . . | 0.083070 | 0.078888 | 0.091161 | 0.086142 | 0.08180 | 0.09456 | 0.067584 | 0.059687 | 0.076549 |
| 89–90 . . . . . . . . . . . . . | 0.080690 | 0.076178 | 0.088131 | 0.084242 | 0.07941 | 0.09213 | 0.066514 | 0.058097 | 0.075039 |
| 90–91 . . . . . . . . . . . . . | 0.078310 | 0.073468 | 0.085101 | 0.082342 | 0.07702 | 0.08970 | 0.065444 | 0.056507 | 0.073529 |
| 91–92 . . . . . . . . . . . . . | 0.075930 | 0.070758 | 0.082071 | 0.080442 | 0.07463 | 0.08727 | 0.064374 | 0.054917 | 0.072019 |
| 92–93 . . . . . . . . . . . . . | 0.073550 | 0.068048 | 0.079041 | 0.078542 | 0.07224 | 0.08484 | 0.063304 | 0.053327 | 0.070509 |
| 93–94 . . . . . . . . . . . . . | 0.071170 | 0.065338 | 0.076011 | 0.076642 | 0.06985 | 0.08241 | 0.062234 | 0.051737 | 0.068999 |
| 94–95 . . . . . . . . . . . . . | 0.068790 | 0.062628 | 0.072981 | 0.074742 | 0.06746 | 0.07998 | 0.061164 | 0.050147 | 0.067489 |
| 95–96 . . . . . . . . . . . . . | 0.066410 | 0.059918 | 0.069951 | 0.072842 | 0.06507 | 0.07755 | 0.060094 | 0.048557 | 0.065979 |
| 96–97 . . . . . . . . . . . . . | 0.064030 | 0.057208 | 0.066921 | 0.070942 | 0.06268 | 0.07512 | 0.059024 | 0.046967 | 0.064469 |
| 97–98 . . . . . . . . . . . . . | 0.061650 | 0.054498 | 0.063891 | 0.069042 | 0.06029 | 0.07269 | 0.057954 | 0.045377 | 0.062959 |
| 98–99 . . . . . . . . . . . . . | 0.059270 | 0.051788 | 0.060861 | 0.067142 | 0.05790 | 0.07026 | 0.056884 | 0.043787 | 0.061449 |

*Stationary population ($L_x$)*—The stationary population at ages 1 to 99 years is calculated assuming that the survivor function declines linearly between age $x$ and $x+1$. This gives the formula

$$L_x = \tfrac{1}{2}(l_x + l_{x+1}) = l_x - \tfrac{1}{2}d_x \qquad [8]$$

For $x = 0$, the separation factor $f$ is used to calculate $L_0$.

$$L_0 = f\,l_0 + (1 - f)\,l_1$$

$_\infty L_{100}$ is calculated by surviving the life table cohort from age 100 using equations 4, 5, and 6 until $L_x$ at these ages is essentially zero (somewhere between ages 110 and 120). $q_x$ for these ages can be extrapolated from the Medicare data using equation 4. However, $k_x$ values must be estimated for these ages. $k_x$ can be modeled as a linear function of age

$$k_x = k_{85} + (x - 85)s \qquad [9]$$

where $s$ is the slope of the change in $k_x$ by age and $k_{85}$ is calculated as $[\ln(q_{88}/q_{81})]/7$ in order to minimize the effects of random fluctuations (10, 16). $s$ can be obtained by treating equation 9 as a linear regression model. Calculated values for $s$ are shown in table IV. The predicted values for $k_x$ are then used to calculate $q_x$ above age 100 using equation 4. The corresponding $L_x$ values for ages 100 years and over are then summed to give $_\infty L_{100}$.

*Person-years lived at and above age $x$ ($T_x$)*—$T_x$ is calculated by summing $L_x$ values at and above age $x$.

$$T_x = \sum_{t=0}^{\infty} L_{x+t} \qquad [10]$$

*Life expectancy at age $x$ ($e_x$)*—Life expectancy at exact age $x$ is calculated as

$$e_x = \frac{T_x}{l_x} \qquad [11]$$

**Table IV. Slope of the change in $k$ value ($s$) by race and sex**

| Race and sex | $s$ |
|---|---|
| Total, both sexes . . . . . . . . . . . . . | −0.002379 |
| Male . . . . . . . . . . . . . . . . . . | −0.002710 |
| Female. . . . . . . . . . . . . . . . . . | −0.003031 |
| White, both sexes. . . . . . . . . . . . . | −0.001902 |
| Male . . . . . . . . . . . . . . . . . . | −0.002390 |
| Female. . . . . . . . . . . . . . . . . . | −0.002427 |
| Black, both sexes . . . . . . . . . . . . . | −0.001074 |
| Male . . . . . . . . . . . . . . . . . . | −0.001586 |
| Female. . . . . . . . . . . . . . . . . . | −0.001512 |

## Abridging the complete life table

An abridged or collapsed version of the complete life table can be easily calculated in which life table functions are shown for 5-year rather than single-year age intervals. It is often desirable to summarize the life table and save space when publishing life table data by single years of age is unnecessary (17). The abridgement of the complete life table is simplified by an important property of three of the six life table functions. The $l_x$, $T_x$, and $e_x$ functions describe exact age $x$, i.e., the beginning of the age interval $x$ to $x+n$ ($n$ denotes the length of the age interval—for 5-year age intervals $n = 5$). Life expectancy at age 20 ($e_{20}$), for example, has the same value regardless of whether the age interval is 20–21 years or 20–25 years. Thus, the values $l_x$, $T_x$, and $e_x$ can be extracted at 5-year intervals from the complete life table and placed into the abridged life table (compare $l_x$, $T_x$, and $e_x$ in table V with the same functions in table 1). It is also illustrative to compare values for $e_x$ and $l_x$ in tables A and B with their corresponding values presented in tables 1–9. The $q_x$, $d_x$, and $L_x$ functions, in contrast, describe the age interval $x$ to $x+n$. In

fact, for abridged life tables, the notation for these functions is different ($_nq_x$, $_nd_x$, $_nL_x$). Thus, $_5q_{20}$ is the probability of dying between ages 20 and 25 years and will obviously be somewhat larger than $q_{20}$, the probability of dying between ages 20 and 21 years. Taking this into account, $_nq_x$, $_nd_x$, and $_nL_x$ must be recalculated in the abridged life table. It is simplest to begin with $_nd_x$. The calculations are made for all but the final age interval as follows:

$$_nd_x = l_x - l_{x+n}$$

$$_nq_x = \frac{_nd_x}{l_x}$$

$$_nL_x = T_x - T_{x+n}$$

Note that for the open-ended interval, ages 100 and over: $_\infty d_{100} = l_{100}$, $_\infty q_{100} = 1.0$, and $_\infty L_{100} = T_{100}$.

Table V shows each of the life table functions for the 1999 U.S. total population abridged from table 1.

## Table V. Abridged life table for the total population: United States, 1999

| Age | Proportion dying during age interval $q_x$ | Number living at beginning of age interval $l_x$ | Number dying during age interval $d_x$ | Stationary population in the age interval $L_x$ | Stationary population in this and all subsequent age intervals $T_x$ | Life expectancy at beginning of age interval $e_x$ |
|---|---|---|---|---|---|---|
| 0–1 . . . . . . . . . . . . . . . . . . . . . | 0.00706 | 100,000 | 706 | 99,384 | 7,672,728 | 76.7 |
| 1–5 . . . . . . . . . . . . . . . . . . . . . | 0.00138 | 99,294 | 137 | 396,850 | 7,573,344 | 76.3 |
| 5–10 . . . . . . . . . . . . . . . . . . . . | 0.00088 | 99,157 | 87 | 495,553 | 7,176,494 | 72.4 |
| 10–15 . . . . . . . . . . . . . . . . . . . | 0.00105 | 99,070 | 104 | 495,154 | 6,680,941 | 67.4 |
| 15–20 . . . . . . . . . . . . . . . . . . . | 0.00349 | 98,966 | 345 | 494,048 | 6,185,787 | 62.5 |
| 20–25 . . . . . . . . . . . . . . . . . . . | 0.00467 | 98,621 | 461 | 491,972 | 5,691,739 | 57.7 |
| 25–30 . . . . . . . . . . . . . . . . . . . | 0.00485 | 98,160 | 476 | 489,624 | 5,199,767 | 53.0 |
| 30–35 . . . . . . . . . . . . . . . . . . . | 0.00589 | 97,684 | 575 | 487,046 | 4,710,143 | 48.2 |
| 35–40 . . . . . . . . . . . . . . . . . . . | 0.00811 | 97,109 | 788 | 483,681 | 4,223,097 | 43.5 |
| 40–45 . . . . . . . . . . . . . . . . . . . | 0.01174 | 96,321 | 1,131 | 478,946 | 3,739,416 | 38.8 |
| 45–50 . . . . . . . . . . . . . . . . . . . | 0.01753 | 95,190 | 1,669 | 472,027 | 3,260,470 | 34.3 |
| 50–55 . . . . . . . . . . . . . . . . . . . | 0.02564 | 93,521 | 2,398 | 461,981 | 2,788,443 | 29.8 |
| 55–60 . . . . . . . . . . . . . . . . . . . | 0.04028 | 91,123 | 3,670 | 447,053 | 2,326,462 | 25.5 |
| 60–65 . . . . . . . . . . . . . . . . . . . | 0.06212 | 87,453 | 5,433 | 424,515 | 1,879,409 | 21.5 |
| 65–70 . . . . . . . . . . . . . . . . . . . | 0.09432 | 82,020 | 7,736 | 391,815 | 1,454,894 | 17.7 |
| 70–75 . . . . . . . . . . . . . . . . . . . | 0.14115 | 74,284 | 10,485 | 346,326 | 1,063,079 | 14.3 |
| 75–80 . . . . . . . . . . . . . . . . . . . | 0.20804 | 63,799 | 13,273 | 286,913 | 716,753 | 11.2 |
| 80–85 . . . . . . . . . . . . . . . . . . . | 0.31784 | 50,526 | 16,059 | 213,410 | 429,840 | 8.5 |
| 85–90 . . . . . . . . . . . . . . . . . . . | 0.46485 | 34,467 | 16,022 | 131,252 | 216,430 | 6.3 |
| 90–95 . . . . . . . . . . . . . . . . . . . | 0.61935 | 18,445 | 11,424 | 61,192 | 85,178 | 4.6 |
| 95–100 . . . . . . . . . . . . . . . . . . . | 0.75858 | 7,021 | 5,326 | 19,623 | 23,986 | 3.4 |
| 100+ . . . . . . . . . . . . . . . . . . . . | 1.00000 | 1,695 | 1,695 | 4,363 | 4,363 | 2.6 |

## Contents

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