







## National Center for Health Statistics

# Deaths: Leading Causes for 2003


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This report from the Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics (NCHS) presents findings from the final 2003 data on the 10 leading causes of death in the United States. It summarizes a more detailed forthcoming report (1). Key findings, illustrated in [Tables 1–4](#)  [PDF – 148 KB], and [Figure 1](#) show:

## The 2003 mortality experience

- In 2003, the 10 leading causes of death were ([Table 1](#)  [PDF – 148 KB]):
  - Diseases of heart (heart disease)
  - Malignant neoplasms (cancer)
  - Cerebrovascular diseases (stroke)
  - Chronic lower respiratory diseases (CLRD)
  - Accidents (unintentional injuries)
  - Diabetes mellitus (diabetes)
  - Influenza and pneumonia
  - Alzheimer's disease
  - Nephritis, nephritic syndrome and nephrosis (kidney disease)
  - Septicemia
- These leading causes accounted for about 78 percent of all U.S. deaths in 2003.
- The top two causes, heart disease and cancer, accounted for roughly one-half (50.7 percent) of all deaths in 2003.
- Despite some changes in the number of deaths due to specific causes, the actual ranking of the 10 leading causes remained unchanged from 2002 to 2003.
- Leading causes of death varied substantially by age (1).
  - Unintentional injuries, cancer, Assault (homicide), heart disease and Congenital malformations, deformations and chromosomal abnormalities were the major causes of death in the population aged 1–14 years.
  - Unintentional injuries, cancer, homicide, Intentional self-harm (suicide), and heart disease were the top five killers of the population in the 15–34 year age group.
  - Human immunodeficiency virus (HIV disease) was among the 10 leading causes of death for the population aged 20–54 years.
  - Unintentional injuries, suicide, and homicide had lower rankings among the age 45 and over population than among the under age 45 population; chronic diseases such as heart disease, cancer, stroke, CLRD, and diabetes were more prominent leading causes in older age groups. Alzheimer's disease was the fifth leading cause of death in the population aged 65 years and over.
- Heart disease and cancer were the first and second leading causes of death, respectively, of both men and women ([Table 2](#)  [PDF – 148 KB]). Both populations also had in common the sixth and ninth leading causes, which were diabetes and Nephritis, nephrotic syndrome and nephrosis (kidney disease). However, men and women diverged on the ranking of other leading causes. For example, unintentional injuries were the third leading cause of death for men but the seventh for women. Alzheimer's disease ranked 10th for males but 5th for females.
- Leading causes varied by major race group ([Table 3](#)  [PDF – 148 KB]).
  - The four major race groups, White, Black or African American, American Indian or Alaska Native (AIAN), and Asian or Pacific Islander (API), shared 7 of the 10 leading causes of death. The ranking of these causes was not necessarily the same across populations. For example, heart disease and cancer were the first and second leading causes of

death for the white, black, and AIAN populations. However, for the API population, cancer was the top killer, followed by heart disease. These top two causes accounted for 51.2 percent of all deaths in the white population, 48.1 percent in the black population, 37.0 percent in the AIAN population, and 51.5 percent in the API population.

- For three race groups, at least one of the 10 leading causes was unique to each group. For the AIAN population, Chronic liver disease and cirrhosis ranked fifth, but was not ranked in the top 10 for the other 3 race groups. Homicide ranked sixth and HIV disease ninth for the black population, whereas Alzheimer's disease ranked sixth for the white population; these causes were not ranked among the top 10 for the other race groups.
- Leading causes varied by Hispanic origin ([Table 4](#)  [PDF - 148 KB]).
  - Heart disease and cancer were the first and second leading causes of death for Hispanics as well as the total non-Hispanic, non-Hispanic white, and non-Hispanic black populations. In general, these 4 race-ethnic groups had 6 of the 10 leading causes in common.
  - However, the groups also had interesting differences. For example, in the 3 non-Hispanic groups, Chronic liver disease and cirrhosis was not a top 10 killer; however, this cause ranked sixth among Hispanics. Unintentional injuries accounted for roughly 9 percent (ranked third) of all Hispanic deaths compared with roughly 4 percent (ranked fifth) in the total non-Hispanic, non-Hispanic white, and non-Hispanic black populations. The higher ranking of deaths due to unintentional injuries in the Hispanic population partly reflects the comparatively younger age distribution of this population.
- The top five leading causes of infant death in 2003 were, in order of rank, Congenital malformations, deformations and chromosomal abnormalities, which accounted for one-fifth of all infant deaths; Disorders related to short gestation and low birth weight, not elsewhere classified; Sudden infant death syndrome (SIDS); Newborn affected by maternal complications of pregnancy; and Newborn affected by complications of placenta, cord and membranes. From 2002 to 2003, the ranking of the 10 leading causes of infant death did not change (1).

## Trends

- The top five causes, heart disease, cancer, stroke, CLRD, and unintentional injuries, accounted for about 67 percent of all deaths in 2003, down from 76 percent in 1980 ([Figure 1](#)). Much of this progress can be attributed to declines in the mortality burden of heart disease relative to other causes.
- The proportion of deaths due to heart disease, stroke, and unintentional injuries has trended downward, whereas that of cancer and CLRD has trended upward between 1980 and 2003.

## Technical Notes

### Cause-of-death ranking

Cause-of-death ranking is a useful tool for illustrating the relative burden of cause-specific mortality. However, it should be used with a clear understanding of what the rankings mean. Literally, the rankings denote the most frequently occurring causes of death among those causes eligible to be ranked. The rankings do not necessarily denote the causes of death of greatest public health importance.

### Nature and sources of data

Data in this report are based on information from all death certificates filed in the 50 states and the District of Columbia in 2003. The U.S. Standard Certificate of Death—which is used as a model by the states—was revised for 2003 (2,3). Prior to this, it had last been revised for 1989 (4,5). This report includes data for five areas (California, Idaho, Montana, New York City, and New York State) that implemented the 2003 revision in 2003, as well as for the remaining 46 states and the District of Columbia that continued to use the 1989 revision in 2003. Most of the items presented in this report are largely comparable despite changes to item wording and format in 2003; hence, data from both groups of reporting areas are combined unless otherwise stated.


Information from death certificates is coded by the states and provided to the National Center for Health Statistics (NCHS) through the Vital Statistics Cooperative Program and from copies of the original certificates received by NCHS from the state registration offices. In 2003, all the states and the District of Columbia participated in this program and submitted part or all of the mortality data for 2003 in electronic data files to NCHS.

## Race, multiple race, and Hispanic origin





Race and Hispanic origin are reported separately on the death certificate. Therefore, data shown by race include persons of Hispanic or non-Hispanic origin, and data for Hispanic origin include persons of any race. In this report, unless otherwise specified, deaths of Hispanic origin are included in the totals for each race group—White, Black or African American, American Indian or Alaska Native (AIAN), and Asian or Pacific Islander (API)—according to the decedent’s race as reported on the death certificate. Data shown for Hispanic persons include all persons of Hispanic origin of any race.

The 2003 revision of the U.S. Standard Certificate of Death allows the reporting of more than one race (multiple races) (3). This change was implemented to reflect the increasing diversity of the U.S. population and is consistent with the decennial census. The race and ethnicity items on the revised certificate are compliant with the new standards issued by the Office of Management and Budget (OMB) in 1997, which mandate the collection of more than one race for federal data (6). In addition, the new certificate is compliant with the OMB-mandated minimum of five races to be reported for federal data. Multiple race includes any combination of white, black or African American, AIAN, and API. If two or more specific subgroups such as Korean and Chinese are reported, these count as a single race of Asian rather than as multiple races.

In 2003, multiple race was reported on the revised death certificates of California, Idaho, Montana, and New York, as well as on the unrevised certificates of Hawaii, Maine, and Wisconsin. More than one race was reported for 0.6 percent of the records in the seven states for which multiple race reporting has been implemented. Data from the remaining 43 states and the District of Columbia are based on the 1989 revision of the U.S. Standard Certificate of Death, which follows the older 1977 OMB standard of allowing only a single race to be reported (4,7). In addition, these states report a minimum of four races as stipulated by said standard: white, black or African American, AIAN, and API.

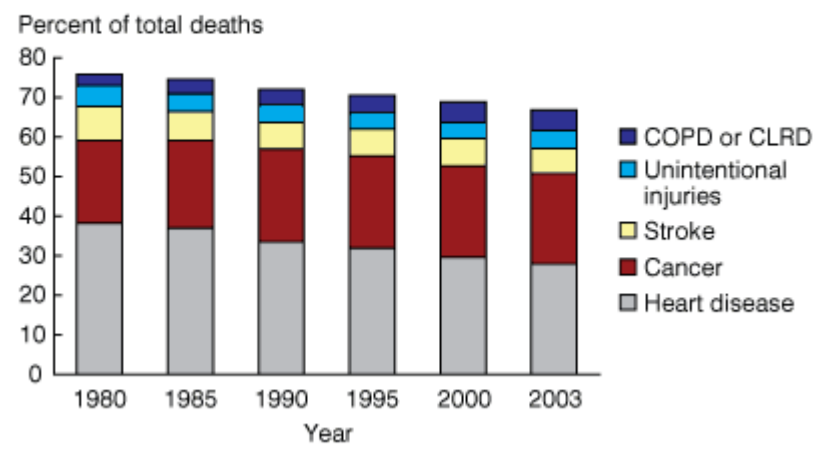
In order to provide uniformity and comparability of the data during the transition to the new multiple-race format, it was necessary to “bridge” the responses of those who reported multiple races to one, single race in a procedure similar to that used to bridge multiracial population estimates (8,9). Multiracial decedents are imputed to a single race (either white, black, AIAN, or API) according to their combination of races, Hispanic origin, sex, and age indicated on the death certificate. See the [imputation procedure](#)  [PDF – 165 KB] for more details.

## References

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- 9. Schenker N, Parker JD. From single-race reporting to multiple-race reporting: Using imputation methods to bridge the transition. *Stat Med*. 22:1571-87. 2003.

## Figures

Figure 1. Percentage of total deaths for the top five leading causes, all races, both sexes: 1980-2003



SOURCE: CDC/NCHS, National Vital Statistics System, Mortality.