



2023 Heart Disease and Stroke Statistics Update Fact Sheet

At-a-Glance

This document contains key statistics about heart disease, stroke, other cardiovascular diseases and their risk factors, in addition to commonly cited statistics about the American Heart Association (AHA)'s research program. This At-a-Glance document is based on the association's 2023 Heart Disease and Stroke Statistics Update, which is compiled annually by the AHA, the National Institutes of Health, and other collaborators. The years cited are the most recent available for each topic.

American Heart Association Research

- The AHA uses donations to fund research projects. Research applications are carefully weighed and selected by teams of scientists and healthcare professionals who volunteer for the association.
- Ten investigators received Nobel Prizes for research wholly or partially supported by the AHA.
- The AHA funds more research into cardiovascular diseases and stroke than any other private not-for-profit organization except for the federal government.
- The AHA has funded more than \$5 billion in research since 1949.

Heart Disease, Stroke and other Cardiovascular Diseases

- Cardiovascular disease (CVD), listed as the underlying cause of death, accounted for 928,741 deaths in the United States in 2020.
- Heart disease and stroke claim more lives each year in the United States than all forms of cancer and Chronic Lower Respiratory Disease (CLRD) combined.
- Between 2017 and 2020, 127.9 million US adults had some form of CVD. Between 2018 and 2019, direct and indirect costs of total CVD were \$407.3 billion (\$251.4 billion in direct costs and \$155.9 billion in lost productivity/mortality).
- In 2017 to 2020 in the United States, 59.0% of non-Hispanic (NH) Black females and 58.9% of NH Black males had some form of CVD. This race category had the highest prevalence of CVD.
- In 2020 in the United States, coronary heart disease (CHD) was the leading cause (41.2%) of deaths attributable to CVD in the United States, followed by stroke (17.3%), other CVD (16.8%), high blood pressure (12.9%), heart failure (9.2%), diseases of the arteries (2.6%).
- CVD accounted for 12% of total US health expenditures in 2018 to 2019. That is more than any major diagnostic group.
- CVD accounted for approximately 19.05 million global deaths in 2020.

Coronary Heart Disease (CHD)

- Heart Disease remains the No. 1 cause of death in the United States, according to 2020 data.
- CHD caused 382,820 deaths in 2020.
- According to data from 2005 to 2014, the estimated annual incidence of heart attack in the United States was 605,000 new attacks and 200,000 recurrent attacks. Average age at the first heart attack was 65.6 years for males and 72.0 years for females.
- Approximately every 40 seconds, someone in the United States will have a myocardial infarction.
- From 2010 to 2020 in the United States, the annual death rate attributable to CHD declined 19.2% and the actual number of deaths increased 0.9%.
- The estimated direct and indirect cost of heart disease in 2018 to 2019 (average annual) was \$239.9 billion in the United States.

Stroke

- In 2020, stroke accounted for approximately 1 of every 21 deaths in the United States.
- On average in 2020, someone died of stroke every 3 minutes 17 seconds in the United States.
- When considered separately from other CVD, stroke ranks No. 5 among all causes of death in the United States, causing 160,264 deaths in 2020.
- In 2020, the age-adjusted US stroke death rate as an underlying cause of death was 38.8 per 100,000, a decrease of 0.8% from 2010, whereas the actual number of stroke deaths increased 23.8% during the same time period.
- In 2020, there were 7.08 million deaths attributable to cerebrovascular disease worldwide (3.48 million deaths from ischemic stroke, 3.25 million deaths from intracerebral hemorrhage (ICH), and 0.35 million from subarachnoid hemorrhage).
 - Central, Southeast and East Asia, Oceania, and sub-Saharan Africa have the highest rates of overall stroke mortality.
 - Eastern Europe and Central Asia have the highest mortality rates attributable to ischemic stroke.
 - ICH mortality is highest in Oceania, followed by western, central, and eastern sub-Saharan Africa and Southeast Asia.
 - Mortality attributable to subarachnoid hemorrhage is highest in Oceania, Andean Latin America, and Central Asia.

Sudden Cardiac Arrest

- In 2020, any-mention sudden cardiac arrest mortality in the United States was 436,852.
- According to 2021 US data, the majority of adult Out of Hospital Cardiac Arrests (OHCA) occur at a home or residence (73.4%). Public settings (16.3%) and nursing homes (10.3%) were the second and third most common locations of adult OHCA.
- According to 2021 US data for adult OHCA only, survival to hospital discharge was 9.1% for all EMS-treated non-traumatic OHCA cardiac arrests. Bystander witnessed adult arrests had a 13.3% survival to hospital discharge and 9-1-1 responder witnessed arrests had a 15.9% survival to hospital discharge.

Heart Disease, Stroke and Cardiovascular Disease Risk Factors

The AHA gauges the cardiovascular health of the nation by tracking eight key health factors and behaviors that increase risks for heart disease and stroke. We call these “Life’s Essential 8” and we measure them to track progress toward improving cardiovascular health for all Americans. Life’s Essential 8 are: not-smoking, physical activity, healthy diet, body weight, sleep health, and control of cholesterol, blood pressure, and blood sugar. Here are some key facts related to these factors:

Smoking

- Worldwide, tobacco contributed to an estimated 8.09 million deaths in 2020.
- In the United States, smoking was the leading risk factor for years of life lost to premature mortality and the third leading risk factor for years of life lived with disability or injury in 2019.
- A meta-analysis of 23 prospective and 17 case-control studies of cardiovascular risks associated with secondhand smoke exposure demonstrated 18%, 23%, 23%, and 29% increased risks for total mortality, total CVD, CHD, and stroke, respectively, in those exposed to secondhand smoke.
- According to the 2020 Surgeon General’s report on smoking cessation, >480 000 Americans die as a result of cigarette smoking and >41 000 die of secondhand smoke exposure each year, ≈1 in 5 deaths annually.
- In 2021, 13.4% of US high school students and 4.0% of middle school students reported current tobacco product use. Additionally, 1.9% of US high school students and 1.0% of middle school students smoked cigarettes in the past 30 days. In the past 30 days, 11.3% of US high school students and 2.8% of middle school students used e-cigarettes.
- In 2021, 12.5% of US adults reported cigarette use every day or some days (14.1% of males and 11.0% of females).

Physical Inactivity

- In 2018, the overall prevalence of meeting the 2018 Physical Activity Guidelines for Americans for both aerobic and muscle-strengthening guidelines was 24.0% in US adults.
- Among US high school students in 2019, 44.1% were physically active for 60 minutes or more on at least 5 days of the week.

Nutrition

- Using the AHA’s Life’s Essential 8 scoring metric, diet was among the 4 metrics with the lowest scores; the range for diet across demographic groups was 23.8 to 47.7 out of 100.
- Among children 2 to 5 years of age, a mean diet score of 61.1 out of 100 was observed. The score for children 12 to 19 years of age was 28.5 out of 100.
- Using 2019 data, an estimated 7.9 million deaths and 188 million disability-adjusted life years were attributable to dietary risks. The leading dietary risk factors were high sodium intake, low whole grain intake, and low legume intake.

Overweight/Obesity

- In the United States, the prevalence of obesity among adults increased from 1999 to 2000 through 2017 to 2018 from 27.5% to 43.0% in males and from 33.4% to 41.9% in females.
- Comparing data across NHANES survey years shows that the prevalence of overweight, obesity, and severe obesity among all children and adolescents 2 to 19 years of age increased from 10.2%, 5.2%, and 1.0%, respectively, in 1971 to 1974 to 16.1%, 19.3%, and 6.1% in 2017 to 2018. According to 2017 to 2020 data, the prevalence of overweight and obesity for US children aged 2 to 19 was 36.8% and the prevalence of obesity was 19.8%.
- Worldwide, high body mass index was attributed to 2.40 million deaths in 2020, a change of 131.46% compared with 1990.
- According to the Global Burden of Disease 2020 study, age-standardized mortality rates attributable to high body mass index lowest in high-income Asia Pacific and highest in Oceania, Central Asia, the Middle East and North Africa, southern sub-Saharan Africa, and locations in Central and Eastern Europe, Central sub-Saharan Africa, and Central Latin America.

Cholesterol

- Using data from 2017 to 2020, 86.4 million, or 34.7% of US adults had total cholesterol of 200 mg/dL or higher.
- Using data from 2017 to 2020 about 24.7 million, or 10.0% of US adults had total cholesterol of 240 mg/dL or higher.
- Using data from 2017 to 2020, 63.1 million, or 25.5% of US adults had high levels of low-density lipoprotein cholesterol (130 mg/dL or higher).
- Using data from 2017 to 2020, 41.3 million, or 16.9% of US adults had low levels of high-density lipoprotein cholesterol (less than 40 mg/dL).
- Globally in 2020 there were 4.51 million deaths attributable to high levels of low-density lipoprotein cholesterol, a 19% increase from 2010.

Sleep

- Analysis of 2020 data indicates that the proportion of US adults reporting insufficient sleep (<7 hours) was 32.8% (females, 32.2%; males, 33.4%). Prevalence of reporting insufficient sleep was lowest among older adults (>65 years of age) with 27.3% of females and 24.7% of males in this older group reporting <7 hours of sleep per night.
- Based on 2020 data, 43.7% of US adults self-report they wake up feeling well rested on some days or never (46.9% of females; 40.4% of males).
- Based on 2020 data, during the last 30 days, 24.3% of US adults responded that they had trouble falling or staying asleep on most or all days (27.8% female; 20.6% male).

Diabetes

- Using data from 2017 to 2020, an estimated 29.3 million (10.6%) US adults had diagnosed diabetes.
- Using data from 2017 to 2020, an estimated 9.7 million (3.5%) US adults had undiagnosed diabetes. Additionally, 115.9 million (46.4%) US adults had prediabetes.
- In 2020, 102,188 US deaths were attributed to diabetes.
- In 2020, an estimated 1.64 million deaths were attributed to diabetes globally. This represents an age-standardized mortality rate of 20.07 per 100,000.

High Blood Pressure (HBP)

- Using data from 2017 to 2020, 122.4 million (46.7%) US adults had hypertension.
- In 2020, there were 119,997 US deaths primarily attributable to HBP.
- In 2020, the age-adjusted US death rate primarily attributable to HBP was 29.1 per 100,000.

For additional information, charts and tables, see

Heart Disease & Stroke Statistics – 2023 Update

Additional charts may be downloaded directly from the [online publication](#) or [Heart and Stroke Association Statistics | American Heart Association](#).

Many statistics in this At-a-Glance document come from unpublished tabulations compiled for this document and can be cited using the document citation listed below. The data sources used for the tabulations are listed in the full document. Additionally, some statistics come from published studies. If you are citing any of the statistics in this At-a-Glance document, please review the full Heart Disease and Stroke Statistics document to determine data sources and original citations.

The American Heart Association requests that this document be cited as follows:

Tsao CW, Aday AW, Almarzooq ZI, Anderson CAM, Arora P, Avery CL, Baker-Smith CM, Beaton AZ, Boehme AK, Buxton AE, Commodore Mensah Y, Elkind MSV, Evenson KR, Eze-Nliam C, Fugar S, Generoso G, Heard DG, Hiremath S, Ho JE, Kalani R, Kazi DS, Ko D, Levine DA, Liu J, Ma J, Magnani JW, Michos ED, Mussolino ME, Navaneethan SD, Parikh NI, Poudel R, Rezk-Hanna M, Roth GA, Shah NS, St-Onge M-P, Thacker EL, Virani SS, Voeks JH, Wang N-Y, Wong ND, Wong SS, Yaffe K, Martin SS; on behalf of the American Heart Association Council on Epidemiology and Prevention Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics—2023 update: a report from the American Heart Association [published ahead of print January 25, 2023]. *Circulation*. doi: 10.1161/CIR.0000000000001123

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