2021 Heart Disease & Stroke Statistical Update Fact Sheet
Global Burden of Disease

Cardiovascular Disease (CVD) (ICD-9 390 to 459; ICD/10 I00 to I99)

- In 2019, approximately 18.6 million deaths were attributed to CVD globally. The age-adjusted death rate per 100,000 population was 239.8. The age-adjusted prevalence rate was 6431.6 per 100,000.
- The highest mortality rates attributable to CVD in 2019 were in Eastern Europe and Central Asia. CVD prevalence was high in North Africa and the Middle East, Central Asia, and high-income North America.

Coronary Heart Disease (CHD) (ICD-9 410 to 414, 429.2; ICD-10 I20 to I25, includes MI ICD-10 I21 to I22)

- Globally, it was estimated that in 2019, 197.2 million people were living with ischemic heart disease (IHD), and it was more prevalent in males than in females (113.7 and 83.6 million people, respectively). North Africa and the Middle East, Central Asia, and Eastern Europe had the highest prevalence rates of IHD in the world.
- In 2019, IHD mortality rates were 118.0 per 100,000. IHD mortality rates were highest in parts of North Africa and the Middle East, Eastern Europe, and Central Asia.

Stroke (ICD-9 430 to 438; ICD-10 I60 to I69)

- Global prevalence of stroke in 2019 was 101.5 million people, whereas that of ischemic stroke was 77.2 million, that of intracerebral hemorrhage was 20.7 million, and that of subarachnoid hemorrhage was 8.4 million.
- Overall, in 2019, age-standardized stroke prevalence rates were highest in Oceania, Southeast Asia, North Africa and the Middle East, and East Asia. Countries in parts of North Africa and the Middle East, southern sub-Saharan Africa, high-income North America, and Southeast Asia had the highest prevalence rates of ischemic stroke. The prevalence of intracerebral hemorrhage was high in Oceania and Southeast Asia. The prevalence of subarachnoid hemorrhage was high in high-income Asia Pacific, high-income North America, Oceania, and Eastern Europe.
- In 2019, there were 6.6 million deaths attributable to cerebrovascular disease worldwide. Globally in 2019, a total of 3.3 million individuals died of ischemic stroke, 2.9 million died of intracerebral hemorrhage, and 0.4 million died of subarachnoid hemorrhage. Several countries in Eastern Europe, Central and Southeast Asia, and Oceania had the highest rates of stroke mortality. Countries in Eastern Europe and Central Asia had the highest mortality rates attributable to ischemic stroke. Intracerebral hemorrhage mortality was highest in Oceania, Central Asia, Southeast Asia, and parts of sub-Saharan Africa. Mortality attributable to subarachnoid hemorrhage was highest in parts of Asia.

Unless otherwise noted, all statistics in this Fact Sheet pertain to the United States.

High Blood Pressure (HBP) (ICD-9 401 to 404; ICD-10 I10 to I15)

- Based on 2019 data, age-standardized mortality rates attributable to high systolic blood pressure (SBP) were generally lower in high-income countries.
- Between 1990 and 2015, the number of deaths related to SBP ≥140 mm Hg did not increase in high-income countries (from 2.197 to 1.956 million deaths) but did increase in high-middle-income (from 1.288 to 2.176 million deaths), middle-income (from 1.044 to 2.253 million deaths), low-middle-income (from 0.512 to 1.151 million deaths), and low-income (from 0.146 to 0.293 million deaths) countries.
- Based on 2015 data, there were 3.47 billion adults worldwide with SBP of 110 to 115 mm Hg or higher. Of this group, 874 million had SBP ≥140 mm Hg.

High Blood Cholesterol and Other Lipids

- In 2019, high low-density lipoprotein cholesterol accounted for 4.4 million deaths.
- In 2019, the mortality rate (per 100 000) attributable to high LDL-C was highest in Eastern Europe, Central Asia, North Africa, and the Middle East.

Smoking

- The age-standardized global prevalence of daily smoking in 2017 was 8.7% in males and 1.76% in females.
- Tobacco (including smoking, secondhand smoke, and chewing tobacco) caused an estimated 8.7 million deaths globally in 2019 (6.6 million men and 2.1 million women). Global Burden of Disease study investigators estimated that in 2019, smoking tobacco was the second-leading risk of mortality (high SBP was number 1), and tobacco ranked third in disability-adjusted life years globally.
- Based on 2019 data, Oceania, East and Central Asia and Eastern Europe had the highest mortality rates attributable to tobacco.

Physical Inactivity

- Prevalence of physical inactivity in 2016 was reported to be 27.5% of the population globally. There were higher numbers of women than men reporting insufficient physical activity globally.
- Mortality rates attributable to low physical activity were highest in North Africa and the Middle East in 2019.

Overweight and Obesity

- Based on 2019 data, age-standardized mortality rates attributable to high body mass index were generally lower in high-income Asia Pacific, Western Europe, East Asia, Australasia, and South Asia.
- In 2015, a total of 107.7 million youth and 603.7 million adults had obesity, with an overall obesity prevalence of 5.0% among children and 12.0% among adults.

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Diabetes (ICD-9 250; ICD-10 E10 to E14)

- Based on 2019 data, overall, 237.9 million males and 222.0 million females worldwide had diabetes.
- Age-standardized mortality rates attributable to high fasting plasma glucose were generally lower in high income countries in 2019. Age-standardized mortality attributable to diabetes was highest in Oceania, southern sub-Saharan Africa, Central Latin America, and Southeast Asia.
- The age-standardized prevalence of diabetes was highest in Oceania, Central Latin America, Caribbean, high-income North America, and parts of North Africa and the Middle East.
- The global economic burden of diabetes was $1.3 trillion in 2015. It is estimated to increase to $2.1 to $2.5 trillion by 2030.

For additional information, charts and tables, see
Heart Disease & Stroke Statistics – 2021 Update

Additional charts may be downloaded directly from the online publication or www.heart.org/statistics

Many statistics in this Fact Sheet 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 factsheet, 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:
Virani SS, Alonso A, Aparicio HJ, Benjamin EJ, Bittencourt MS, Callaway CW, Carson AP, Chamberlain AM, Cheng S, Delling FN, Elkind MSV, Evenson KR, Ferguson JF, Gupta DK, Khan SS, Kissela BM, Knutson KL, Lee CD, Lewis TT, Liu J, Loop MS, Lutsey PL, Ma J, Mackey J, Martin SS, Matchar DB, Mussolino ME, Navaneethan SD, Perak AM, Roth GA, Samad Z, Satou GM, Schroeder EB, Shah SH, Shay CM, Stokes A, VanWagner LB, Wang N-Y, Tsao CW; on behalf of the American Heart Association Council on Epidemiology and Prevention Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics—2021 update: a report from the American Heart Association [published online ahead of print January 27, 2021]. *Circulation.* doi: 10.1161/CIR.0000000000000950

If you have questions about statistics or any points made in the 2021 Statistical Update, please contact the American Heart Association National Center, Office of Science & Medicine at statistics@heart.org. Please direct all media inquiries to News Media Relations at http://newsroom.heart.org/newsmedia/contacts.

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