



2020 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 2017, approximately 17.8 million deaths were attributed to CVD globally. The age-adjusted death rate per 100,000 population was 233.1. The age-adjusted prevalence rate was 6081.6 per 100,000.
- The highest mortality rates attributable to CVD in 2017 were in Eastern Europe and Central Asia. CVD prevalence was high in the United States, Central Europe, North Africa, and the Middle East.

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 2017, 126.5 million people were living with ischemic heart disease, and it was more prevalent in males than in females (68.5 and 57.9 million people, respectively).
- In 2017, ischemic heart disease mortality rates were generally lower than 150 per 100,000 for most of the world but exceeded 280 per 100,000 in Eastern Europe and Central Asia. Eastern Europe, North Africa, and the Middle East have the highest prevalence rates of ischemic heart disease in the world.

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

- Global prevalence of stroke in 2017 was 104.2 million people, whereas that of ischemic stroke was 82.4 million, that of intracerebral hemorrhage was 17.9 million, and that of subarachnoid hemorrhage was 9.3 million.
- Overall in 2017, age-standardized stroke prevalence rates were highest in Eastern Europe, North Africa, the Middle East, and Central and East Asia. Countries in Eastern Europe and Central and East Asia had the highest prevalence rates of ischemic stroke. The prevalence of intracerebral hemorrhage was high in East and Central Asia. The prevalence of subarachnoid hemorrhage was highest in Japan.
- In 2017, there were 6.2 million deaths attributable to cerebrovascular disease worldwide. Globally in 2017, a total of 2.7 million individuals died of ischemic stroke, 3.0 million died of intracerebral hemorrhage, and 0.4 million died of subarachnoid hemorrhage. Several countries in Eastern Europe, Africa, and Central Asia had the highest rates of stroke mortality. Countries in Eastern Europe, North Africa, and Central Asia had the highest mortality rates attributable to ischemic stroke. Intracerebral hemorrhage mortality was highest in East and Southeast Asia. Mortality attributable to subarachnoid hemorrhage was highest in Southeast Asia and Mongolia.

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

- Based on 2017 data, age-standardized mortality rates attributable to high systolic blood pressure were generally lower in high-income countries.
- Between 1990 and 2015, the number of deaths related to SBP \geq 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 systolic blood pressure of 110 to 115 mm Hg or higher. Of this group, 874 million had systolic blood pressure \geq 140 mm Hg.

High Blood Cholesterol and Other Lipids

- In 2017, high low-density lipoprotein cholesterol accounted for 4.3 million deaths and 94.9 million disability-adjusted life years world-wide.
- In 2017, among WHO regions, the mortality rate (per 100,000) attributable to low-density lipoprotein cholesterol was highest in the European region (125.9) and lowest in the African region (16.1), driven by very low rates in sub-Saharan Africa. The remainder of the regions had rates clustered between 46.3 and 58.1 per 100,000.

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 8.1 million deaths globally in 2017 (6.2 million men and 1.9 million women). Global Burden of Disease study investigators estimated that in 2017, smoking tobacco was the second-leading risk of mortality (high systolic blood pressure was number 1), and smoking tobacco ranked fourth in disability-adjusted life years globally.
- Based on 2017 data, East and Southeast 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 and in Central and Eastern Europe in 2017.

Overweight and Obesity

- Based on 2017 data, age-standardized mortality rates attributable to high body mass index were generally lower in Northern Europe, sub-Saharan Africa, and East 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.

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

- Based on 2017 data, overall, 245.5 million males and 230.5 million females worldwide had Diabetes Mellitus.
- Age-standardized mortality rates attributable to high fasting plasma glucose were generally lower in high income countries in 2017. Age-standardized mortality attributable to Diabetes Mellitus was highest in Oceania, Southern and sub Saharan Africa, Southeast Asia, and parts of Central and Tropical Latin America.
- The age-standardized prevalence of Diabetes Mellitus was highest in Oceania.
- The global economic burden of Diabetes Mellitus 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 – 2020 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, Benjamin EJ, Bittencourt MS, Callaway CW, Carson AP, Chamberlain AM, Chang AR, Cheng S, Delling FN, Djousse L, Elkind MSV, Ferguson JF, Fornage M, Khan SS, Kissela BM, Knutson KL, Kwan TW, Lackland DT, Lewis TT, Lichtman JH, Longenecker CT, Loop MS, Lutsey PL, Martin SS, Matsushita K, Moran AE, Mussolino ME, Perak AM, Rosamond WD, Roth GA, Sampson UKA, Satou GM, Schroeder EB, Shah SH, Shay CM, Spartano NL, Stokes A, Tirschwell DL, VanWagner LB, 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— 2020 update: a report from the American Heart Association. *Circulation*. 2020;141:e1–e458. doi: 10.1161/CIR.0000000000000757

If you have questions about statistics or any points made in the 2020 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>.