



American  
Heart  
Association.

## 2022 Heart Disease & Stroke Statistical Update Fact Sheet Children & Cardiovascular Diseases\*

### Out-of-Hospital Cardiac Arrest

- In 2015, 7,037 children younger than 18 years of age experienced out-of-hospital cardiac arrest (EMS assessed).
- In 2015, 13.2% of children with nontraumatic cardiac arrest treated by EMS survived to hospital discharge.
- Sports-related Sudden Cardiac Arrest (SCA) accounted for 39% of SCAs among those  $\leq 18$  years of age in Portland, OR between 2002 and 2015.

### Congenital Cardiovascular Defects (ICD/10 codes Q20-Q28) (ICD/9 codes 745-747)

- According to studies in 2010 and 2011, an estimated minimum of 40,000 infants are expected to be affected by congenital cardiovascular defects each year in the United States. Of these, about 25%, or 2.4 per 1,000 live births, require invasive treatment in the first year of life.
- In 2019, congenital cardiovascular defects were the most common cause of infant death resulting from birth defects; 21.6% of infants who died of a birth defect had a heart defect. According to 2001 and 2008 studies, hospitalization of infants with congenital heart defects is common; one third of patients with congenital heart defects require hospitalization during infancy, often in an ICU.

### Stroke in Children

- In a northern California birth group, from 1997 to 2003, the prevalence of perinatal strokes was 29 per 100,000 live births, or one per 3,500 live births.
- In an analysis of data from the International Pediatric Stroke Study from 2003 to 2014 (N=2127 children with AIS), 725 (34%) had arteriopathy. Subtypes of arteriopathy were dissection (27%), moyamoya (25%), focal cerebral arteriopathy inflammatory subtype (15%), diffuse cerebral vasculitis (15%), and nonspecific arteriopathy (19%).
- According to 2006 and 2014 studies, despite current treatments, 1 of 10 children with ischemic or hemorrhagic stroke will have a recurrence within 5 years.

### High Blood Pressure (HBP)

- In 2015 to 2016, 13.3% of children and adolescents 8 to 17 years of age had elevated BP (systolic blood pressure or diastolic blood pressure at the 90th percentile or higher) and 4.9% had hypertension (systolic blood pressure or diastolic blood pressure at the 95th percentile or higher). Rates of elevated BP were higher among youth 13 to 17 years of age compared with those 8 to 12 years of age (15.6% and 10.8% respectively).

\* Due to inconsistencies in reporting, some statistics may be unreliable.  
Unless otherwise noted, all statistics in this Fact Sheet pertain to the United States.

## High Blood Pressure (HBP) (continued)

- In 2015 to 2016 among youth 8 to 17 years of age, HBP was more common among males (5.9%) than females (3.8%) and among Mexican American youth (9.0%) compared with NH Black youth (4.7%), and NH White youth (2.7%). Having EBP was more common among males (16.9%) than females (9.8%). In addition, Mexican American youth (16.9%) and NH Black youth (16.4%) were more likely to have elevated BP than NH White youth (10.7%).
- In 2015 to 2016, the prevalence of hypertension was 11.6% among obese US adolescents (BMI  $\geq 120\%$  of 95th percentile of sex-specific BMI for age or BMI  $\geq 35$  kg/m<sup>2</sup>) compared with 2.7% among normal/underweight children. The prevalence of elevated BP among obese versus normal/underweight youth was 16.2% compared with 8.7%.

## Smoking

In 2020:

- 23.6% of high school students used any tobacco products and 6.7% of middle school students used tobacco in the past 30 days; 4.6% of high school students and 1.6% of middle school students smoked cigarettes in the past 30 days.
- 3.1% of high school students and 1.2% of middle school students used smokeless tobacco in the past 30 days.
- 5.0% of high school students and 1.5% of middle school students used cigars in the past 30 days.
- In 2019 among middle and high school students who smoked cigarettes in the past 30 days, 28.9% reported smoking cigarettes on 20 to 30 days of the past 30 days.
- In 2020, e-cigarettes were the most commonly used tobacco products in youth: in the prior 30 days, 19.6% of high school students and 4.7% of middle school students used e-cigarettes.
- In 2020, NH White adolescents (3.7%) were more likely than Hispanic (3.6%) and NH Black (2.5%) adolescents to report cigarette use in the past month. For cigars, in 2019, Black adolescents (6.5%) reported higher use in the past month than NH White (2.8%) and Hispanic (4.0%) adolescents.

## High Blood Cholesterol

- According to 2015 to 2018 data, among children age 6 to 11 years, the mean total blood cholesterol level was 157.3 mg/dL; 157.4 mg/dL for males and 157.1 mg/dL for females.
- According to 2015 to 2018 data, among adolescents age 12 to 19 years, the mean total blood cholesterol level was 155.1 mg/dL; 152.7 mg/dL for males and 157.5 mg/dL for females.
- Among youth 6 to 19 years of age, the prevalence of adverse TC levels (TC  $\geq 200$  mg/dL) in 2009 to 2016 was 7.1%. Among youth 6 to 19 years of age, the prevalence of ideal TC levels (TC  $< 170$  mg/dL) in 2015 to 2016 was 71.4%. The remainder of youth had borderline levels (TC, 170–199 mg/dL).

## Physical Activity (PA)

- Using parental report, from 2018 to 2019, the nationwide prevalence of youth who were active for  $\geq 60$  minutes every day of the week was higher for youth 6 to 11 years of age (28.3%) compared with youth 12 to 17 years of age (16.5%).
- In 2019 and based on self-report, the nationwide prevalence of high school students who engaged in  $\geq 60$  minutes of PA on at least 5 days of the week was 44.1% and was lower with each successive grade (from ninth [49.1%] to 12th [40.0%] grades). The prevalence was higher in males (52.8%) than in females (35.3%). The nationwide prevalence of high school students who engaged in  $\geq 60$  minutes of PA on all 7 days of the week was 23.2%, with similar patterns by grade and sex.

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## Physical Activity (PA) (continued)

- Among high school students, 17.0% reported that they did not participate in  $\geq 60$  minutes of any kind of PA on any 1 of the previous 7 days. Females were more likely than males to report not meeting recommendations on any day (19.6% versus 14.4%).
- Nationwide in 2019, 46.1% of high school students used a computer for activities other than schoolwork (e.g., videogames or other computer games) for  $\geq 3$  hours per day on an average school day. The prevalence differed by race and ethnicity and was high among both males (47.5%) and females (44.6%).

## Overweight and Obesity

- Between 2015 and 2018, 25.9 million children ages 2 to 19 were overweight or obese; 35.0% of males and 35.8% of females. Of all children, 13.8 million were obese; 20.0% of males and 18.0% of girls.
- In 2015 to 2018, among children ages 2 to 19, the prevalence of obesity was highest among Hispanic males (28.6%), followed by NH Black girls (27.1%), Hispanic girls (23.4%), NH Black males (19.1%), NH White males (16.2%) and girls (14.2%), and NH Asian males (11.3%) and girls (7.4%).

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

- Approximately 210,000 people  $< 20$  years of age were diagnosed with diabetes in 2018.
- Among US adolescents 12 to 19 years of age in 2005 to 2014, the prevalence of diabetes was 0.8%. Of those with diabetes, 28.5% were undiagnosed.
- Between 2001 and 2009, the prevalence of type 2 diabetes in youth increased by 30.5%.
- Among US adolescents 12 to 18 years of age in 2005 to 2016, the prevalence of prediabetes was 18.0%. Males were more likely to have prediabetes than females (22.5% versus 13.4%).

## Healthy Diet

- Based on 2015 to 2016 data, the average dietary consumption by US children and teenagers of selected foods and nutrients related to cardiometabolic health is detailed below.
- Whole Grains— 0.95 serving per day in youth.
- Fruit— consumption was low (0.68 serving per day) and decreased with age. NH Asian youth and other races, including multiracial youth, had the highest intake of whole fruit, followed by NH White youth, other Hispanic youth, Mexican American youth, and NH Black youth.
- Non-starchy vegetable— consumption was low with an estimated average intake of 0.57 serving per day. The consumption pattern increased with age.
- Fish and shellfish— consumption was very low with an estimated average intake of 0.06 serving per day. The consumption pattern increased with age.
- Sugar-sweetened beverages— consumption was 1.0 serving per day and consumption patterns increased with age.
- Consumption of sweets and bakery desserts contributed to an average of 6.07% of calories among US youth.
- Sodium— consumption was 3.33 g/d and the consumption pattern increased with age.
- Saturated fat — consumption was 12.1% of calories in US youth.
- Nuts and seeds— consumption was low with an estimated average intake of 0.40 serving per day
- Processed meats — consumption was 0.27 serving per day with higher intake among males than females.
- Consumption of dietary fiber was 15.6 g/d.

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**For additional information, charts and tables, see**

***Heart Disease & Stroke Statistics – 2022 Update***

Additional charts may be downloaded directly from the online publication or [www.heart.org/statistics](http://www.heart.org/statistics).

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, Alonso A, Beaton AZ, Bittencourt MS, Boehme AK, Buxton AE, Carson AP, Commodore-Mensah Y, Elkind MSV, Evenson KR, Eze-Nliam C, Ferguson JF, Generoso G, Ho JE, Kalani R, Khan SS, Kissela BM, Knutson KL, Levine DA, Lewis TT, Liu J, Loop MS, Ma J, Mussolino ME, Navaneethan SD, Perak AM, Poudel R, Rezk-Hanna M, Roth GA, Schroeder EB, Shah SH, Thacker EL, VanWagner LB, Virani SS, Voecks JH, Wang N-Y, 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—2022 update: a report from the American Heart Association [published online ahead of print Wednesday, January 26, 2022]. *Circulation*. doi: 10.1161/CIR.0000000000001052

Link to document: <https://www.ahajournals.org/doi/10.1161/CIR.0000000000001052>

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