Youth and Cardiovascular Diseases — Statistics

Note: Death rates are age-adjusted per 100,000 population, based on the 2000 U.S. standard. Some data are reported according to ICD/9 codes and some use ICD/10 codes.

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

- About 40,000 babies are born each year with congenital heart defects.

- At least 35 distinct types of defects are recognized, ranging from simple defects to complex malformations. Common defects diagnosed in infancy include
  - ventricular septal defect (14-17 percent).
  - tetralogy of Fallot (9-12 percent).
  - transposition of the great arteries (10-11 percent).
  - coarctation of the aorta (8-11 percent).
  - atrioventricular septal defect (4-10 percent).

Most defects can be corrected or improved with surgery or catheter-based therapy.

- 51.9 percent of deaths from congenital cardiovascular defects in 2000 occurred in people under age 15. Crude infant death rates (under 1 year) were 45.7 for white babies and 62.8 for black babies.

End-Stage Renal Disease  (ICD/10 code N18.0)

- The average incidence rates for pediatric ESRD are more than twice as high among children 15-19 years as for children 10-14 years. The rates are more than 3 times higher than those for children ages 0-4 and 5-9.

- Children with pediatric ESRD have high transplantation rates. More than 44 percent of children starting therapy received a transplant during the first year of therapy, compared with 10 percent of patients 20-64 years of age at ESRD incidence.

Cardiomyopathy  (ICD/10 code I42) (ICD/9 code 425)

- Recent studies show that 36 percent of young athletes who die suddenly have probable or definite hypertrophic cardiomyopathy.

Kawasaki Disease  (ICD/10 M30.3) (ICD/9 code 446.1)

- About 80 percent of patients with Kawasaki disease are under age 5. Most are under age 2. Children older than 8 years are rarely affected.

- Up to 2,500 cases of Kawasaki disease are diagnosed yearly. It occurs more often among boys (63 percent) and among those of Asian ancestry.
Tobacco Smoke

- According to a 2001 survey of students in grades 9-12,
  - 38.5 percent of male students and 29.5 percent of female students report current tobacco use.
  - 22.1 percent of males and 8.5 percent of females report current cigar use.
  - 14.8 percent of males and 1.9 percent of females report current smokeless tobacco use.

- In 1996 about 15 million children and adolescents under age 18 were exposed to environmental tobacco smoke in the home. (MMWR, Vol. 46, No. 44, Nov. 7, 1997, CDC/NCHS)

- About 80 percent of people who use tobacco begin before age 18, with the most common ages of initiation being 14 to 15. (MMWR, Vol. 48, No. 31, Aug. 1999, CDC/NCHS)

- From 1980 to 2001, the percentage of high school seniors who smoked in the past month decreased 3.3 percent.
  - For males it increased 10.8 percent.
  - For females it decreased 14.1 percent.
  - For whites it increased 10.0 percent.
  - For blacks it **decreased** 48.8 percent.
  (Health United States 2002, CDC/NCHS)

**Prevalence of High School Students Using any Tobacco Product Within the Last 30 Days by Race/Ethnicity and Sex**

United States: 2001

![Bar chart showing prevalence of smoking among high school students by race/ethnicity and sex](chart.png)

• During 1988-96, among people 12-17 years old, the incidence of initiation of first use increased by 30 percent, and first daily use increased by 50 percent.
  — More than 6,000 people under age 18 try a cigarette each day, and each day more than 2,000 of them become daily smokers.
  — If trends continue, about 5 million of these people eventually will die from a disease attributed to smoking.
  (NHSDA, analyzed by the CDC/NCHS and the SAMHSA)

High Blood Cholesterol and Other Lipids

• Among children and adolescents ages 4-19,
  — Females have significantly higher mean total cholesterol and low-density lipoprotein (LDL) or “bad” cholesterol levels than do males.
  — Non-Hispanic black children and adolescents have significantly higher mean total cholesterol, LDL cholesterol and high-density lipoprotein (HDL) cholesterol or “good” levels when compared with non-Hispanic white and Mexican-American children and adolescents.
  (NHANES III [1988-94], CDC/NCHS)

• Among children and adolescents ages 4-19, the mean total blood cholesterol level is 165 mg/dL. For boys it’s 163 mg/dL and for girls it’s 167 mg/dL. The racial/ethnic breakdown is
  — For non-Hispanic whites, 162 mg/dL for boys and 166 mg/dL for girls.
  — For non-Hispanic blacks, 168 mg/dL for boys and 171 mg/dL for girls.
  — For Mexican Americans, 163 mg/dL for boys and 165 for girls.
  (NHANES III [1988-94], CDC/NCHS)

• About 10 percent of adolescents ages 12-19 have total cholesterol levels exceeding 200 mg/dL. (NHANES III [1988-94], CDC/NCHS)

• For children and adolescents ages 12-19, mean LDL cholesterol levels are
  — Among non-Hispanic whites, 91 mg/dL for boys and 100 mg/dL for girls.
  — Among non-Hispanic blacks, 99 mg/dL for boys and 102 mg/dL for girls.
  — Among Mexican Americans, 93 mg/dL for boys and 92 mg/dL for girls.

Higher LDL cholesterol levels combined with other risk factors increase the risks of heart disease, heart attack and stroke. (NHANES III [1988-94], CDC/NCHS)

• For children and adolescents ages 4-19, mean HDL cholesterol levels are
  — Among non-Hispanic whites, 48 mg/dL for boys and 50 mg/dL for girls.
  — Among non-Hispanic blacks, 55 mg/dL for boys and 56 mg/dL for girls.
  — Among Mexican Americans, 51 mg/dL for boys and 52 mg/dL for girls.

The higher a person’s HDL cholesterol level is, the better. (NHANES III [1988-94], CDC/NCHS)
Trends in Mean Total Blood Cholesterol Among Adolescents Ages 12-17 by Sex, Race and Survey


Physical Inactivity

- 51.7 percent of high school students were enrolled in physical education classes in 2001, but only 32.2 percent attended classes daily. (MMWR Vol. 51, No. SS-4, June 28, 2002, CDC/NCHS)

Percentage of Students in Grades 9-12 Who Participated in Sufficient Vigorous or Moderate Physical Activity During the Past 7 Days by Race/Ethnicity and Sex
United States: 2001

Source: YRBS, United States, 2001, MMWR, Vol. 51, No. SS-4 June 28, 2000, CDC/NCHS. “Vigorous activity” is defined as activity causing sweating and hard breathing for at least 20 minutes on 3 or more of the 7 days. “Moderate activity” is defined as activities such as walking or bicycling lasting for at least 30 minutes on 5 or more of the 7 days.
Overweight and Obesity

- Among American children ages 6-11, using the 95th percentile of body mass index (BMI) values on the CDC 2000 growth chart, the following are overweight:
  - For non-Hispanic whites, 12.0 percent of boys and 11.6 percent of girls.
  - For non-Hispanic blacks, 17.1 percent of boys and 22.2 percent of girls.
  - For Mexican-Americans, 27.3 percent of boys and 19.6 percent of girls.
  (NHANES [1999-2000], CDC/NCHS)

- Among American adolescents ages 12-19, using the 95th percentile of BMI values on the CDC 2000 growth chart, the following are overweight:
  - For non-Hispanic whites, 12.8 percent of boys and 12.4 percent of girls.
  - For non-Hispanic blacks, 20.7 percent of boys and 26.6 percent of girls.
  - For Mexican-Americans, 27.5 percent of boys and 19.4 percent of girls.
  (NHANES [1999-2000], CDC/NCHS)

Prevalence of Overweight Among Students in Grades 9-12 by Sex and Race/Ethnicity
United States: 2001

![Bar chart showing prevalence of overweight among students by sex, race/ethnicity, and BMI 95th percentile or higher.]

Source: BMI 95th percentile or higher. YRBS, United States, 2001, MMWR, Vol. 51, No. SS-4, June 28, 2002, CDC/NCHS.

Surgery

- An estimated 154,000 cardiovascular procedures were performed on youth age 15 and younger in 2000.

Source Footnotes
CDC/NCHS – Centers for Disease Control and Prevention/National Center for Health Statistics
MMWR – Morbidity and Mortality Weekly Report
NHANES I – National Health and Nutrition Examination Survey I
NHANES III – National Health and Nutrition Examination Survey III
NHES III – National Health Examination Survey III
NHSDA – National Household Survey on Drug Abuse
SAMHSA – Substance Abuse and Mental Health Services Administration
YRBS – Youth Risk Behavior Surveillance