

STATISTICS ON YOUTH SPORTS SAFETY

- There were 120 sports-related deaths of young athletes in 2008–2009; 50 in 2010; and 40 in 2011.¹
- Approximately 8,000 children are treated in emergency rooms each day for sports-related injuries.²
- Among children, those aged 15–17 experience the highest emergency room visits for sports injuries.²
- Rates of sports injury visits to ERs were highest in remote rural settings.²
- High school athletes suffer 2 million injuries, 500,000 doctor visits and 30,000 hospitalizations each year.³
- There are three times as many catastrophic football injuries among high school athletes as college athletes.⁷
- History of injury is often a risk factor for future injury, making prevention critical.³²
- 62 percent of organized sports-related injuries occur during practices.⁹
- Only 42 percent of high schools have access to athletic training services.¹⁰
- 47 percent of schools nationally fall short of the federally recommended nurse-to-student ratio. Many schools have no nurse at all.¹¹
- Ninety-six percent of Americans feel it's important for young athletes to be evaluated by a qualified health care professional before they begin playing sports.¹³

CONCUSSION

- 50 percent of “second impact syndrome” incidents – brain injury caused from a premature return to activity after suffering initial injury (concussion) – result in death.⁴
- Female high school soccer athletes suffer almost 40 percent more concussions than males (29,000 annually).⁵
- Female high school basketball players suffer 240 percent more concussions than males (13,000).⁵
- 400,000 brain injuries (concussions) occurred in high school athletics during the 2008–09 school year.⁶
- 15.8 percent of football players who sustain a concussion severe enough to cause loss of consciousness return to play the same day.⁸
- Emergency department visits for concussions sustained during organized team sports doubled among 8–13 year olds between 1997 and 2007 and nearly tripled among older youth.¹²
- Concussion rates more than doubled among students age 8–19 participating in sports like basketball, soccer and football between 1997 and 2007, even as participation in those sports declined.¹²
- A 2011 study of U.S. high schools with at least one athletic trainer on staff found that concussions accounted for nearly 15% of all sports-related injuries reported to ATs.¹⁹
- High school athletes who have been concussed are three times more likely to suffer another concussion in the same season.²⁰
- Females aged 10–19 years sustained sports- and recreation-related TBIs most often while playing soccer or basketball or while bicycling.²¹
- More than 248,000 children visited hospital emergency departments in 2009 for concussions and other traumatic brain injuries related to sports and recreation.³³

HEAT ILLNESS

- High school athletes, especially males, are at the highest risk of suffering exertional heat illness requiring treatment in U.S. hospital emergency rooms.²²
- 31 high school players died of heat stroke complications between 1995 and 2009.²³
- 64.7% of football players sustaining a heat illness were either overweight or obese.²⁴
- The number of heat-related injuries from 1997 to 2006 increased 133 percent. Youth accounted for the largest proportion of heat-related injuries or 47.6 percent.¹⁴
- Injuries associated with participation in sports and recreational activities account for 21 percent of all traumatic brain injuries among children in the United States.¹⁵
- 2/3 of kids show up for practice at least significantly dehydrated.¹⁶

SUDDEN CARDIAC ARREST

- Sudden cardiac arrest (SCA) is the leading cause of death in exercising young athletes.²⁵
- It's estimated that more than 95 percent of cardiac arrest victims die before reaching the hospital.²⁶
- Just one in 10 U.S. student-athletes who suffer sudden cardiac arrest survives.²⁷
- The incidence of out-of-hospital sudden cardiac arrest in high school athletes ranges from .28 to 1 death per 100,000 high school athletes annually in the U.S.³¹

ASTHMA

- EIA (exercise-induced asthma) affects 12–15% of the population¹⁷
- It is estimated that 80 to 90 percent of all individuals who have allergic asthma will experience symptoms of EIA with vigorous exercise or activity. For teenagers and young adults this is often the most common cause of asthma symptoms.¹⁸

EXERTIONAL SICKLING

- Sickle cell trait was the primary cause of death for 15 out of the 2,387 athlete deaths recorded in the *30-Year U.S. National Registry of Sudden Death in Athletes*.²⁸
- Young athletes with sickle cell trait may be at an increased risk of heat-related illnesses and their complications.²⁹
- Predisposing factors to exertional sickling include heat, dehydration, altitude, asthma, high intensity exercise with few rest intervals.³⁰

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- ¹ National Athletic Trainers' Association.
- ² Wier L, Miller A, Steiner C. *Sports Injuries in Children Requiring Hospital Emergency Care, 2006*. HCUP Statistical Brief #75. June 2009. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.hcup-us.ahrq.gov/reports/statbriefs/sb75.pdf>.
- ³ Centers for Disease Control and Prevention.
- ⁴ Cantu RC. *Second impact syndrome: immediate management*. Phys Sportsmed. 1992;20(9):14–17.
- ⁵ Covassin T, Swannik C. *Sex Differences and the Incidence of Concussions Among Collegiate Athletes*. J Athl Train. 2003;38(3):238–244.
- ⁶ Yard E, Comstock R. *Compliance with return to play guidelines following concussion in U.S. high school athletes, 2005–2008*. Informa Healthcare. 2009;23(11):888–898.
- ⁷ Boden B. *Catastrophic Head Injury Three Times Greater in High School vs. Collegiate Football Players*. Am J Sports Med. 2007;35(7):1075–1081.
- ⁸ Center for Injury Research and Policy. The Research Institute at Nationwide Children's Hospital, Dr. Dawn Comstock, Columbus, OH.
- ⁹ Rachel J, Yard E, Comstock R. *An Epidemiologic Comparison of High School Sports Injuries Sustained in Practice and Competition*. J Athl Train. 2008;43(2):197–204.
- ¹⁰ National Athletic Trainers' Association.
- ¹¹ National Association of School Nurses, 2008 Survey.
- ¹² Bakhos L, Lockhart G, Myers R. *Emergency Department Visits for Concussion in Young Child Athletes*. Pediatrics. 2010;126(3):e550–6.
- ¹³ American College of Sports Medicine.
- ¹⁴ Nelson NG, Collins CL, Comstock RD, McKenzie LB. *Exertional Heat-Related Injuries Treated in Emergency Departments in the U.S., 1997–2006*. Am J Prev Med. 2011;40(1):54–60.
- ¹⁵ SAFE KIDS USA.
- ¹⁶ Walker, SM, Casa, DJ, et al. *Children participation in summer soccer camps are chronically dehydrated*. Med Sci Sports Exerc. 2004;36(5):S180–181.
- ¹⁷ Rupp NT. *Diagnosis and Management of Exercise-Induced Asthma*. Phys Sportsmed. 1996;24(1):77–80,83–87.
- ¹⁸ Asthma and Allergy Foundation of America.
- ¹⁹ Meehan WP, d'Hemecourt P, Collins C, Comstock RD. *Assessment and Management of Sport-Related Concussions in United States High Schools*. Am J Sports Med. 2011. doi:10.1177/0363546511423503.
- ²⁰ Gissel LM, Fields SK, Collins CL, Dick RW, Comstock RD. *Concussions Among United States High School and Collegiate Athletes*. J Athl Train. 2007;42(4):495–503.
- ²¹ Gilchrist J, Thomas KE, Xu L, McGuire LC, Coronado VG. *Nonfatal sports and recreation related traumatic brain injuries among children and adolescents treated in emergency departments in the United States, 2001–2009*. MMWR Morb Mortal Wkly Rep. 2011;60(39):1337–1342.
- ²² Centers for Disease Control and Prevention.
- ²³ Mueller FO, Colgate B. *Annual Survey of Football Injury Research, 1931–2009*. February 2010; University of North Carolina in Chapel Hill.
- ²⁴ Centers for Disease Control and Prevention. *Heat Illness Among High School Athletes—United States, 2005–2009*. MMWR Morb Mortal Wkly Rep. 2010;59(32):1009–13.
- ²⁵ Drezner JA. *Preparing for sudden cardiac arrest—the essential role of automated external defibrillators in athletic medicine: a critical review*. Br J Sports Med. 2009;43:702–707.
- ²⁶ American Heart Association. *Long-Term Treatment for Cardiac Arrest*. www.heart.org/HEARTORG/Conditions/More/CardiacArrest/Long-Term-Treatment-for-Cardiac-Arrest_UCM_307916_Article.jsp.
- ²⁷ Drezner JA, Chun JS, Karmon KG, Derminer L. *Survival trends in the United States following exercise-related sudden cardiac arrest: 2000–2006*. Heart Rhythm. 2008;5(6):794–799.
- ²⁸ Minneapolis Heart Institute Foundation.
- ²⁹ Pretzlaff RK. *Death of an adolescent athlete with sickle cell trait caused by exertional heat stroke*. Pediatr Crit Care Med. 2002;3(3):308–310.
- ³⁰ Eichner RE. *Sickle Cell Trait*. J Sport Rehab. 2007;16:197–203.
- ³¹ American Heart Association. *CPR Statistics*. www.heart.org/HEARTORG/CPRAndECC/WhatIsCPR/CPRFactsandStats/CPR%20Statistics_UCM_307542_Article.jsp.
- ³² Kucera KL, Marshall SW, Kirkendall DT, Marchak PM, Garrett WE Jr. *Injury history as a risk factor for incident injury in youth soccer*. Br J Sports Med. 2005;39(7):462.
- ³³ Centers for Disease Control and Prevention. *Nonfatal Traumatic Brain Injuries Related to Sports and Recreation Activities Among Persons Aged ≤19 Years—United States, 2001–2009*. MMWR. 2011;60(39):1337–1342.